



CHINA'S MILITARY & THE U.S.-JAPAN ALLIANCE IN 2030

a strategic net assessment

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ADVANCE PRAISE

“**T**he Asia century is well under way, and with it the emerging challenges of a region in transition.... Any sound future policy will require a thorough assessment of China’s evolving military and foreign security capabilities and of the capacity and willingness of Tokyo and Washington to sustain their historic cooperation. There are no guarantees that the future will resemble the recent past, and the best approaches for continued deterrence credibility and regional stability will require careful consideration and thoughtful analysis.

To this end, the Carnegie Endowment has offered up an extraordinary contribution: *China’s Military and the U.S.-Japan Alliance in 2030: A Strategic Net Assessment*. The future security and prosperity of the Asia-Pacific region may very well be defined by the content of this assessment. But one thing is certain: the United States and Japan must recognize that in the future, status quo thinking is unlikely to guarantee a stable security environment that serves the long-term interests of the bilateral relationship or the region.”

—GOVERNOR JON HUNTSMAN JR.,
FORMER AMBASSADOR TO CHINA AND FORMER GOVERNOR OF UTAH

“**M**ichael Swaine and his co-authors have done an admirable job of thinking through the complex interactions of the U.S.-Japan-China relationship in the future. Using scenarios and trend projections, they go beyond simple predictions to examine the complex interactions of different developments and reactions among the three countries and different groups within them. While I do not agree with specific military and policy judgments in all the scenarios, I strongly endorse the effort to examine potential developments along with likely and possible reactions and counterreactions. The triangular interactive relations among these great Asian powers will determine both the overall future of the region and much of the futures of each of the individual countries.”

—ADMIRAL DENNIS BLAIR (U.S. NAVY, RETIRED),
FORMER DIRECTOR OF NATIONAL INTELLIGENCE
AND FORMER COMMANDER OF THE U.S. PACIFIC COMMAND

“The U.S.-Japan alliance has long been crucial to the military balance in the Western Pacific. The balance of power in the region is now shifting toward China, and tensions between Asian states are rising concomitantly. Current trends suggest that the United States and Japan will not find it easy to sustain immunity from coercion as they seek to preserve stability, secure their national interests, and manage crises in the region over the coming years. This study is a remarkably timely, thoughtful, and meticulous examination of the drivers and choices the allies will face through 2030. It illuminates probable shifts in the strategic landscape of northeast Asia, their consequences, and the policy and resource allocation choices they pose. In this strategic net assessment, the scholars Carnegie assembled have given decisionmakers in Tokyo and Washington a uniquely insightful and thought-provoking policy-planning tool.”

—**AMBASSADOR CHAS W. FREEMAN JR. (U.S. FOREIGN SERVICE, RETIRED),
FORMER ASSISTANT SECRETARY OF DEFENSE**

“There is nothing out there like this—a very important piece of work.... This is an elegantly framed study that systematically assesses the postures of China, Japan, and the United States and treats the dynamics between them. Obviously, this is tough to execute, but the authors have done an outstanding job. The report addresses a critical subject and offers empirically based suggestions.... There is nothing like it in terms of looking at the interactions between states to produce a set of possible future regional dynamics.”

—**ERIC HEGINBOTHAM,
SENIOR POLITICAL SCIENTIST AT THE RAND CORPORATION**

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PREFACE

The emergence of the People's Republic of China as an increasingly significant military power in the Western Pacific presents major implications for Japan, the U.S.-Japan alliance, and regional security. Most notably, China's acquisition of so-called anti-access/area denial-type capabilities—centered on ballistic and cruise missiles, increasingly capable air forces, submarines and surface combatants, long-range radars and sophisticated C4ISR networks, and other types of offshore weapons systems—combined with its growing military and paramilitary presence along the East Asian littoral and beyond, is providing Beijing with a greater capacity to influence the security environment in this vital region of the world. In fact, China's increasing influence abroad is converging with rising levels of nationalism at home to produce more strident domestic arguments in favor of using this growing military capacity to advance Chinese security interests overseas.

These developments pose a challenge to U.S. and Japanese security interests for several reasons. First, and most notably, they cast doubt on the ability of Japan and the United States to operate freely and, if necessary, to prevail in future disputes with Beijing over a variety of contentious national security issues, from maritime territorial and resource rivalries to the handling of crises over Taiwan or North Korea. Second, on a broader level, the tensions and uncertainties associated with a greater and more active Chinese military and paramilitary presence near Japan have the potential to reduce trust and spur zero-sum approaches toward Beijing in many nonmilitary policy areas—such as economic and trade relations—while channeling more scarce resources into military development. If mishandled,

China's growing military capabilities and presence could even weaken Japanese confidence in America's security commitment to Tokyo and increase support in Japan for a much larger and offensive-oriented conventional military—and perhaps even for the acquisition of nuclear weapons.

Thus, if Tokyo and Washington do not effectively respond to this challenge, China's growing offshore military capabilities could eventually increase the likelihood of serious political-military crises in East Asia, weaken the U.S.-Japan alliance, and undermine overall regional stability. These potential outcomes could diminish the future peace and prosperity of the entire Asia-Pacific region. Some of these adverse outcomes are already evident in relations between China, Japan, and the United States—the imbroglio between Tokyo and Beijing over the Senkaku/Diaoyu Islands in the East China Sea is but one example.

To sustain allied confidence and cooperation and maintain regional stability in the face of China's growing military presence, it is therefore essential for both Tokyo and Washington to accurately assess the current and future dimensions of China's security challenge, along with the capacity and willingness of the United States and Japan to meet that challenge over time and under varying circumstances. This requires a clear understanding of the range and likelihood of possible security environments that could emerge among the three powers over the long term; the critical political, economic, social, and military trends and interests that will likely shape each alternative environment; and the ability of Tokyo and Washington to implement the kind of response that will best meet their security needs in each instance.

Developing such a response involves far more than simply intellectually projecting over time China's military capabilities in Northeast Asia and then determining a set of military policies and countermeasures to deal with them. China's future economic and military capabilities in many areas will remain to some extent uncertain, as will those of the United States and Japan. Moreover, China does not constitute the same security challenge to the West as the former Soviet Union once did. Over time, Beijing's emergence as a major regional and (in some respects) global power poses at least as many opportunities as threats to both Tokyo and Washington. In addition, the capacity of the United States and Japan to develop appropriate political, economic, and military responses to China is not limitless. Hard choices will have to be made by both powers between various alternative approaches, each likely containing both advantages and disadvantages.

To maximize the chance of success in this endeavor, any set of responses to Beijing's growing military capabilities in East Asia must therefore combine a wide range of both military and nonmilitary elements. Ideally, these capabilities and actions must not only deter truly threatening Chinese behavior but also reduce distrust, strengthen cooperation, and assure Beijing that its most vital interests are not imperiled. Such strategies must be based on a realistic understanding of the nature and limits of the Chinese military threat to Japan and the U.S.-Japan alliance. They also must take into account the likely political, military, and economic constraints confronting both Washington and Tokyo.

Given the seriousness and complexity of this problem, one would expect numerous studies that examine these issues to exist already. Unfortunately, existing studies usually address only the purely military dimensions of the equation, often rely almost exclusively on a “worst case” set of assumptions regarding Chinese military capabilities and intentions, or posit virtually limitless capacities on the part of the United States and Japan. In short, a comprehensive strategic net assessment of the future impact of China’s growing military power on Japan and the alliance does not exist, at least not in the unclassified world.

This report constitutes an attempt to fill this gap. It is the product of many minds, combining expert knowledge in Chinese, Japanese, and U.S. foreign and defense policies and military capabilities with other relevant areas of expertise. As part of this undertaking, the authors conducted multiple rounds of interviews with policymakers and defense experts in Tokyo and Washington and with scholars and analysts in China in addition to extensive research in primary and secondary sources.

Perfection, either conceptual or analytical, is not the goal, given existing constraints and shortcomings in resources, data, and perhaps intellectual insight. But at the very least, this study defines the many aspects of the current security problem facing China, Japan, and the United States, provides a set of alternative security futures, and assesses the strengths and weaknesses of a range of possible strategic approaches for the alliance. In the process, it identifies some of the most important decisions confronting both U.S. and Japanese policymakers as well as the many factors that will influence those decisions.

The aim of this project is to sharpen the level of analysis and stimulate debate in both Tokyo and Washington over the future of the U.S.-Japan security alliance. Policymakers and publics in all three countries are presented with several inconvenient truths about the nature and extent of China’s challenge to this alliance and the likely requirements for effectively addressing it. This analysis offers a useful template for further quantitative and qualitative assessment and strategic formulation. In so doing, it will hopefully provide the basis for more in-depth examination of the larger strategic and policy implications of the rapidly changing and enormously important Sino-Japanese-U.S. security dynamic.

—Michael D. Swaine

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LIST OF ACRONYMS

A2/AD	Antiaccess/area denial	ASW	Antisubmarine warfare
AEW&C	Airborne early warning and control	AWACS	Airborne warning and control system
ALCM	Air-launched cruise missile	BAMS	Broad Area Maritime Surveillance
AMS	Academy of Military Science	BJOCC	Bilateral and Joint Operations Command Center
APEC	Asia-Pacific Economic Cooperation (forum)	BMD	Ballistic missile defense
ARF	ASEAN Regional Forum	C2	Command and control
ASAT	Antisatellite	C4ISR	Command, control, communications, computers, intelligence, surveillance, and reconnaissance
ASB	Air-Sea Battle	CATOBAR	Catapult-assisted take-off but arrested recovery
ASBC	Air-Sea Battle Concept	CBO	Congressional Budget Office
ASBM	Antiship ballistic missile	CCP	Chinese Communist Party
ASCEL	Active strategic counterattack against exterior lines	CMC	Central Military Commission
ASCM	Antiship cruise missile	CONUS	Continental United States
ASEAN	Association of Southeast Asian Nations	CPGS	Conventional prompt global strike
ASUW	Antisurface warfare	DCGS	Distributed Common Ground System

CHINA'S MILITARY AND THE U.S.-JAPAN ALLIANCE IN 2030

DPJ	Democratic Party of Japan	MOD	Ministry of Defense (Japan)
DSP	Defense Support Program	MOFA	Ministry of Foreign Affairs (Japan)
DOD	Department of Defense (U.S.)	MRBM	Medium-range ballistic missile
EEZ	Exclusive economic zone	NATO	North Atlantic Treaty Organization
ELINT	Electronic intelligence	NDPG	National Defense Program Guidelines
GDP	Gross domestic product	NDPO	National Defense Program Outline
GEO	Geostationary Earth Orbit	New START	New Strategic Arms Reduction Treaty
GNI	Gross national income	NFU	No first use
GNP	Gross national product	NIPRNET	Non-classified Internet Protocol Router Network
GPS	Global Positioning System	NSC	National Security Council
HALE	High-altitude, long-endurance (UAV)	NSS	National Security Strategy
IADS	Integrated air defense system	OECD	Organization for Economic Cooperation and Development
ICBM	Intercontinental ballistic missile	OSD	Office of the Secretary of Defense
IISS	International Institute for Strategic Studies	OTHR	Over-the-horizon radar
IRBM	Intermediate-range ballistic missile	PACOM	(U.S.) Pacific Command
ISR	Intelligence, surveillance, and reconnaissance	PBSC	Politburo Standing Committee
JASDF	Japan Air Self-Defense Force	PLA	People's Liberation Army
JAXA	Japan Aerospace Exploration Agency	PLAAF	People's Liberation Army Air Force
JCER	Japan Center for Economic Research	PLAN	People's Liberation Army Navy
JDA	Japan Defense Agency	PPP	Purchasing power parity
JGSDF	Japan Ground Self-Defense Force	PR	Proportional representation
JMSDF	Japan Maritime Self-Defense Force	PRC	People's Republic of China
JOAC	Joint Operational Access Concept	QDR	Quadrennial Defense Review
JRP	Japan Restoration Party	R&D	Research and development
JSDF	Japan Self-Defense Forces	RMB	Renminbi
LACM	Land attack cruise missile	SAM	Surface-to-air missiles
LDP	Liberal Democratic Party	SIGINT	Signals intelligence
LEO	Low Earth orbit	SIPRI	Stockholm International Peace Research Institute
LSG	Leading small group		

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SLBM	Submarine-launched ballistic missile	UAV	Unmanned aerial vehicle
SLOC	Sea lines of communication	UN	United Nations
SRBM	Short-range ballistic missile	USAF	United States Air Force
SS	Submersible ship—also known as diesel-electric submarine	UUV	Unmanned underwater vehicle
SSBN	Submersible ship (ballistic nuclear)—also known as nuclear-powered ballistic missile submarine	VLS	Vertical launch system
SSN	Submersible ship (nuclear)—also known as nuclear-powered submarine	VSTOL	Vertical/short take-off and landing
TACAIR	Tactical aircraft	WMD	Weapons of mass destruction
THAAD	Terminal high-altitude area defense		

SUMMARY

The emergence of the People's Republic of China as an increasingly significant military power in the Western Pacific presents major implications for Japan, the U.S.-Japan alliance, and regional security. But a comprehensive assessment of the current and possible future impact of China's military capabilities and foreign security policies on Tokyo and the alliance, along with a detailed examination of the capacity and willingness of both the United States and Japan to respond to this challenge, is missing from the current debate. Such an analysis is essential for Washington and Tokyo to better evaluate the best approaches for maintaining deterrence credibility and regional stability over the long term.

KEY FINDINGS

- The most likely potential challenge to the U.S.-Japan alliance over the next fifteen to twenty years does not involve full-scale military conflict between China and Japan or the United States—for example, one originating from Chinese efforts to expel Washington from the region.
- The likeliest challenge instead stems from Beijing's growing coercive power—increasing Chinese military capabilities could enable Beijing to influence or attempt to resolve disputes with Tokyo in its favor short of military attack.

- An increase in the People's Liberation Army's presence in airspace and waters near Japan and disputed territories could also heighten the risk of destabilizing political-military crises.
- Significant absolute and possibly relative shifts in the military balance between China and the alliance in Japan's vicinity are likely.
- In the most probable future scenarios facing these three actors, the U.S.-Japan alliance will either only narrowly retain military superiority in the airspace and waters near Japan or the balance will become uncertain at best.
- A significant drop in the potential threat posed by China is also possible if the Chinese economy falters and Beijing redirects its attention and resources toward maintaining internal stability.
- More dramatic shifts in the strategic landscape are unlikely in the fifteen- to twenty-year time frame. Such shifts include an Asian cold war pitting a normalized U.S.-Japan alliance against a belligerent China and a major withdrawal of U.S. presence that heralds either the dawning of a Sino-centric Asia or the emergence of intense Sino-Japanese rivalry with Japanese nuclearization.

U.S. AND JAPANESE POLICY RESPONSES

There are no “silver bullets.” No regional or alliance response can single-handedly deliver a stable military or political balance at minimal cost to all parties involved. Each of the major conceivable responses to these future challenges in the regional security environment will likely require painful trade-offs and, in some cases, the adoption of radically new ways of thinking about the roles and missions of both the U.S. and Japanese militaries.

Three general political-military responses offer viable ways to advance allied interests over the long term.

- *Robust Forward Presence:* This deterrence-centered response is designed to retain unambiguous allied regional primacy through either highly ambitious and forward-deployment-based military concepts, such as Air-Sea Battle, or approaches more oriented toward long-range blockades, such as Offshore Control.
- *Conditional Offense/Defense:* This primacy-oriented response nonetheless avoids both preemptive, deep strikes against the Chinese mainland or obvious containment-type blockades, and stresses both deterrence and reassurance in a more equal manner.

- *Defensive Balancing*: This response emphasizes mutual area denial, places a greater reliance on lower visibility and rear-deployed forces, and aims to establish a more genuinely balanced and cooperative power relationship with China in the Western Pacific.

These responses could be complicated by a number of factors.

- Limits on the ability of Japan or other nations in the Asia-Pacific region to advance substantive security cooperation or embark on major security enhancements
- Unwillingness in the U.S. military to alter doctrinal assumptions in operating in the Western Pacific
- China's own suspicions of alliance efforts that might constrain the use of its growing capabilities
- Low tolerance among stakeholders for uncertainty and even failure during political or diplomatic negotiations over vital security interests

The status quo is likely to prove unsustainable. Despite the potential complications, Washington and Tokyo must seriously evaluate these possible responses. Current economic and military trends in China, Japan, and the United States suggest that existing policies and strategies might fail to ensure a stable security environment conducive to U.S. and Japanese interests over the long term.

1

THE NET ASSESSMENT APPROACH

THE PROBLEM

If the most important story of international politics in the twenty-first century is the growth of the Chinese economy, the second most important story is likely to be the modernization and development of the Chinese military. Having been in the past a large, poorly equipped force known more for employing human wave attacks than for its doctrinal finesse or technological prowess, the People's Liberation Army (PLA) is becoming a truly modern military force equipped with increasingly sophisticated weapons and equipment and greatly improved levels of training, education, logistics, and overall organizational competence.

For decades Beijing has pursued a systematic, well-funded, and determined program of modernizing both its conventional and strategic forces. More recently, the tempo of China's force modernization program appears to have increased significantly and its focus has sharpened, largely in response to continued high levels of national economic growth and as a result of specific concerns over increasing U.S. power projection and related capabilities—as demonstrated in the Gulf Wars and in the Kosovo conflict—as well as growing tensions with the United States and other regional powers over Taiwan and maritime territorial issues in the East and South China Seas. Indeed, for years Taiwan in particular provided the force-structuring and force-sizing scenario for the PLA. Recently, however, China's modernization effort has begun to place a greater emphasis on acquiring more ambitious power

projection capabilities beyond Taiwan to include nearby regions. This military modernization process has created substantial security concerns in the United States, Japan, and many other countries in Asia.

To understand the nature and extent of these concerns, one must understand the assumptions and interests that have shaped Asian (and especially American and Japanese) security policies in recent decades, as well as the type of potential threat to those policies posed by specific Chinese military capabilities and views.

Throughout the post-World War II era, the most critical U.S. security objective in the Asia-Pacific region has been the creation and maintenance of predominant political and military influence across the vast reaches of maritime East Asia. The United States has pursued this objective by maintaining the ability to project superior naval, air, and (to a lesser extent) land power into or near any areas within this region.¹ Such capabilities, along with the development of close political and diplomatic relations and explicit bilateral security alliances with key states such as Japan and South Korea, have sustained a wide range of pivotal U.S. interests, including

- Preventing the emergence of a hostile power in the region that could limit or prevent U.S. access;
- Preventing the emergence or intensification of regional disputes or rivalries that could disrupt overall peace and economic development;
- Ensuring freedom of commerce, market access, and sea lines of communication throughout the region;
- Defending and encouraging democratic states and processes and discouraging the expansion of nondemocratic movements or regimes hostile to the United States; and
- Preventing the proliferation of dangerous weapons, technologies, and know-how across littoral Asia and coping with nontraditional security threats, in particular global and regional terrorism, pandemics, and environmental degradation.

During this period, Japan has played a critical role in supporting many of these U.S. security interests in the Asia-Pacific region. In addition to providing bases and financial support for U.S. forward-deployed forces, Tokyo has acquired, and gradually expanded, the capability to defend its own territories and contiguous spaces and to lend critical forms of “rear-area” and command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) support to U.S. forces operating in nearby areas, thereby reducing the U.S. security burden. It has also deepened its involvement with the United States in the development of key weapons systems—such as ballistic missile defense, purchasing many U.S. military systems, and increasing the level of official, public attention it pays to potential security threats posed by two nearby nations: North Korea and, more recently, China.

At the same time, Japan has continued to confront considerable political, economic, and social constraints on its ability and willingness to develop a more ambitious, regional-oriented military capacity and defense strategy. The Japanese are arguably both ambivalent and yet also increasingly concerned about their external security environment, especially in light of China's expanding development of local power projection capabilities and growing assertiveness toward both maritime territorial issues such as the dispute with Beijing over the Senkaku/Diaoyu Islands and North Korea's pursuit of a nuclear weapons capacity. Although many Japanese citizens are now more inclined to regard China as a security threat, they also remain largely unwilling—especially during an era of slow growth—to devote a greater share of gross national product (GNP) to national defense and continue to support close, mutually beneficial economic relations with Beijing. Indeed, many Japanese view Beijing as an unavoidably critical partner in sustaining Japan's future prosperity and domestic stability, given the nation's increasing level of economic dependence on China. These factors, combined with Japan's long-standing aversion both to higher levels of military spending (above 1 percent of GNP) and the acquisition of a more "normal" force structure designed, in part, to operate beyond the home islands, inevitably create strong levels of ambivalence toward defense issues involving China.

Despite such ambivalence within Japanese society as a whole, many serious Japanese defense and foreign policy analysts, along with many of their American counterparts, have little doubt that China's growing military capacity is altering the security environment facing Japan, America's security interests in Asia, and perhaps the U.S.-Japan alliance in major ways. Specifically, for such analysts, China's growing air, naval, intermediate ballistic missile, C4ISR, cyber, space, and overall power projection capabilities, especially in the larger context of Japan's ongoing domestic political turbulence and America's own domestic distractions, are threatening to erode U.S. predominance in the Western Pacific, overshadow long-standing U.S. sanctuaries in Japan, increase security anxieties among many Asian nations, and thereby potentially challenge strategic stability in Northeast Asia.

Of particular concern to American and Japanese defense analysts has been the development of what has been called the "antiaccess and area denial" (A2/AD) capabilities of the Chinese armed forces, as well as their ability to project power well beyond their borders. Because the United States would need to deploy and sustain its forces over thousands of miles in any military conflict in the Western Pacific, Washington's concern is that the Chinese are developing forces whose primary purpose would be to deny the U.S. military access to the region while the Chinese themselves were projecting power directly onto a nearby objective. Such an "antiaccess" or "counterintervention" operation might begin with cyber or physical operations against command-and-control nodes together with American space-based ISR assets.² These initial attacks might be followed by air, missile, or special operations attacks on U.S. naval surface combatants, logistical facilities, and U.S. air bases or seaports in the region.

The intent of these actions would be to interfere with American and Japanese intelligence gathering, lengthen the decisionmaking process in Washington and Tokyo, and ulti-

mately slow the U.S. military response to events unfolding in the Western Pacific, such as a crisis over Taiwan or other disputed territories. In the “area denial” component of the operation, an integrated air defense capability would work to keep U.S. aerial forces at bay, while American sea forces would be kept away with mines, together with missile and submarine attacks—or perhaps just the threat of attacks—on aircraft carriers and other critical naval assets. The Chinese purpose would be to deny the area near the objective to U.S. military forces and keep these critical power projection capabilities at a distance. Overall, these A2/AD capabilities, combined with emerging Chinese power projection operations and a larger overall presence in areas near Japan, might allow the PLA to accomplish its mission without having to confront U.S. military capabilities directly.

The U.S. military in particular is very concerned about this emerging capability, not just with regard to specific contingencies such as a crisis over Taiwan but also as it affects the overall capacity of U.S. forces to perform the missions listed above. As early as 1995, Air Force Chief of Staff General Ronald Fogleman noted that “saturation ballistic missile attacks against littoral forces, ports, airfields, storage facilities, and staging areas could make it extremely costly to project forces into a disputed theater, much less carry out operations to defeat a well-armed aggressor. Simply the threat of such enemy missile attacks might deter the [U.S. and] coalition [partners] from responding to aggression in the first instance.”³ In 1995 the threat was more theoretical than real, as analysts were simply examining worldwide trends in the development of ISR, command-and-control, and precision-strike capabilities. Today, however, the challenge is moving beyond the theoretical. In its 2008 report on the military power of China, the Defense Department reported to Congress that

the PLA appears engaged in a sustained effort to develop the capability to interdict or attack, at long ranges, military forces—particularly air or maritime forces—that might deploy or operate within the Western Pacific. Increasingly, China’s antiaccess/area denial forces overlap, providing multiple layers of offensive systems, utilizing the sea, air, space, and cyber-space.⁴

Augmenting their growing A2/AD-type capabilities, the Chinese are also steadily developing the ability to project power beyond their borders. Although China’s focus on Taiwan has long been recognized, according to the Defense Department, “China continues to invest in military programs designed to improve extended-range power projection. Current trends in China’s military capabilities are a major factor in changing East Asian military balances, and could provide China with a force capable of conducting a range of military operations in Asia well beyond Taiwan.”⁵ Moreover, some Chinese defense analysts have been arguing, unofficially, that to defend its national interests and add strategic depth to its homeland, China needs to acquire so-called far sea defense capabilities that emphasize the ability to execute multidimensional precision attacks well beyond the first island chain.⁶ According to the Pentagon, proponents of this strategy assert that “China requires a greater number of large- and medium-sized warships, carrier-based aviation, improved C4ISR, and more long-range support vessels.”⁷

To support its ambitious program of military modernization, China has pursued double-digit defense spending increases for the past decade, currently equivalent to approximately 2 percent of the gross domestic product (GDP) of what is now the second-largest economy in the world, and what could be the largest economy by 2035, if not sooner. By contrast, Japan's defense budget has shrunk to less than 1 percent of GDP and is still declining. Though the two countries started at very different levels of technology and force composition, it is increasingly clear that China is overtaking Japan in several key military areas, and that Japan is growing more, not less, dependent on the United States for its defense. Simultaneously, the United States is deploying substantial forces to Guam and is expanding its overall military presence in the Asia-Pacific. This is partly in response to China's growing military capabilities and presence in the region.

Very little of this shifting military situation is discussed publicly in Japan, although various nongovernmental, anti-China groups occasionally draw attention to it. Beijing, meanwhile, has for most of the past several decades deployed its best diplomatic assets to convey a pacific image to the Japanese public. This effort, along with China's growing economic importance to Japan and the deeply rooted Japanese resistance to military spending, have forestalled a clear and strong consensus developing in Japan against a "China threat" requiring major increases in military capabilities, despite arguably intensifying altercations with Beijing over maritime territorial disputes and historical issues arising from past Sino-Japanese conflicts. Moreover, any clear or decisive moves by Tokyo regarding this issue are further constrained by the general policy paralysis resulting from the current instabilities and uncertainties of Japan's domestic political process and overall focus on internal reform.

Adding to this situation, the United States has reached defense budget levels that will be difficult to increase, if necessary, amid swelling deficits and conflicting social priorities. The F-22, for example, would have been a force multiplier, replacing Japan's aging F-15s and F-4EJs against China's third- and fourth-generation fighters, as well as a possible substitute for all frontline U.S. fighter forces in the Western Pacific, but the United States is ending production of that aircraft earlier than planned. Moreover, Japan has inadequate missile defenses (in both number and sophistication) to protect its population, infrastructure, and defense facilities against the People's Republic of China's (PRC's) steadily growing intermediate-range ballistic missile capability. These missiles, along with China's growing number of advanced fighters with offshore, long-range capabilities, also potentially threaten U.S. bases on Japanese territory. As a result, the potential trade-offs between the United States and Japanese budgets necessary to meet China's rising capabilities are getting more difficult by the year.

Few civilian policymakers in Washington and Tokyo are prepared to address this changing correlation of forces in a comprehensive and long-range manner. For Japan, doing so could involve wrenching decisions about defense spending and the nation's strategic posture that might alter decades of minimalist policy. For the United States, it would possibly entail tough policy choices about defense budgets, weapons systems, deployments, and alliance expectations in the Western Pacific, as well as striking a very different balance between cooperative engagement and hedging in the relationship with China.⁸

At present, one key and missing element in this decision process is an active Japan that will debate and decide how to respond to the Chinese challenge. Also missing so far is an integrated American regional concept or strategy that takes into account both the real uncertainties confronting future U.S. and Chinese defense spending and the complexities of U.S. relations with both Beijing and Tokyo.

Preparation of a credible, fact-based net assessment of (1) the current and possible alternative future military capabilities and accompanying national security and defense strategies, policies, and actions of China, Japan, and the United States and (2) the impact of such alternative assessments on the security environment in the Western Pacific will sharpen our understanding of this problem and perhaps force debate in both Tokyo and Washington over the future of the United States–Japan security alliance. It would do so by confronting the publics (and some elites) in both countries with inconvenient truths and trade-offs in policies and capabilities they might otherwise prefer to ignore. Most important, it would provide the basis for a more sophisticated and in-depth examination of the larger strategic and policy implications for the United States and Japan of the rapidly changing Sino–Japanese military dynamic. Thus far, none of the major scholarly or unclassified U.S. and Japanese governmental analyses of PLA modernization and the evolving China–Japan–United States strategic relationship provide such an examination of this issue. This project would thus inform subsequent decisions, and continue to do so as updates are periodically produced.

THE INTELLECTUAL APPROACH: NET ASSESSMENT

One approach—designed to analyze, in comparative fashion, the relative military capabilities and strategic outlook of countries—that has been widely used in the defense community is called “net assessment.”⁹ Various regional and functional net assessments conducted within the Office of the Secretary of Defense’s Office of Net Assessment have, over the years, had a major impact on the development of American strategy.¹⁰ In fact, since its introduction more than forty years ago, the net assessment approach has been so successful that a number of different organizations and individuals—both inside and outside government—have adopted the term and at least some elements of the approach to analyze the interaction in a specific domain of two or more entities engaged in a long-term competitive or interactive process. Sometimes these efforts have been successful, and sometimes they have not. From the 1970s to the 1990s, for example, various Net Technical Assessments, conducted under the aegis of the Defense Science Board, were very useful in comparing the position of the United States relative to certain competitors (principally the Soviet Union) in specific technological domains. The information derived from these reports influenced secretarial-level decisions within the Defense Department on research-and-development investment and weapons acquisition. Other attempts at using a derivative of the net assessment approach have proven less useful. The Joint Military Net Assessment, for example,

and the Joint Forces Command's Operational Net Assessment were both efforts to bureaucratize and routinize the approach that, for various reasons, no longer exists.

One of the major challenges in understanding how net assessments have been done in the past is that some of the best and most influential are still highly classified and were, when written, usually intended for a very small audience—policymakers who could make a difference with regard to the challenges and opportunities presented by the assessment. Nevertheless, there are enough examples in the open literature and enough material in academia and elsewhere that one can make some general observations and obtain some insight into the approach.¹¹

Net assessment has been described in a number of ways and defined differently by different authors. Eliot Cohen describes it simply as “the craft and discipline of analyzing military balances.”¹² Cohen's definition and the approach he describes can be very useful in conducting an assessment of an ongoing conflict or one that is on the verge of becoming kinetic—as might be the case, for example, on the Korean Peninsula or in certain parts of the Middle East. In an analysis of the future security environment of the Western Pacific, however, though an appraisal of the current military balance might be useful, it would be difficult to address the *future* of the balance without a more comprehensive study of what the relevant military forces and capabilities are likely to look like fifteen or twenty years from now and how many nonmilitary factors—such as leadership views, social attitudes, and exogenous events—might influence the future security environment. Moreover, Cohen's approach is clearly more useful in times of actual physical conflict and less useful in examining the long-term peacetime competition or comparative interaction between the national security systems of two or more nations.

Stephen Rosen, another expert on net assessment, uses the term more broadly to mean “the analysis of the interaction of national security establishments in peacetime and in war.”¹³ By bringing the entire national security establishment of the various competitors to bear, Rosen's approach addresses the importance of the peacetime competition as well as the wartime competition, including both military and nonmilitary factors. In a broader sense, using Rosen's approach one could envision national security establishments as opposing systems, each with political, financial, military, technological, and other dimensions in some sort of competition with one another. Still, there are elements outside a nation's security establishment that can have an impact on the long-term strategic competition between them, particularly in a region as politically and economically dynamic as the Western Pacific, and when considered over a period of fifteen to twenty years, the timeline employed in this study.

Although both these characterizations are useful, for the current analysis the best definition might be the official one offered by the U.S. Department of Defense, which calls net assessment “the comparative analysis of military, technological, political, economic, and other factors governing the relative military capability of nations. Its purpose is to identify problems and opportunities that deserve the attention of senior defense officials.”¹⁴ So, though Cohen's approach is useful in reminding the analyst that, in a net assessment, the

military nature of the competition is of critical importance, and Rosen reminds the analyst that strategic competition can take place in peace as well as in war and that *elements of the national security establishment, beyond those that are purely military*, can have a major impact on the competition, the Department of Defense captures the fact that to analyze the strategic competition fully, one needs to also consider aspects of the technological, political, social, and economic dynamics—especially when examining a specific competition over the long term. In a sense, then, though none of the definitions individually captures the full essence of net assessment, collectively they offer insights as to what net assessment is, what its principal characteristics are, and why it has proven so powerful over the years.

Net assessment is often described as a methodology. Methodologies, however, typically possess a body of practices, policies, and rules used by those who work in the area; net assessment does not.¹⁵ Instead, it is, as Rosen argues, an “intellectual approach” substantially different from others in that it is “designed to pose and answer, however imperfectly, the strategic questions facing the United States.” By strategic questions, Rosen means “those surrounding the Clausewitzian conception of strategy, which is the use of military campaigns to obtain the political goals of the nation, but also the questions involving the peacetime problem of obtaining national goals by military competition short of war. It is concerned with the question of what the war will look like and what the character of our long-term competition might be.”¹⁶ Paul Bracken, another analyst experienced in net assessment, uses different words, but he appears to agree in principle. “The best way to define net assessment,” he argues, “is to understand that it is a practice. It isn’t an art (like military judgment), nor is it a science (like chemistry). Rather it’s a way of tackling problems from certain distinctive perspectives.”¹⁷ Conducting a net assessment, therefore, is not employing a specific set of techniques to derive answers as to the shape of the future security environment in the Western Pacific. Instead, it involves establishing an understanding and applying an intellectual approach designed to pose and answer the most important *strategic* questions about the future security environment and to present plausible alternative versions of that environment, from a comprehensive and long-range perspective, taking into account all relevant factors, both military and nonmilitary. This broader perspective is why, in this study, we used the term “*strategic* net assessment,” and not merely “net assessment.”

One more defining element of a net assessment is that it is intended to be a “net” assessment—that is, a comparison of two or more sides in interaction with one another, whether deliberate and calculating or not.¹⁸ This is in distinct contrast to an intelligence assessment, which focuses exclusively on an opponent’s capabilities. This difference is critical in at least two respects. From a practical point of view, though both kinds of analysis should provide a comprehensive overview of the opponent’s capabilities, only a net assessment requires the analyst to have an understanding of the capabilities of *friendly* forces. Although obtaining an understanding of friendly forces sounds easy—especially for government analysts—it can be anything but. In some instances, the relevant information simply may not be readily available. Neither the United States nor any other military has ever really faced a comprehensive antiaccess or area denial-oriented set of capabilities, for example, especially one

that integrates cyber and kinetic capabilities. It is doubtful, therefore, that anyone has ever developed an inventory of “counter-A2/AD” forces in the U.S. military. In other instances, the individual military services might have bureaucratic reasons for not sharing the precise details of their capabilities with the other services or with civilian policymakers. The U.S. Navy might not be willing to share the vulnerability profile of a modern aircraft carrier, the details of which might make a significant difference in the ability of the United States to counter an A2/AD-based strategy but might also be used in the budgetary battles with the other services. Similarly, the Air Force might not be completely forthcoming on the capabilities of current aircraft—especially if it is involved in budgetary battles trying to justify a new one.

If there are difficulties sharing information within the Pentagon, assessing the capabilities of allies can be even more challenging. Just as the U.S. military may not be prepared to share its most secret and sensitive information with the Japanese military, presumably the Japanese may not be willing to share everything with their American counterparts. In short, developing a comprehensive understanding of friendly capabilities might be as hard as developing an understanding of the potential adversary.

The inclusion of friendly forces is not the only difference between a net assessment and other kinds of analysis. In a net assessment, the focus is not on one side or the other but on the evolving *interaction* between the competitors.¹⁹ In an assessment of the future security environment in the Western Pacific, therefore, the analysis should concentrate on the relative power projection and A2/AD capabilities of the two sides and how they might interact with one another in a particular battlespace or domain and given a particular set of strategic priorities, policies and outlooks—and not just provide a laundry list of Chinese, Japanese, and U.S. capabilities. How the United States–Japan alliance might respond to an A2/AD challenge is (presumably) highly classified and certainly somewhat conjectural. As a result, it is not only difficult to know when and how the Chinese might execute A2/AD operations, but it is also difficult to know how effective the United States might be in countering the cyber, undersea, missile, and other kinds of attacks that might be part of such a campaign.

To understand the net assessment approach, one must not only understand the definition of the term; one must also understand the principal characteristics of the approach. In this study, we focus on the following characteristics of net assessment:

- Employs a broad-based approach;
- Focuses on the long-term nature of the competition;
- Recognizes the importance of trends;
- Acknowledges the critical nature of national differences;
- Realizes the importance of asymmetries; and
- Identifies the critical domains of competition.

Broad-Based Approach

One of the advantages of the net assessment approach used in this study is that it is broad-based—it is not focused on military factors alone but also integrates a number of other elements that bear on a state's overall military capability and willingness to employ force. As the U.S. Department of Defense definition notes, net assessment is a comparative analysis of military, technological, political, economic, and other factors. Because many, if not most, assessments focus on the future, net assessments recognize that today's political, diplomatic, and economic circumstances will have a major impact on establishing the military budgets and strategies for tomorrow, which in turn will be the basis for military capabilities and behavior that exist the day after. The importance of conducting a broad-based analysis is particularly salient with regard to the future security environment in the Western Pacific. Quite clearly, for instance, China's ability to influence the region depends to a great extent on the future pattern of economic growth in the PRC and on the political willingness of Chinese decisionmakers to continue spending billions on military modernization and deploy weapons systems in the areas around Japan.

Similarly, political factors—especially in Japan but also in Washington—are going to be major determinants of how the alliance responds to the Chinese challenge. Technologies—and the ability to use technologies—will also make a difference. Undersea, stealth, space, information systems, and command-and-control technologies are rapidly evolving; the ability of the various countries to use these developments in their military forces will certainly make a difference in how the balance changes over time. There are also other factors that might make a difference. Demographic shifts already apparent in Japan are becoming increasingly important in China and could make a difference. Extraregional events—especially those affecting energy—could also influence the trilateral equation. And unanticipated or sudden paradigm-shifting exogenous events, such as major crises sparked by local incidents or shifting policies of other states—as well as unexpected, major, and relatively rapid shifts in military technologies—could also generate changes in the military balance.

Of particular importance, however, the reason for looking at political, economic, technological, demographic, and other variables is to understand the effect they are likely to have on the *strategic competition, usually through their impact on security policies, military forces, and military activity*. A net assessment of the future security environment in the Western Pacific, therefore, would not necessarily include a wide-ranging analysis of the Japanese political landscape. Instead, it would focus on those aspects of Japanese politics that bear on the future security environment and future foreign and defense policies generally, and on power projection and A2/AD competition more specifically. It might, for example, include an analysis of the Japanese public's feelings toward the military and toward a potential threat from China, a more detailed look at the attitudes of policymakers toward increasing (or decreasing) defense spending in the wake of Chinese assertiveness, and an assessment of the behavior of those defense analysts, military officers, and bureaucrats who will actually work on the issues and build the force that will respond (or not) to Chinese initiatives. A

similar political analysis might be necessary for the PRC and the United States. In the same vein, an economic analysis would be important primarily for its impact on defense spending and perhaps its influence on the nation's technology base.

Focus on the Long Term

Another of the defining characteristics of the net assessment approach is that it focuses on the long-term competition between international actors. America has often been criticized for working on a time horizon equal to one, or at most two, presidential terms. Moreover, most analytical techniques and methodologies within the government focus either on an immediate military issue or on the implications of certain budgetary changes. The problem, of course, is that the budget's time horizon is five to seven years, but international interactions and national security competitions do not usually end every five years and start anew; they are more often long term and continuing. The Cold War lasted almost forty-five years, and America's competition with Islamic extremism began well before the terrorist attacks of September 11, 2001, and has no end in sight. In the same context, though the nature of the political-economic-military competition between China, on one hand, and the United States–Japan alliance, on the other, will certainly evolve over the next several decades, it will likely last well into the twenty-first century. These are long-term competitions. As Paul Bracken notes,

One of the great contributions of net assessment is that it calls for consciously thinking about the time span of the competition you are in. Change that is imperceptible on any given day can produce large effects viewed over time. For example, one way to look at China is to focus on the decision of whether or not Beijing's leaders will attack Taiwan. This, of course, is an important question, but it leaves a great deal out. Changes in China's military capacity from one year to the next are small. Yet looked at over a time span of 20 years, one sees a very different picture.²⁰

But the compounding nature of small changes is only one reason why the long-term perspective of net assessments is useful. There are several other reasons why policymakers need to consider the long term. First, of course, it puts various aspects of a particular conflict in perspective. Although the term "Cold War" certainly described one dimension of the interaction between the United States and the Soviet Union, understanding it as a "long-term competition" provided an entirely different—and sometimes very useful—strategic perspective. Some argue, for example, that while bombers were not the best and most efficient nuclear delivery mechanism during the Cold War, they played a little understood role in U.S. strategy: "By continually adding new planes and cruise missiles to the U.S. arsenal over the past three decades, Washington has forced Moscow to invest heavily in such purely defensive weapons as anti-aircraft missiles. Over the years, this investment has been expensive for the Soviet Union, and at the same time, it is less threatening to the United States than Soviet investment in tanks, ballistic missiles, or other offensive weapons."²¹ In fact,

when thinking about conflicts as a form of long-term competition, a variety of potential cost-imposing or competitive strategies becomes potentially useful. Thus, in the long-term competition in the Western Pacific, though China's rate of military modernization might be a reason for concern, it is certainly not a reason for panic; there are both military and nonmilitary actions the United States, Japan, and others can undertake and strategies they can adopt that can improve their relative positions in the long term. This study examines such actions and strategies.

There is yet another reason for focusing on the long-term nature of the competition. Modern history has shown that it can sometimes take decades to build new weapons systems, to change military doctrines, to restructure military organizations, or to build the foundations for an alliance. The requirement for an advanced technology fighter to replace the American F-15 Eagle, for example, was developed in 1981; the first-production F-22—the aircraft that filled that role—was not delivered until 2003, twenty-two years later. There are some indications that, as early as 1992, the Chinese government authorized studies on building an aircraft carrier; twenty years later, the studies have apparently resulted in a decision to build a small number of carriers.²² Moreover, the general consensus among naval professionals is that it would likely take most of a decade before even one carrier became combat-capable.

Although it may take a long time to build and deploy new weapons, once in the system, they tend to stay there for a long time—though they may be frequently updated. The U.S. Air Force's B-52 has been a mainstay of the U.S. strategic bomber force since 1955; one of America's most powerful warships, the aircraft carrier *Enterprise*, was launched in 1961 and is not due for decommissioning until 2013 (a date that may be extended until 2014 or 2015), and the U.S. Army's highly valued M1 tank entered service in 1980. Although the PLA no longer hoards outdated equipment like it once did, the Chinese still keep military matériel around for decades. The PLA Air Force, for instance, still has several models of fighters based on 1970s technology. So, many of the most expensive weapons built today and tomorrow by Tokyo, Washington, or Beijing will still be in the inventory twenty or more years from now. It is incumbent on policymakers to understand the strategic environment in which these platforms could be operating.

Developing new weapons systems is not the only thing that takes time. Changing military doctrines and operational concepts can also be a difficult and time-consuming task. In the United States, for example, despite widespread agreement on the need for a change in battlefield doctrine, and the fact that it took place primarily within one service, it nevertheless took the U.S. Army nine years (from 1973 to 1982) to change its doctrine from "Active Defense" to "AirLand Battle." More profound doctrinal changes—several of which appear to be taking place in the different services within China today—could well take a generation or more to implement fully. Similarly, building effective alliances can also take time. One of the things that make the North Atlantic Treaty Organization (NATO) so unique and potentially effective is that it has built an entire infrastructure to integrate the capabilities of the various members. The NATO command-and-control system, various standard-

ization agreements, logistics agreements, and other elements of the North Atlantic Alliance are the product of decades of study and negotiation. Though the United States–Japan alliance has some operating agreements in place, it could well take a number of years—even if the political will existed—to build an infrastructure that would solidify and enhance the capabilities of the alliance.

In short, to make reasonable and rational decisions on which weapons, operational doctrines, organizations, and processes they will need to achieve their national strategic objectives in the Western Pacific during the next fifteen to twenty years, decisionmakers in Washington and Tokyo must have some notion, today, of how that environment could evolve. The net assessment approach focuses on the long-term competition or interaction and tries to capture how elements of this process, along with related determinants of behavior such as the security views of the political leadership, might evolve over the next ten to twenty years. Indeed, the ability of net assessments to look far into the future complements the budget process and is perhaps one of the most important features of the approach.

The Importance of Trends

Simply understanding the current military, political, economic, technological, and other situations that exist in China, Japan, and the United States is a far cry from understanding how they will affect the security environment fifteen to twenty years from now. Moreover, trying to predict which events might occur in the future is a fool’s errand. However, it is possible to identify particular trends in these domains and the varying effects different trends might have on both security perceptions and the overall balance. Indeed, although all assessments are organized and structured differently, at the heart of many—if not most—is an analysis of trends. The determination of which particular trends are relevant to any specific assessment is a key to success. In the past, assessments have looked at different combinations of political, social, economic, demographic, technological, and military trends. In this assessment of the future security environment in the Western Pacific, we clearly need to analyze certain trends within these domains that affect the power projection—specifically A2/AD competition—in the region, as well as the strategic outlooks and actions of the United States, Japan, and China.

The reason net assessments often focus on trends is quite simply momentum; it is extremely difficult for governments, large organizations, institutions, or nations to change direction in short periods of time. Extrapolating from existing institutional or national trends and assessing how they might interact with one another over time and under differing conditions is one way of determining how the future might evolve. Barring any major exogenous shocks, for example, most analysts assess that fairly robust levels of Chinese economic growth are likely to continue for at least several more years—though the specific rate of growth might be contentious. In fact, the variability of this particular trend is central to any analysis of long-term security in the Western Pacific.

Trends within military institutions are also difficult to change. Stephen Rosen writes, “Military forces are large organizations that are products of their societies and political systems, as well as their own organizational histories and cultures. Because they are large and reflect long-standing values in their home countries, they will have certain persistent tendencies. Although the means that are used to carry out certain missions can and will change more or less quickly in wartime, certain patterns of behavior will persist.”²³ Thus, one way to estimate the defense budgets of the United States, China, and Japan into the future is to look at the trends over the past several years. How large are they? Have they been going up? Down? Is it possible to pinpoint a reason for the trend? Are there specific sub-trends within the defense budget that are important? What about their spending on power projection capabilities? Just as it is possible to identify a trend with regard to the defense budget overall, one can make judgments on the kind of weapons systems a country might buy in the future and at what rate by analyzing the kinds it has bought in the past and their rate of acquisition. Have past purchases focused on the units and matériel that might be needed for territorial defense, for protecting sea lines of communication, or for power projection? Do they have a preference for ground, sea, or air forces? Which doctrinal tenets seem to be consistent in a nation’s operational concepts? At what rate have specific systems been deployed? These are but a few of the questions a net assessment approach would pose.

One of the real innovations of the net assessment approach is the explicit recognition of the importance of political and bureaucratic behavior in analyzing defense policy. Most American defense analysts have long recognized that both types of behavior (and especially the latter type) exert a large impact on U.S. national security policy. Indeed, the instances of the individual services acting in a way to increase their budget and influence with regard to the other services, and within the political system, are legion. It was, however, not until net assessments undertook detailed analyses of various aspects of foreign defense policies that analysts began to understand the degree to which other countries’ actions and policies were influenced by their internal politics and bureaucracies as well. Arguably, in fact, nations often take actions that have very little to do directly with a rational calculation of their strategic interest; instead, they are sometimes the outcome of specific bureaucratic interactions and political calculations. Paul Bracken notes that the Soviet Union “never optimized its strategy against the United States in the sense of allocating resources to an efficient production schedule of weapons matched to American weaknesses. A good deal of Soviet weaponry was better analyzed by understanding the design bureaus that produced it. Bureaus with political clout, those with prestigious design teams, consistently received a disproportionate share of Soviet defense capital.” He goes on to note that the same point is relevant today and with respect to other actors.²⁴ It is a fair bet that some of the specific power projection and antiaccess capabilities developed by Beijing, Tokyo, and Washington have less to do directly with the strategic environment than with domestic politics and bureaucratic dynamics. Net assessment offers the framework within which to examine these issues.

Though trends are critical in the conduct of most assessments, it is important to recognize that not all trends continue forever. As the economist Herbert Stein famously pointed out, “If something cannot go on forever, it will stop.” The reasons that trends do not go on forever are varied. Some begin to fade because they generate their own feedback mechanisms. At some point, for example, the Chinese military could determine that it has enough missiles facing Taiwan and the trend of deploying more and more accurate missiles in the area will decline. Similarly, the Chinese economy is large and complex, but eventually one of the many feedback mechanisms inherent in modern economic systems will begin to play a larger and larger role. At some point, for example, the production of goods might demand so much energy and so much raw material that the price of inputs will rise, increasing the price of manufactured goods, decreasing world demand, and slowing the economic rate of growth. Political, economic, demographic, technological, military—all these trends will eventually generate feedback mechanisms of some sort. Determining how long these trends will last before these mechanisms begin to erode their effect is a challenging analytical task in any assessment.

A second reason that trends can change or fade away is their interaction with other trends. Too often, analysts predict a specific trajectory for various trend lines without considering the fact that they can and will interact with one another. Political, economic, social, and military trends can interact with one another to produce a result that no one foresees. At the macro level there are several instances in which declining economies have led to changes in government—and sometimes even coups d’état. Indeed, there is a general consensus that in the late 1980s political, economic, and military trends in the former Soviet Union interacted in such a way as to bring about the downfall of the country. There are also instances in which the size and/or nature of military spending has been affected by political or economic trends. The key point is that in analyzing the impact of various trends on the long-term competition, it is important to understand how each of them might interact with the others.

Although it is certainly true that change is difficult for states and other large institutions, it can and does happen, often in conjunction with a traumatic external event sometimes called a “trigger point.” American politics, American society, and U.S. defense spending changed dramatically in the aftermath of 9/11. Though a net assessment tries to explain the implications of key trends that last for years, it frequently also tries to identify which set of circumstances or events—what “trigger points” or “wild cards”—could occur in the region that would dramatically alter the nature of the security environment. Some changes that might be important in the Western Pacific might be a trigger point that results in a greater willingness in Japan to confront China, a determination in the United States to build and deploy more (or fewer) aircraft carriers, or a decision in Beijing to decrease its power projection capability or to become far more assertive in deploying such a capability. Understanding the nature and likelihood of these trigger points could lead to important insights about the security environment and possibly even policy prescriptions.

The Critical Nature of National Differences

One key to understanding the intellectual approach underlying net assessments is to appreciate the degree to which it emphasizes the importance of national differences—in operational concepts, in organizational constructs, and in decisionmaking. In this context, net assessment stands in contrast to other approaches that often ignore national differences and concentrate on the armaments available to military forces. One of the most common techniques for comparing the relative capabilities of military forces, for example, is to compare the two sides in a quantitative side-by-side analysis. In this kind of evaluation, the analyst focuses on how many and what kinds of tanks, ships, and aircraft each side has. With regard to the security environment in the Western Pacific, in particular, it is common to read articles comparing at least portions of the forces available to each side with those of the other. For example, there have been discussions comparing the number of fourth- and fifth-generation fighters in the U.S. and Japanese militaries, on the one hand, and in the Chinese military, on the other; or the lack of aircraft carriers in the PLA Navy with the eleven in the U.S. Navy; or the number and type of ground-based army, marine, or naval infantry units that might be capable of executing amphibious operations in and around Taiwan. Sometimes these analyses even extrapolate and provide estimates of what each side might have some years into the future. Although these kinds of comparisons can sometimes be useful and certainly have some utility in an assessment of the future security environment in the Western Pacific, in a net assessment, a listing of forces would provide only the first step.

A net assessment would demand more than a simple quantitative comparison; it would require an in-depth analysis of the so-called soft factors that are so critical to understanding the outcome of military interaction. Even Eliot Cohen, who uses the narrowest definition of net assessment as the appraisal of military balances, believes qualitative factors are key to any assessment. “Net assessment requires thorough understanding of an opponent’s style of warfare and an effort to see how it interacts with one’s own,” he writes. “In order to get beyond mere ‘bean counting’ ... it is necessary to understand how each side characteristically operates its forces, and then to speculate as intelligently as possible about the significance of those facts.”²⁵ A purely quantitative comparison would not capture the potential dangers, for example, of a Chinese doctrine that successfully employed A2/AD-type capabilities, nor would it assess the value of the training, organization, matériel, combat experience, and leadership available to the opposed military forces. The failure to include soft factors is a common one in military analyses.

Just before the First Gulf War, for example, studies comparing the quantity of armaments available to the Iraqis and the American-led Coalition forces showed that whereas the Iraqis did not have as many aircraft, they had an overwhelming advantage in the number of men under arms and that the two sides had a similar number of tanks and artillery pieces (though the Coalition was recognized as having far more modern equipment). In fact, going beyond simple static comparisons of forces, computer simulations indicated that, though Coalition forces would likely win, the fight would be a hard one; the

U.S. Army alone was expecting thousands of casualties. In the event, of course, that the American-led Coalition achieved its military objectives in 100 hours with minimal loss of life. The quantitative comparisons—even those that used the most up-to-date computer simulations—could not capture the effects of doctrine, training, leadership, morale, experience, and the quality of matériel on the battle. In another famous example, before the onset of World War II, French intelligence organizations were well aware of the numbers and types of armaments possessed by the German armed forces and correctly assessed that the French had more and better tanks than the Germans. However, the French knew nothing of the doctrine of blitzkrieg and did not understand the nature and quality of the leadership and training in the Wehrmacht. As a result, they underrated the capability of the German armed forces with disastrous consequences.

Given these examples, it would be reasonable to assume that the American Way of War, the Chinese Way of War and the Japanese Way of War are likely to be very different from one another. Simply counting equipment is not likely to offer much insight into the outcome of a conflict involving the three nations. Far more useful than a mere recounting of the number and type of forces that might be available in the future would be an assessment of how these forces might be used, how well they are trained, how well they are organized, and how effective their leaders are.

A second, related problem with many current methods of analysis is that they tend to assume that decisionmakers in different countries think similarly. Nothing could be further from the truth. In fact, the evidence is fairly clear that the factors that might deter or influence an American policymaker might not have the same effects on Russian, Chinese, or Japanese policymakers. The intellectual approach underlying net assessments almost takes it as a matter of faith that history, culture, geographic position, national institutions, and other factors influence all members of a country's population, from its lowliest soldiers and bureaucrats to its highest-level decisionmakers. Stephen Rosen writes that net assessment seeks “to avoid the natural tendency to assume that the enemy would behave as we would were we in his position or that our forces would engage like forces on the enemy side.”²⁶ These differing views are often attributed to differences in strategic culture, and a net assessment would certainly analyze elements of strategic culture if appropriate. Sometimes, however, less comprehensive views can be useful. It may not be necessary, for instance, to have a full and comprehensive grasp of Chinese strategic culture to understand how and why members of the Chinese leadership value Taiwan so highly that they would fight for it or how deeply pacifism influences Japanese international behavior and the conditions under which it might give way to a willingness to fight. In a purely military vein, a net assessment would not assume that Chinese methods of power projection would necessarily mirror American techniques. Indeed, there may be a notion of power projection “with Chinese characteristics.” Just as important and certainly more complex is an understanding of how specific countries perceive the actions of others. How, for example, might the Chinese characterize American strategy in the Western Pacific? How might they characterize Japanese strategy? Do the Chinese really believe Japan poses a challenge to the PRC, and if so, what sort of challenge?

A failure to understand the impact of history, geographic position, culture, political system, and myriad other factors on strategic and military decisionmakers is one reason why many methods of analysis produce incomplete or flawed conclusions. This failure can be particularly problematic with regard to understanding how an opponent assesses the relative capabilities of military forces. Eliot Cohen quotes Winston Churchill as saying, “Always remember, however sure you are that you can easily win, that there would not be a war if the other man did not think he also had a chance.” Cohen goes on to note that “one might paraphrase Churchill to say that strategic competition would not occur if the other side thought its position hopeless; and there may not be peace if the other side thought it could win a war.”²⁷ Because one of the purposes of this analysis is to explain how and why the military capabilities of China, Japan, and the United States might evolve in the Western Pacific and how these military forces might be used—in both peacetime competition and in war—it is critical to recognize that decisionmakers in different countries might well think differently about strategic issues.

The Importance of Asymmetries

From the analysis of political, economic, military, technological, and other trends and of national differences—particularly in doctrine or operational concepts, organizational constructs, training, matériel and equipment, combat experience, quality of leadership, quality and quantity of personnel, and basing facilities—most net assessments attempt to identify the major asymmetries that exist between competitors. The purpose of identifying asymmetries is to specify challenges and opportunities for senior policymakers, so the “analysis of asymmetries ... must go beyond crudely obvious differences of political purpose, economic strength, and geographic location.”²⁸ In fact, as the term is used in net assessments, asymmetries generally have three central characteristics. First, they are not simply differences between competitors, but they are differences that potentially tilt the military balance one way or the other. The quality of equipment, for example, may be one area in which differences exist between the two sides, but unless that difference could make a serious difference in the overall outcome, it is not an asymmetry in net assessment terms. During the First Gulf War, the quality of equipment and the training of soldiers were clearly asymmetries that tilted the balance in favor of the allies; in the German invasion of France during World War II, there were several asymmetries—in doctrine (blitzkrieg versus static defense), organizational constructs (panzer divisions versus infantry divisions) and the quality of leadership—that tilted the balance in favor of the Axis. In both instances, other differences existed between the two forces, but these were the key asymmetries.

A second characteristic of asymmetries, as the term is used in net assessments, is that they generally consist of differences over which policymakers have some control. Although it is certainly possible to list dozens or even hundreds of differences between the power projection capabilities of the United States–Japan alliance on the one hand and the PRC on the other—some of which might even make a difference in the outcome of the strate-

gic competition—many of these are not under the control of policymakers. Geographical location, forms of government, and the nature of each nation's economic system may make a difference in the nature of the competition and should certainly be taken advantage of or taken into consideration, but there is very little the policymaker can do about them. Asymmetries in net assessment are generally more subtle and exploit doctrinal differences, alternative design philosophies, bureaucratic propensities, and so on. During the Cold War, for example, the Soviets had such an overwhelming advantage in the number of maneuver units that they had to attack in multiple echelons. This particular asymmetry allowed NATO to develop a unique follow-on-forces-attack counterdoctrine that was based on the alliance's asymmetric advantages in ISR, C4, and precision-strike technologies.

Finally, asymmetries in net assessment are generally areas in which the advantage of one side or the other can be sustained for a period of time.²⁹ For policymakers to spend time, effort, and resources on opportunities that offer only a short-lived advantage would be foolish. This assessment of the future Western Pacific environment is, after all, designed to examine the evolution of the balance over the next fifteen to twenty years. Because weapons, doctrines, organizations, and alliances all take time to develop and improve, developing a capability or defense outlook that will only offer an advantage for a brief period is not particularly useful.³⁰

Asymmetries can lead to both challenges and opportunities for policymakers. Challenges, of course, are areas in which the potential adversary may have, or be able to develop, a strategic advantage; opportunities are areas in which friendly forces may have, or be able to develop, an advantage in the competition. Of particular importance, Andrew Marshall, the director of the Pentagon's Office of Net Assessment, points out that whereas the secretary of defense has all sorts of people and a number of analytical techniques that can point out strategic problems and challenges, he has very few that can point out opportunities. This is one of the reasons Marshall believes that net assessments have been so useful to policymakers over time.

Critical Domains of Competition

Net assessments are to a great extent about competitions and their effects. Identifying which domains of competition are important and which are less relevant is, in and of itself, a difficult and complex task. Some have argued that all areas of military competition are important and that the United States must remain dominant in all of them to maintain its position in the Western Pacific. Not only is such a proposition impractical, it is also unnecessary. In fact, the net assessment process is an excellent method for determining which competitions a nation *must* focus on to ensure sufficient levels of security and *how* to create and sustain an advantageous or, at worst, optimal, position in each of these competitions.

In fact, one might conceive of a morass of military competitions laid out in a kind of “network” diagram. Some of these competitions influence several others—these would have

many arrows leading to the competitions they influence; some influence only a few. Some competitions would have a strong effect on the strategic or operational environment—represented by thick arrows—and some would have less influence. Indeed, in some ways this diagram might represent one's view of future warfare. With regard to the Western Pacific, the missile/antimissile competition, for example, is likely to influence the strategic environment more than a tank/antitank competition. So, if due to fiscal constraints or some other reasons, the United States had to choose the competition to which to apply resources, it is probable Washington would be willing to lose in the tank/antitank competition if it could gain an advantage in the missile/antimissile competition.

Of course, constructing a detailed “competition network diagram” for warfare fifteen to twenty years in the future is not practical. Nevertheless, the technique can be applied at our current level of predictive understanding in order to envision how military competitions in the Western Pacific are likely to interact and to evolve over the next fifteen to twenty years. This begins with identifying and analyzing the various domains in which these competitions will take place.

This is important for a number of reasons. Parsing competitions is the basis for anticipating relative vulnerabilities and advantages. Second, appropriately formulated competition schematics can help envision the operational level of war to considerable beneficial effect. Third, competitions need to be laid out before the connections between them can be anticipated. Finally, a competition network diagram is particularly important when trying to understand the relationships between military competitions and their domain basis, on the one hand, and the vulnerabilities of civilian infrastructures that must be reduced and defended just as with their military counterparts, on the other hand. Without this last step, warfare simply devolves into an exercise in force protection, the outcome to be expected only of particularly isolated and introspective military institutions.

The foregoing rationale for parsing competitions illustrates the extraordinary complexity of competition network diagrams. This places the complexity of warfare in an increasingly challenging and variegated international security environment in which both capabilities and competitions are developing with astounding rapidity and interacting with one another and a wide variety of other factors, both military and nonmilitary. The reality is that fully parsing competitions and deriving their implications—a net assessment—must be the task of national security establishments rather than think tanks and foundations. Nevertheless, the present effort attempts to establish the basis for a subsequent effort by a national security establishment.

This study identifies seven domains in which the competition between the United States and Japan, on one hand, and China, on the other hand, are likely to evolve over the next fifteen to twenty years:

- maritime;
- air;
- ground;

- space;
- cyberspace;
- nuclear; and
- command and control.

Many of these same domains will be important in evolving military competitions elsewhere in the world, but given the geography, the current state of the military balance in the region, and the strategic decisions all sides appear to be making, it seems clear that these seven will be especially important in the Western Pacific.

MARITIME

Given that the preponderance of the theater is covered by water, it should come as no surprise that the maritime domain will play a major role in the military interactions between the United States–Japan alliance on the one hand and the PRC on the other. Some of the specific competitions within the maritime domain, of course, will be more important than others. For example, whether to prosecute an antiaccess-type strategy or simply to protect its own national interests, China has already shown that it intends to use submarines as a major part of its maritime strategy. The United States and Japan, conversely, need to protect their sea lines of communication against submarines—and other undersea threats—for both commercial and military reasons. Thus, it is quite likely that even without a direct military confrontation there will be an intense focus on the submarine/antisubmarine competition in the theater. To cite another example, because the United States has relied, and will likely continue to rely, to some extent, on aircraft carriers as a crucial power projection tool, there will doubtless be competition at sea between American air and Chinese air defense capabilities, between Chinese missile attackers and American/Japanese missile defenders, and between Chinese surface units focused on sinking carriers and American/Japanese escorts determined to protect them. All these competitions—and many more—fall within the maritime domain.

AIR

If there is any indisputable trend with regard to military operations over the past century, it is the increasing importance of airpower. Moreover, because of the distances involved in the Western Pacific, and the speed of deployment often required in managing modern-day political-military crises, it is clear that all sides will use airpower—in some cases long-range airpower—to influence the military balance in the region. Any future competition or battle for control of the air will involve the matériel, technology, doctrine, and training of both sides' manned aircraft, unmanned aircraft, and active and passive air defenses. Moreover, during peacetime the air/air competition seems to take on an even greater importance, in that the technological sophistication of a nation's aircraft are often used as an indicator of its overall technological sophistication.

The air domain, however, is not limited to manned and unmanned aircraft; it also includes missilery. Indeed, given what appears to be a demonstrated propensity for missiles on the part of the PRC—particularly opposite Taiwan but also within range of Japan—it seems clear that there will be also a competition between land-based missiles and missile defense capabilities.

GROUND

During the past seventy years, starting with George Marshall's warning concerning "land wars in Asia," and systematically deterred since by actual or potential reverses in Korea, Vietnam, Iraq, and Afghanistan, the United States has regularly underrated the importance of ground forces and has demonstrated a preference for the use of airpower over the use of ground forces. By contrast, for reasons of history, strategy, and strategic culture, the Chinese tend to rate the ground domain very highly. One must not forget that the names of both the Chinese navy and air force include the word "army"—the People's Liberation Army Navy and the People's Liberation Army Air Force. The stage seems set, therefore, for ground forces and/or the ground force-oriented mindset to play some sort of role in the competition between Beijing and Japan and the alliance. Although the Chinese are trying to increase the relative emphasis on air and sea forces and increase their ability to execute truly joint operations, the importance of the ground force is so deeply embedded into Chinese military culture that it is difficult to see how the PLA can achieve such a transition in a mere fifteen to twenty years. How and where that competition might play out, of course, is difficult to say; and how important it might be to the overall regional competition is even more difficult.

Competition in the ground domain need not be focused on which side might win a large-scale ground war in Asia. In fact, even a small ground threat could have enormous strategic implications. For example, by spending a relatively small amount of money, Beijing might be able to build and maintain a mildly credible ground threat—perhaps by building and training certain kinds of special operating forces—to parts of the Japanese homeland or other territories claimed by Japan. The mere threat of an attack on such areas could force Tokyo to dedicate significant resources to the protection of its territory—at the expense of the other domains.

The fact is that in the offshore "maritime salient" defined by the triangle bounded by Sakhalin, Singapore, and Guam, where it is most likely that Chinese, Japanese, and American forces might engage, there is plenty of land area to be controlled and exploited in a complex theater campaign that cannot be conducted without a wide array of permanent and temporary bases. Furthermore, the vital interests of so many putative Japanese and American friends and partners with common security interests are located in the littoral, archipelagic, and island territories of the Asia-Pacific region that it is clear that one cannot dismiss ground forces out of hand as a possible domain of military competition.

SPACE

During the past few decades, outer space has become increasingly important in military competitions. It is, in many respects, an enabler for competition within all the other domains. Modern ground, sea, and air forces would be far less effective without unfettered access to space. It provides the medium for intelligence, surveillance, and reconnaissance activities for communications satellites, for navigation assets, and for several other important military capabilities. These characteristics of space warfare have particular implications for command-and-control warfare.

The peacetime space competition is already under way in that the United States, Japan, and China all have security-related satellites in orbit—and the United States and China already have demonstrated the ability to attack enemy satellites from the ground. These on-orbit systems are low density, high cost, and high demand. They cannot be replaced easily, and their supporting launch infrastructure is vulnerable and has little redundancy. Compounding the problem, certainly Japanese and American—and presumably Chinese—war-fighting systems are designed to operate with space systems intact, raising the risk of space becoming a single-point-of-failure domain.

It is increasingly clear not only that space domain advantages are truly significant to military operations but also that space denial is a basic fact of future warfare. In its essence, due to the vulnerability of the space domain, planners must envision and account for “a day without space” and thus be prepared both to significantly reduce their dependence on space and to impose the same potentially decapitating strictures upon their opponents.

Within the next twenty years, space may provide the medium from which to strike terrestrial targets anywhere in the world. Obviously, many ballistic fires already operate through space. Nevertheless, the future that includes fires from space is beyond this assessment.

CYBERSPACE

As is true for outer space, so over the past few decades cyberspace has become increasingly important in military competitions. It is, in many respects, an enabler for competition within all the other domains in the same way as is outer space. Because all modern militaries rely on computers and on computer networks to operate, cyberspace already is a new domain of competition for future military competitions. It is particularly important in the Western Pacific for two reasons. First, the United States and Japan probably rely on computers and computer networks more than most modern militaries, including China. Second, and perhaps more important, China and the United States have long been working toward developing an ability to conduct computer network attacks on other countries' homelands as well as their militaries. To China, the ability to take down a major U.S. or Japanese network could be extremely important, given the high reliance of both countries on such capabilities; for the United States and Japan, the ability to protect these networks from an opponent, through both defensive and offensive means, is just as important. Similarly, it will be important to all to be able to operate under compromised conditions.

Again, the comparison with outer space is appropriate. Not only are Japanese and American—and presumably Chinese—war-fighting systems designed to operate with cyberspace systems intact, but so too are their civilian infrastructure and computer networks. The implication is that not only is cyberspace apparently a single-point-of-failure military domain, but also potentially a civilizational linchpin, for better or for worse. In short, there will certainly be a desperate competition in cyberspace where each side tries to protect its own networks while interfering with those of the enemy. That said, assessing the ultimate significance of cyberwarfare to overall deterrence strategies and its actual utility as an instrument of warfare are both daunting challenges. The threat posed by cyberattacks might be much more limited, sporadic, and unpredictable than is the case in most other domains. Hence, to a significant extent, it will likely remain as a wild card of uncertain importance.

NUCLEAR

Although the nuclear domain is easy to overlook, it is, in some ways, responsible for the security structure in the Western Pacific. Tokyo has, to date, been willing to forgo nuclear weapons as long as it can count on the nuclear umbrella of the United States to deter potential threats. For its part, Washington is willing to provide that umbrella to ensure that Tokyo does not decide to build its own nuclear deterrent, for if Japan felt it had to build nuclear systems, Beijing—and quite possibly other Asian nations—might feel they had to respond in the nuclear domain. Additionally, the development of a nuclear deterrent was at least partially responsible for the international recognition of China's great-power status.

It is also important to recognize that during the Cold War, the “nuclear balance” took on a psychological and strategic importance all its own. It was perceived as an indicator of the overall strategic balance; indeed, the term “strategic balance” was often used to describe the nuclear situation rather than the more complex military, political, and economic interactions that usually underlie the term “strategy.”

For its part, China presents a rather clearly stated but in some ways ambiguous nuclear doctrine as well as a largely opaque and unverifiable force structure. Having secreted most of its land-based launchers and garrisons in underground tunnels, and refused thus far to engage in strategic nuclear arms control discussions, Japan and the United States have an arguably inadequate understanding of Chinese thinking and capabilities in the nuclear realm and little way to construct a reliable model of Chinese behavior during a nuclear crisis, what it would take to cause such a crisis, or how to end it.

COMMAND AND CONTROL

Future peer competitor warfare is going to be command-and-control warfare. For instance, American national systems and strategies depend upon connectivity, bandwidth, and uninterrupted decisionmaking. A recurring theme from enabling domains, the United States will have to defend its command-and-control systems against opponents who will try to disrupt them as a first priority and at the same time will have to be prepared to attack

its opponents' own command-and-control networks. Defended networks that can discern and track targets will be able to hit them effectively, imposing potentially catastrophic non-nuclear effects as a result of precision guided munitions.

Napoleon said, "I would rather fight against two good generals than one bad one," because he understood the ease with which battlefield and political coalitions could be split, and then defeated in detail.³¹ He was addressing the offensive and coordinative dimensions of command-and-control warfare, a common subject on historical battlefields.

Command and control is important for other reasons as well; effective alliance command and control crosses the line between military and political preparedness. In the bilateral security alliance, American and Japanese commanders do not enjoy effectively integrated bilateral command facilities, doctrines, or cultures. This is the case for political reasons, and as a result the technical connectivity and operational arrangements necessary for conducting modern coalitional warfare have not been instituted.

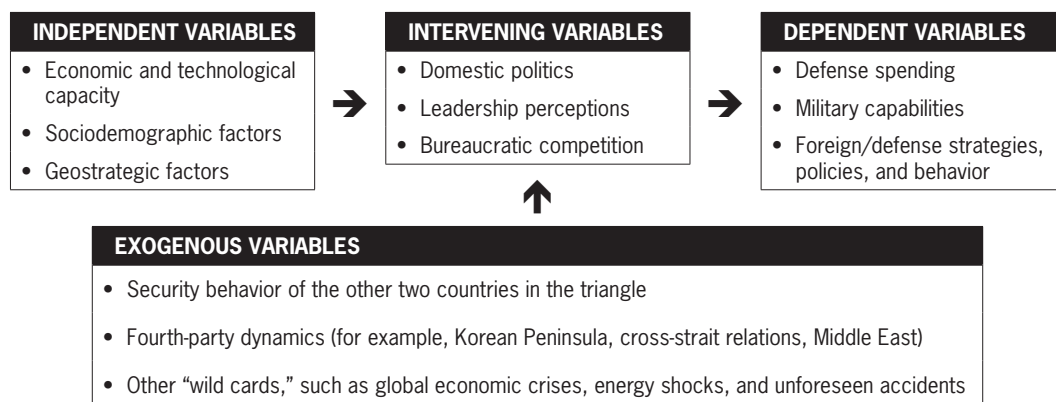
For the purposes of this study, we also consider "jointness," or the ability of the military services and other elements of the national security establishments to work together, a critical component of the command-and-control domain. Though jointness has always been important in military operations, over the past twenty years it has become especially so.

THE ANALYTICAL FRAMEWORK

Over the years, net assessments have employed a variety of different structures and approaches. Functional net assessments that focus on analyzing the relative capabilities of countries in, for example, the space, cyberspace, and C4I domains look very different from geographic assessments that compare a broad spectrum of military capabilities of specific countries in a region over time. Moreover, geographical assessments, depending on the specific region of the world and countries under analysis, can look very different from one another and can focus on different domains of competition. This strategic net assessment adopts a broader approach, encompassing not only the relative military capabilities of China, Japan, and the United States to project power in the Western Pacific, but also (and more important) the larger security environments that will emerge, in part, from those capabilities over the next fifteen to twenty years. It dedicates a chapter to each of the major actors—China, Japan, and the United States. These are followed by a chapter each assessing the alternative regional security environments that could emerge from developments and trends among these three actors, and the possible responses that Washington and Tokyo could develop to cope with each environment.

Each of the three country chapters follows a similar analytical approach in developing alternative trajectories of development through roughly 2030 (figure 1.1). The key outcomes or (using social science terminology) *dependent variables* in this analysis consist of various alternative levels and types of military capabilities within the seven domains identified above (particularly as they relate to power projection and A2/AD-type operations), defense

FIGURE 1.1
Analytical Approach for Chapters 2, 3, and 4 (Individual Country Chapters)



spending, and those foreign/defense strategies, policies, and behaviors of China, Japan, and the United States of particular relevance to Northeast Asia.

Such alternative trajectories are developed for each country on the basis of an analysis of several types of inputs, including both baseline factors (or *independent variables*) and mediating factors (or *intervening variables*). Among the former, the most important include each country’s economic and technological capacity, social and demographic factors, and geostrategic position. As noted above, these variables lend themselves to longer-term analysis and thus provide the crux of a net assessment.

The latter factors serve to shape and magnify (or diminish) the way in which baseline factors influence the key outcomes for each country, sometimes in decisive ways. These mediating or intervening variables primarily include domestic politics, bureaucratic competition, and leadership outlook. For example:

- Domestic political debate over the guns-and-butter trade-off will determine how demographic factors affect the military budget.
- Regime insecurity could lead a government facing social unrest to pursue certain types of foreign policy behavior aimed at either preserving a stable external environment for economic growth or bolstering its legitimacy through burnishing its nationalist bona fides.
- Bureaucratic competition over resources will shape how economic and technological capacity translates into increased defense spending and enhanced military capabilities.
- Political leaders who are hyperaware of geographic vulnerability will augment the priority placed on geostrategic position in their foreign policy decisionmaking.

- Highly nationalist political leaders will be more likely to perceive the hedging actions of other countries as threatening, possibly leading them to pursue more assertive reactionary behavior.

In addition to these independent and intervening variables, various external factors (or *exogenous variables*) can also exert an important influence on each nation's security outlook and behavior over the long term. The most significant of these variables are the capacity, policies, and behaviors of the other two countries in the triangle. In other words, Japan's foreign policy and defense strategy will be influenced to a great degree by the policies and behaviors of the United States and China; Beijing's external behavior is also likely to be highly responsive to Tokyo's and Washington's policy choices; and the course Washington follows will be in part dependent on the strategies pursued by both Tokyo and Beijing.

Of course, "fourth-party" dynamics involving countries or areas outside the Washington–Tokyo–Beijing triangle could also exert exogenous influences on the security policies and behaviors of China, Japan, and the United States. This is especially true of events concerning the Korean Peninsula and Taiwan, as well as other potential developments in the Asia-Pacific region. Developments in the Middle East also have the unique potential to shape U.S. security behavior in Northeast Asia. However, in this analysis, such factors are largely treated as less predictable, secondary exogenous variables. Their influence on the evolving security relationship between Beijing, Tokyo, and Washington is largely a function of events occurring outside that triangular relationship, such as leadership decisions in Pyongyang, Taipei, and Tehran, or the larger dynamics of China–Taiwan, North Korea–South Korea, and Middle Eastern politics. This is not to say that such factors are insignificant. They could become extremely important under certain circumstances. For example, a major Sino-American confrontation over Taiwan or, conversely, a peaceful resolution of that issue could alter the threat perceptions of both countries in ways that directly influence the trilateral China–United States–Japan relationship. But the influence of such factors is virtually impossible to predict or even chart and not by and large dependent on the state of that triangular relationship.

Last but definitely not least, other more significant, largely exogenous variables could include truly "wild card" events such as global economic crises and energy shocks as well as unforeseen accidents and regional crises (alternatively referred to above as "trigger points"). Among these, the most important, as factors directly linked to the China–Japan–United States relationship, would be severe political-military crises involving China and Japan, most likely over conflicting territorial and resource claims in the East China Sea. Though possibly emerging out of the blue as a result of the unapproved actions of local antagonists on the scene or leadership decisions in Tokyo or Beijing, such crises could also result from adverse changes in the triangular relationship. Another largely unpredictable variable could consist of one or more unforeseen breakthroughs or leaps in key military technologies that alter security perceptions and risk calculations among the three nations. However, it is extremely difficult to identify such technologies and, even more so, their likely impact,

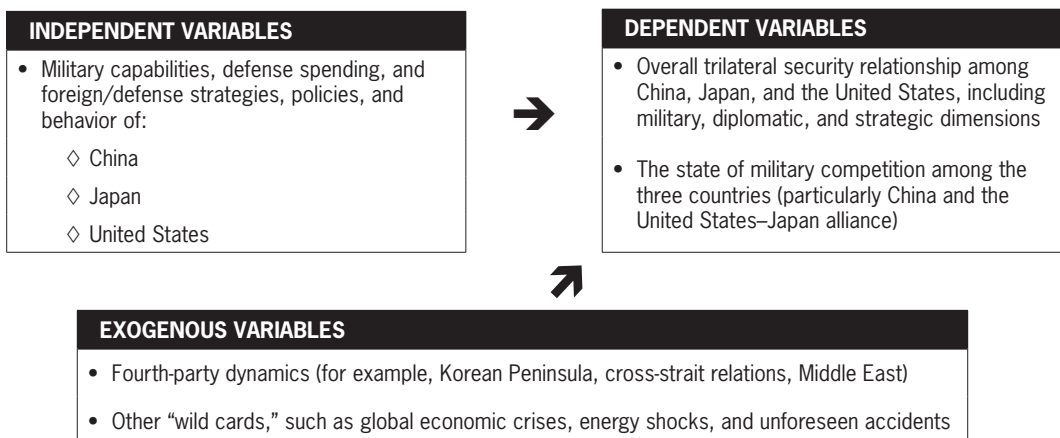
particularly on the basis of unclassified sources. For this reason, they are largely treated as unknowns in this study.

One specific example of the important role played by these intervening and exogenous variables can be found in the case of Japanese defense spending. Comparatively speaking, there is less uncertainty in the direction of Japan's national economic trends than in those of China and the United States. Most economists tend to agree that given various demographic and structural constraints, Japanese economic growth is unlikely to vary widely from its current pace over the next fifteen to twenty years. Furthermore, Tokyo currently devotes a relatively limited amount of its budget to defense spending and already could, in principle, devote more resources to defense.

In light of these facts, economic growth is less likely than in the cases of China and the United States to be a key defining factor determining the level of Japan's defense spending and military capabilities. Rather, the outcome of domestic political debates and the threat perceptions of the Japanese political leadership are more likely to determine how economic capacity translates into policy outcomes, such as whether to move past the de facto cap on defense spending at 1 percent of GNP. That said, one cannot entirely exclude the possibility that Japan could experience an absolute economic decline during the next fifteen to twenty years of the sort that could have a direct impact, in a major way, on its military capabilities and security strategies. Although relatively unlikely, such a trajectory is possible and is thus briefly addressed.³²

The alternative trajectories of security behavior and views for China, Japan, and the United States presented in chapters 2 through 4 are integrated (along with other exogenous variables, such as various "wild cards") in chapter 5 to develop a set of alternative future security environments or scenarios confronting Japan and the alliance in approximately 2030,

FIGURE 1.2
Analytical Approach for Chapter 5
(Alternative Security Scenarios in 2030)



presented in order of likelihood. In this integrative analysis, China/Japan and China/alliance military competitions in the seven domains are a key outcome (or dependent variable), along with the diplomatic and strategic dimensions of the trilateral relationship (figure 1.2).

Although net assessments are frequently exclusively diagnostic in nature and do not offer recommendations, in chapter 6 this study identifies the specific security implications of the trajectories analysis for Japan and the alliance presented in the preceding chapter and offers a set of potential policy responses for Tokyo and Washington. Each response presents some significant advantages and disadvantages, suggesting that the road forward for Japan and the United States in addressing China's growing military power in Northeast Asia will likely demand some very difficult decisions.

2

CHINA

STRATEGY AND DOCTRINE

National Security Strategy

Since the advent of economic reform and opening, and the transition away from Maoist ideology in the late 1970s, China's leadership has pursued a largely pragmatic grand strategy designed to maintain, above all else, high levels of undistracted economic growth.¹ Such growth is viewed as essential to the achievement of several key national goals, including (1) the maintenance of domestic social order and development, which is seen as critical to the preservation of the Chinese state's power and stability; (2) the acquisition of military and other means deemed essential to defend China against foreign threats to its territory and sovereignty, including threats to the eventual reunification of Taiwan with the Mainland and the favorable resolution of other territorial disputes; and (3) the eventual attainment of high levels of international power and prestige commensurate with China's historical status as a great power. Moreover, from the viewpoint of the senior leadership of the People's Republic of China (PRC), the survival of the Chinese Communist Party (CCP) is regarded as both the essential precondition for and an essential by-product of the attainment of all these goals.²

To achieve this fundamental strategic objective, Beijing has repeatedly and emphatically enunciated an overall foreign policy of peace, cooperation, and goodwill toward all states,

which is often described by Chinese officials as the search for a “mutually beneficial, win-win cooperative pattern” (*huli shuangying de hezuo geju*, 互利双赢的合作格局) of inter-state relations.³ In its political and diplomatic policies, China is pursuing an overall approach marked, in the areas of both multilateral and bilateral state-to-state interactions, by the search for mutually beneficial outcomes, the maintenance of amicable ties with virtually all nations and institutions, and the deepening of those types of relationships that are most conducive to economic development.⁴

In the political and security realm, China has sought to advance its definitions of the concepts of peace, development, and harmony through the enunciation of approaches such as the so-called New Security Concept (*xin anquan guan*, 新安全观), which was unveiled in 1997, along with the notion of establishing bilateral “strategic partnerships” (*zhanlüe huoban guanxi*, 战略伙伴关系) with nations along China’s periphery (for example, Russia, the states that belong to the Association of Southeast Asian Nations, Japan, and South Korea) and in other strategically important regions. Both the New Security Concept and the strategic partnership idea were initially intended to offer a potential alternative to the concept of bilateral security alliances (and in particular the United States-centered “hub-and-spokes” security structure of formal alliances and forward-deployed military forces in the Asia-Pacific region), as well as the broader notion of United States-led, unilateral or non-UN-sanctioned military interventions.⁵

These concepts serve a clear strategic purpose for Beijing by presenting, in a systematic and consistent fashion, an overall argument as to why China’s rise will contribute greatly to—rather than threaten or undermine—regional and global stability, peace, and prosperity, thus comporting with U.S. interests in Asia. However, they are also designed to advance the notion that U.S. strategic dominance in general, and any type of United States-led opposition to China’s rise in particular, is unnecessary and potentially destabilizing for the region. In addition, these concepts also play to the fears that some nations harbor about America’s unilateralism and intervention in their domestic affairs.

In an effort to further clarify and define what it perceives to be its most crucial national priorities, Beijing has officially defined its “core interests” as comprising three components: (1) “state sovereignty, national security, territorial integrity and national reunification” (*guojia zhuquan, guojia anquan, lingtu wanzheng, guojia tongyi*, 国家主权, 国家安全, 领土完整, 国家统一); (2) “China’s political system established by the Constitution and overall social stability” (*Zhongguo xianfa queli de guojia zhengzhi zhidu he shehui daju wending*, 中国宪法确立的国家政治制度和社会大局稳定); and (3) “the basic safeguards for ensuring sustainable economic and social development” (*jingji shehui ke chixu fazhan de jiben baozhang*, 经济社会可持续发展的基本保障).⁶ Chinese officials have most often applied the notion of core interests to the Taiwan issue, as well as separatism in Tibet and Xinjiang. Although there is some debate over whether China considers other disputed territories on its maritime periphery to be part of its core interests, Beijing has certainly given clear signs that it intends to employ its growing offshore military capabilities to support or defend its claims on islands in the East China and South China seas and more generally to expand its military presence in the Western Pacific.⁷

That said, looking out to 2030, there is very little, if any, evidence to suggest that Beijing is seriously considering altering its current “peace and development”-oriented grand strategy toward a more assertive overall strategy that is deliberately designed not only to challenge the United States but eventually to supplant it as the dominant maritime power in the Western Pacific. Indeed, from a purely logical point of view, such efforts would directly undermine, if not altogether destroy, Beijing’s capacity to maintain the larger environment of peace, stability, and prosperity upon which it relies to achieve its long-term national goals and remain in power.⁸ The current Chinese leadership apparently understands this, as witnessed by its recent strong and repeated emphasis on developing a new pattern of more harmonious great power relations that departs from the pattern of rivalry and conflict that has often accompanied interactions between rising and established powers in the past.

Nonetheless, debates apparently exist among PRC military and political strategists over how a rising China can best achieve its existing goals and avoid conflict with the United States (and other powers such as Japan) in the face of continued U.S. regional deployments and strategic developments. In these debates, some analysts argue in favor of very ambitious new strategies that envision steadily expanding power projection capabilities beyond China’s territory and immediate periphery, to include large expanses of the Western Pacific, outer space, and the cybersphere. However, as the 2009 Pentagon report on China’s military power stated, most of these debates “appear to remain largely on the margins” and are unlikely to generate a basic shift in approach during the next decade. Conversely, as this report points out, “China’s thinking appears to be gradually moving toward a strategic concept that considers defense of maritime interests, in addition to defense of homeland, as drivers for force modernization.”⁹

In fact, in recent years, China has increased its military and paramilitary presence in the East and South China seas and taken a more assertive approach toward both disputes along its maritime periphery and the surveillance activities of the United States. Beijing has also conducted more frequent and increasingly sophisticated military exercises in this area since at least 2010, some involving simulated amphibious landings and multiship live-fire exercises.¹⁰

Much of this greater assertiveness has taken place in response to UN-established deadlines for defining claims to disputed territories as well as the allegedly “provocative” actions of other claimants, such as Japan (in the case of the Senkaku/Diaoyu Islands) and both Vietnam and the Philippines (in the case of the Spratly Islands in the South China Sea). However, some of it has also emerged from China’s growing capability and desire simply to enhance its capacity to influence events along its maritime periphery. Domestic nationalist pressures for a more activist defense of China’s territorial claims, along with the loosely controlled actions of local entities, such as fishing vessels, undoubtedly have also contributed to China’s more assertive posture. At the same time, Beijing’s overall strategy of delaying the resolution of disputes, while consolidating its own claims and attempting to assuage the concerns of neighbors via political and diplomatic measures, has remained more or less unchanged.¹¹

Within this general strategic framework, however, there is considerable room for instability and escalation, particularly as Chinese military and maritime law enforcement capabilities continue to grow and if China's overall national strength and confidence continue to increase. Beijing's commitment to defend its territorial claims and seek energy resources, combined with strong nationalist sentiments among the Chinese populace and possibly continuing challenges to efforts to coordinate among various actors in the People's Liberation Army (PLA) and elsewhere, suggest that the ability of Beijing, Tokyo, and others to manage disputes in China's near seas as they have in the past could increasingly come into question. This danger was clearly confirmed by the greatly increased tensions in 2012 and early 2013 between Beijing and both Tokyo and Manila over disputed islands and shoals in the East and South China seas.

Despite such tensions, on a more general level, China has publicly reasserted its commitment to its overall strategy of peaceful development, after a period of greater assertiveness in 2009–2010. In a December 2010 essay, Beijing's top foreign policy leader, Dai Bingguo, prominently argued that China would continue to adhere to a "path of peaceful development," insisting that China's "basic national policy and strategic choice" consist of "never seeking leadership, never competing for supremacy and never seeking hegemony." Through such utterances, he sought to put to rest fears that China would someday compete with the United States or other countries for global and/or regional hegemony:

Some say China wants to replace the United States and dominate the world. That is simply a myth.... We do not seek hegemony and will never compete with other countries for leadership in our region, seek so-called "joint hegemony" or follow the so-called "Monroe Doctrine." What we pursue is a policy of friendship, security and prosperity with our neighbors. The purpose of our Asia-Pacific strategy is to create a good, stable neighboring environment for our own development and achieve common progress with all countries.¹²

As indicated above, these arguments represent the dominant foreign policy viewpoint among the members of Beijing's current leadership, one that they have prominently reasserted before both domestic and international audiences. As the 2011 Pentagon report on China's military power stated, "The prevailing voices within China's leadership have supported former paramount leader Deng Xiaoping's dictum" instructing China to keep a low profile.¹³

Despite the fact that such views currently prevail, this does not preclude the possibility that Beijing's goals could become much more expansive or even offensively oriented over time if its objectives expand along with its growing economic and military power, particularly if its threat perceptions are exacerbated. On the basis of evidence from Chinese history, official policy, and broader discourse, however, there is little to suggest that China is certain to shift in this direction.¹⁴

An issue that should be of greater concern is that even if China does maintain relatively modest aims in terms of its power in the region and its stance toward the United States'

presence in the Western Pacific, this does not preclude the possibility that China's growth will increase tensions in the region, particularly vis-à-vis Japan and the United States–Japan alliance. China's growing maritime law enforcement and naval capabilities, in particular, could lead it to continue to increase its presence near disputed territories in the East and South China seas, creating an environment much more conducive to crises and even conflict.

Military Strategy and Doctrine

PLA OBJECTIVES AND MISSIONS

The most recent Chinese defense white paper, published in 2010, defines China's national defense objectives as (1) "safeguarding national sovereignty, security and interests of national development"; (2) "maintaining social harmony and stability"; (3) "accelerating the modernization of national defense and the armed forces"¹⁵; and (4) "maintaining world peace and stability." These broad goals encompass more specific missions, including protecting the homeland; preventing "separatism" in Taiwan, Tibet, and Xinjiang; and defending "maritime rights and interests," presumably including the Senkaku/Diaoyu Islands in the East China Sea, and the Spratly Islands in the South China Sea.¹⁶

The conceptual rationale and motivation for these missions was presented by CCP general secretary and PRC president Hu Jintao in a speech to the CCP's Central Military Commission (CMC) delivered on December 24, 2004—as well as subsequent remarks to PLA delegations attending the National People's Congress in 2005 and 2006—on the so-called four historic missions (*lishi shi ming*, 历史使命) of the PLA. In these speeches, Hu identified a set of four broad, ambitious objectives for the Chinese military, which included two long-standing "traditional" missions and tasks (the defense of the CCP; and countering threats presented by land and maritime border issues, Taiwan separatism, ethnic separatism in Xinjiang and Tibet, terrorism, and domestic social stability) and two more recent and future tasks (the protection of China's expanding national interests, particularly in maritime, outer space, and cyberspace environments; and support for military operations other than war, especially international peacekeeping and humanitarian operations).¹⁷

As these PLA missions suggest, China's defense doctrine is shaped by four fundamental military objectives of particular relevance to Japan and the United States–Japan alliance.¹⁸ First and foremost is the ability to deter or defeat possible threats or attacks against China's heartland, and especially its increasingly important eastern coastline. The most likely source of such potential threats or attacks certainly includes Japan and U.S. forces based in Japan, along with both regional and U.S. forces located in India, Russia, South Korea, Guam, Hawaii, and elsewhere.

Second, the Chinese military must also deal with a range of possible "local war" conflict scenarios or less violent confrontations that might occur along China's periphery, espe-

cially in maritime areas.¹⁹ Such conflicts or confrontations would likely arise in response to Chinese efforts to defend an array of sovereignty and territorial interests, some of which are noted above. These include PRC claims to the Senkaku/Diaoyu Islands near Japan, to Taiwan, to areas along the border with India, and to the Spratly Islands in the South China Sea. Conflict could also occur as a result of confrontations over unresolved hot spots affecting the broader regional balance, such as the Korean Peninsula and the Indo-Pakistani imbroglio. The former would almost certainly involve Japan, and U.S. forces based in Japan.

A third and less central objective of the PLA implied by Hu's four historic missions is to participate in military operations other than war. Domestically, these operations include an array of security and assistance activities associated with natural disasters, pandemics, and social unrest. Beyond China's borders, military operations other than war encompass overseas noncombat missions such as counterpiracy operations, disaster response, evacuation operations, and humanitarian relief efforts, as well as steady increases in China's contribution to international, noncombat peacekeeping activities.²⁰ This PLA objective has fewer direct implications for the United States–Japan alliance, although such operations could augment China's determination and capability to project power to long distances.

A fourth potential objective, the defense of sea lines of communication (SLOCs) and transportation, would also potentially involve both Japan and especially U.S. forces based in Japan, as it could involve China developing an enhanced capability not only to transit and operate in and near straits and chokepoints throughout the Japanese islands but also to prevent other powers—including Tokyo and Washington—from using such potentially strategic areas. However, the latter objective thus far remains only a possibility for inclusion in China's defense doctrine, not a confirmed fact.²¹ Although many pundits assume that Beijing is acquiring such medium- and long-range interdiction capabilities as part of a supposed quest to acquire an expeditionary blue water navy, as is discussed in greater detail below, there is no evidence that such highly ambitious objectives are currently part of China's official policy or strategy.

PLA DOCTRINES: PEOPLE'S WAR AND ACTIVE DEFENSE

The basic PLA doctrines supporting the above-noted missions include the Maoist concepts of "People's War" and "active defense" (*jiji fangyu*, 积极防御). The concept of People's War historically focused on defending the Chinese Mainland through reliance on China's geographic, demographic, and strategic culture advantages—including its traditional emphasis on stratagem, deception, and guerilla warfare. In recent decades, the concept has been adapted to accord with the realities of modern combat and "local wars under conditions of informatization." Most notably, it has come to include the ability to respond rapidly, take the initiative, attain superiority quickly, prevent escalation, and resolve any conflict on favorable terms—a strategy referred to by some Chinese strategists as the "trump card" or "assassins' mace."²²

Closely related to the concept of People's War, "active defense" is another major principle of Chinese military doctrine that was articulated by Mao Zedong and has been reaffirmed in recent years as China's basic "military strategy."²³ Active defense involves both deterrence and war fighting, with war fighting viewed as a last resort only if deterrence has failed.²⁴ *The Science of Military Strategy*, a seminal publication produced in 2001 by the Academy of Military Science (AMS), the PLA's top research institute, explains that "the war-fighting means [for attaining the military objective] is generally used only when deterrence fails and there is no alternative.... So long as we can solve the problem with military deterrence, we will not resort to war."²⁵ That said, Chinese and foreign analysts of PRC crisis behavior have also observed that Beijing has in the past employed low levels of military force as a form of conventional and low-level deterrence, to shape, deter, blunt, or reverse a crisis situation; probe or test intentions; and prevent escalation.²⁶ Thus, while obviously presenting dangers as a form of crisis management, Chinese military analysts might believe that such a use of force can at times be employed to avoid a much greater clash (see below for more on this point).

The AMS authors of *The Science of Military Strategy* view deterrence as a means of accomplishing not only military but also political and diplomatic-economic objectives. Nonetheless, they classify China's approach as *defensive* strategic deterrence, oriented toward preventing violations of Chinese territory, rather than offensive strategic deterrence, which is intended to compel other states. The PLA views successful strategic deterrence as dependent upon (1) possession of adequate force, (2) determination to use that force, and (3) communication with the opponent regarding one's capabilities and resolve—which is almost certainly a major reason for both the increased frequency of PLA exercises along China's maritime periphery and various weapons tests undertaken during the past decade.²⁷

If deterrence fails and a conflict is deemed highly likely to escalate to the level of war fighting, the doctrines of People's War and active defense support the PLA's use of preemptive offensive strikes for self-defense. In recent years, this has been described in PLA writings as "a greater stress on gaining the initiative by striking first," reflecting the need to act quickly and decisively to preempt an attack, restore lost territories, protect economic resources, or resolve a conflict before it escalates. Official statements of doctrine seek to make it clear that such steps would only be taken after Chinese sovereignty or other core interests have been violated or severely threatened.²⁸ Nonetheless, ambiguity extant in PLA writings suggests that the threat of immediate attack, rather than an actual enemy strike, could merit such preemptive measures.²⁹ Analysts have also identified elements of PLA doctrine that suggest that even nonkinetic or political violations of Chinese sovereignty would be sufficient justification for a preemptive strike by PLA forces.³⁰

However, this preemptive dimension of PLA doctrine is often misperceived by outside observers, especially in relation to contingencies involving the United States. Specifically, as Lieutenant Colonel Michael Flaherty (U.S. Air Force) has argued, while it could be used to justify a preemptive strike against Taiwan if Taipei were to declare *de jure* independence,

this doctrine would not necessarily justify preemptive strikes against U.S. carrier groups or bases in Japan, unless the United States had intervened militarily in support of Taiwan's declaration. As Flaherty writes:

Ambiguities regarding the threshold such intervention would have to meet in order to trigger a Chinese counterattack have biased U.S. analysts toward worst-case scenarios that obscure the strategic intent of active defense.... Once conflict begins, active defense can be characterized as strategically defensive and tactically offensive.³¹

In *The Science of Military Strategy*, this aspect of active defense is described as “active strategic counterattack against exterior lines (ASCEL)” (*jiji de zhanlüe waixian fanji zuozhan*, 积极的战略外线反击作战). ASCEL is portrayed as an integral component of the broader strategy of active defense, and as such it is defined as “strategically defensive” and a form of “active self-defense counterattack” rather than as “a component of the expansive and extrovert[ed] offensive strategy.” Once sovereignty has been violated, ASCEL is meant to be an active preemptive response conducted at the beginning of a war, which does not merely rely on passive defense of the border and coastal regions, but instead involves fighting “against the enemy as far away as possible, to lead the war to [the] enemy’s operational base, even to his source of war, and to actively strike all the effective strength forming the enemy’s war system.”³²

Although some analysts have described this ASCEL concept as analogous to an antiaccess/area denial (A2/AD) doctrine, it must also be viewed in the larger context of active defense, deterrence, and the evolution of People’s War. In the above-cited AMS text’s discussion of ASCEL, the authors reiterate that such tactics would only be employed once conflict has already been initiated: “Once the enemy invades our territory and offends our national interests ... we get the freedom to conduct self-defense operations.”³³ Moreover, the focus on exterior lines is proposed as an alternative to the historical emphasis placed on luring the enemy deep into Chinese territory and fighting “in depth.” It is related to the concepts of “strategic frontier” and “active peripheral defense” that have emerged as modifications of traditional Maoist People’s War, rather than as complete departures from past PLA strategy, which remains principally focused on defense of the interior lines and deterrence against attack.³⁴

Chinese Approaches to Crisis Management

Although not a formal part of military doctrine or national security strategy, Beijing’s general approach to managing political-military crises with other nations can greatly influence how it might employ force toward Japan and the alliance in future confrontations short of major military conflict.³⁵ In handling such crises, Chinese leaders in the past have seemed to follow the maxim “just grounds, to our advantage, with restraint” (*youli, youli, youjie*, 有理, 有利, 有节) in assessing how and when to employ coercion or force, accommodation, and persuasion in a crisis.

This maxim, while originally developed to guide the use of force in warfare, is routinely cited to describe Beijing's approach to the management of political-military crises. It consists of three principles:

- Do not attack unless attacked. Never attack others without provocation, but once attacked, do not fail to return the blow. This conveys the need for a “just” and “legitimate” basis for employing force or escalating in a crisis (implying, as well, the need to win over support from domestic and international publics). It also implies a stress on reciprocity and symmetry in evaluating when and how to escalate.
- Do not fight *decisive* actions unless sure of victory. Never fight without certainty of success, unless failing to fight would likely present a worse outcome. Utilize contradictions among the enemy. This conveys the selective and political approach to the use of force and other forms of escalation.
- Be pragmatic and aware of the limited nature of objectives and strength. With a strong power, set appropriate objectives; do not exceed capabilities. Know when to stop, when to counter, and when to bring the crisis to a close. Stop once the goals are attained; rethink if you cannot obtain your objectives. Do not be carried away with success. This conveys the importance of accurately understanding and calibrating means and ends and limiting one's objectives, and can be used to rationalized compromise.³⁶

The *youli, youli, youjie* maxim implies a preference in political-military crises for controllable escalation, possibly symmetrical “tit-for-tat” responses to an adversary's behavior, a sense of “knowing when to stop,” and, according to Chinese analysts, a use of force or coercive threats only in response to an opponent's use of force or threats. That said, many Western studies of China's crisis behavior suggest that Beijing has often initiated coercive threats or the use of force and has employed force in a crisis as a limited political and psychological tool. In fact, some data show that during the Cold War, China was more inclined than most other major powers to employ limited levels of force, especially as an integral element of crisis bargaining.³⁷ Beijing has often used force to show resolve and a commitment to principle, and a corresponding refusal to submit to coercion or intimidation. Beijing has also used force to produce psychological shock and uncertainty. This has sometimes occurred as part of a larger strategy designed to seize the political and military initiative via deception and surprise. At other times, Beijing has used force to intimidate an opponent, and thus to elicit caution and possibly concessions from the other side.³⁸ In this manner, from the Chinese perspective, a limited use of coercion or force can under certain circumstances prevent a much larger conflict, strengthen the foundations of peace, or achieve narrower Chinese objectives.³⁹

According to many analysts and as suggested by the above maxim, once initiated, the amount and frequency of force applied by China is often calibrated and modulated to sup-

port the existing political situation and objectives, and in consideration of the prevailing balance of power. One U.S. analyst has observed, based on a review of the existing (largely Western) literature on China's use of force, that, in past crises, Chinese leaders have often followed an initial overwhelming—albeit often limited—application of force with a pause. This was done for several possible reasons: to lull an adversary into thinking that China is backing down before eliminating the threat through a subsequent strike; to present an opportunity for the adversary to reconsider and back down; or to avoid a serious escalation of the situation. At the same time, Beijing also seeks to convey the impression that significant escalation is possible and acceptable, even though its focus remains on political objectives.⁴⁰

As this suggests, in some instances, a self-perception by China of overall weakness, not strength, can motivate the use of force, as a deterrent, that is, to convey resolve and to shock a stronger adversary into more “cautious” behavior.⁴¹ Such a use of force usually demands sensitivity to the balance of power in the geographic area of the crisis and to problems of escalation and control, as discussed below. In line with this approach, the Chinese use of force in past crises was often followed by signs of accommodation or efforts at persuasion, at least privately, to avoid escalation and to secure at least minimum gains.

Much of the scholarly analysis given above of Chinese leadership perceptions regarding the use of coercion or force, accommodation, and persuasion in a crisis derives from the Mao and Deng eras. During that period, Chinese leaders displayed a low threshold for the use of limited amounts of force in a crisis, sometimes seemingly regardless of the human or economic cost involved and in some cases against a clearly superior adversary such as the Soviet Union. This tendency apparently derived primarily from a high level of confidence on the part of Mao Zedong and Deng Xiaoping in their ability to control escalation and their strong belief that a limited application of force was necessary to avoid a larger conflict or to defend core “principles.”⁴² Conversely, some Western scholars argue that Chinese leaders have held offensive and aggressive approaches to crises throughout most of Chinese history (as part of an overall “hard” realpolitik approach to politics), emphasizing the need to show resolve and to seize the initiative, often through preemptive attack.⁴³

It is very likely that, based on analysis of long-term historical patterns, post-Mao leaders continue to stress the need to show resolve and seize the initiative in a crisis. It is also likely, however, that their willingness *to employ force* in a crisis has declined significantly. Indeed, many Chinese analysts known to some of the authors insist that China's approach to the use of force has changed markedly since the Mao and Deng eras. These observers believe that China's leaders no longer regard force as an effective tool to achieve limited political gains in a crisis. They argue that, while today's leaders must arguably pay greater attention to nationalist sentiments among the public and can still employ uncompromising language, their weaker political power, more consensus-based decisionmaking structure, and need to maintain a peaceful and stable external environment for China's development goals strongly orient them toward caution in managing crises, particularly regarding the use of force.

Because of such factors, these analysts assert that China has ruled out initiating the use of force as an option in dealing with neighboring countries on territorial or border disputes and

proposes instead that such disputes be solved through negotiation on the basis of international law or shelved until the time is ripe for ultimate resolution. In general, this viewpoint asserts that the Chinese leadership today regards the use of force in a foreign policy crisis as a last resort, to be considered only if core national interests are at stake, other (increasingly available) alternative approaches are exhausted, and China is faced with extreme provocation.⁴⁴ As a broad statement, this is probably accurate. At the same time, Beijing might regard its confrontations with Tokyo over the Senkaku/Diaoyu Islands as potentially subject to such “in extremis” conditions. Moreover, in this context, the above “tit-for-tat” approach to the use of force could result in an escalating spiral of conflict from very small origins.

PLA FORCE POSTURE TRANSFORMATION

In reflection of its principal strategic objectives, Beijing is shifting from a continental orientation requiring large land forces for “in-depth” defense of the homeland to a combined continental/maritime orientation requiring a smaller, more mobile, and sophisticated “active peripheral defense” capability for both inland and especially coastal areas, including the waters near Japan. Specifically, among the military services, the PLA Navy (PLAN) is transitioning from an offshore defense to a “near-seas defense” (*jinhai fangyu*, 近海防御), while the Air Force is transitioning from national territorial defense to both offensive and defensive postures (*gongfang jianbei*, 攻防兼备). Moreover, in an effort to more successfully fight local wars “under conditions of informatization,” the PLA is seeking to enhance the joint interoperability of its forces and improve their command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) capabilities, particularly through methods such as “integrated network electronic warfare” (*wangdian yitizhan*, 网电一体战). Beijing has also enunciated a concept of “Three Warfares” (*san zhong zhan*, 三种战), which stresses the need for the political apparatus of the PLA to become more adept at conducting media, psychological, and legal forms of struggle.⁴⁵

From a combat perspective, as noted above, China’s weapons systems, resources, and capabilities appear from the perspective of outside observers in the United States and elsewhere to be largely oriented toward the acquisition of key elements of an A2/AD type of capability.⁴⁶ Such a capability presumably includes the eventual ability to conduct integrated offshore offensive and defensive military operations along the littoral of the Western Pacific (extending out approximately 1,500 nautical miles to the so-called first island chain, which includes the Kuril Islands, the main Japanese islands, the Ryukyu Islands, Taiwan, the Philippines, and Indonesia, along with much of the Yellow Sea, the East China Sea, and the South China Sea), strategic deterrence and counterattacks, and long-range precision strikes and sustained operations. This also includes the ability to defend Chinese claims over its territorial waters and within the 200-nautical-mile exclusive economic zone (EEZ). In other words, these capabilities appear to be oriented toward limited land and sea denial, sustained sea presence, and limited power projection, but not sea control or long-range offensive power projection.⁴⁷

Some Chinese defense analysts do argue, *unofficially*, for China's need to acquire so-called "far sea defense" (*yuanhai fangyu*, 远海防卫/*yuanyang fangyu*, 远洋防御) capabilities emphasizing multidimensional precision attacks beyond the first island chain and operations well outside China's EEZ (including SLOC defense), to protect the PRC's national interests, thereby adding a layer of strategic depth within which to defend China's coastline.⁴⁸ Similarly, some Chinese military analysts even express the need for China to reassess its long-standing prohibition on the deployment of combat forces overseas (for purposes beyond so-called military operations other than war) and the establishment of overseas military bases.⁴⁹ And at least some Chinese observers explicitly argue (again, *unofficially*) that China must acquire these capabilities specifically to counter U.S. maritime strategy as it pertains to the Western Pacific. For these analysts, U.S. strategy is not only designed to sustain Washington's conventional maritime hegemony in the region but also to threaten China's "core interests" (*hexin liyi*, 核心利益).⁵⁰

Despite these assertions, none of the PLA's current objectives require an offensive expeditionary capacity of the type employed by the United States or other major power projection-oriented nations—aside from the ability to place limited forces on islands in the South or East China seas or *possibly* Taiwan. Perhaps more important, they do not suggest that China is developing a force designed to eject the United States from the Asia-Pacific region through military means or to "control" the region writ large. In fact, Chinese officials have on several occasions reiterated that they welcome America's presence in the region, support any U.S. efforts to perform a "constructive" role, and do not seek to expel U.S. forces from the region.⁵¹

Whether this viewpoint continues over the next fifteen to twenty years will depend to a great extent on the evolution of the larger United States–China strategic relationship, as indicated above. In this regard, it is significant that China's acceptance of the U.S. presence in Asia is to some extent conditional, as indicated by the adjective "constructive." The Chinese apparently view U.S. regional behavior as performing such a function only if it respects the interests and concerns of China and other Asian powers, and in general contributes to greater bilateral and regional cooperation while deemphasizing military divisions or rivalries.⁵² Hence, it is not inconceivable that Beijing's future strategic posture toward Washington could become far more adversarial, and its military doctrine more focused on establishing genuine military control along China's maritime periphery, if the Chinese leadership concludes that the United States is actively promoting military rivalry and ignoring or deliberately undermining vital Chinese interests and concerns.

Perhaps equally important, even lacking the intent to develop a long-range, expeditionary power projection capability, Beijing's current defense doctrine involves the development of military capabilities that clearly pose major implications for Japanese security.

Leadership and Elite Perceptions of Japan and the U.S.-Japan Alliance

From a national security standpoint, China's leaders view Japan first and foremost as a key forward base for U.S. forces and a critical political and military support for U.S. policies and actions toward China and Chinese interests, especially regarding Taiwan and the Korean Peninsula. For this reason, Washington is almost certainly viewed by many Chinese analysts as a critical force stimulating Japan's pursuit of a more capable conventional military and a provider of key U.S. bases. At the same time, many Chinese also view the United States as a constraint on Japan's willingness and ability to become an independent military and political power.⁵³

Thus, from the Chinese leadership's perspective, the United States wants Japan to be both stronger and more closely allied to U.S. goals, while simultaneously dependent on and limited by Washington. Although often viewed favorably in the past as a constraint on Japanese "militarism," the latter "keeping the genie in the bottle" function of the United States-Japan alliance is at the same time increasingly regarded by many informed Chinese observers as less desirable than a more independent and Asia-oriented Japan. This view has emerged in recent years as a function of several factors, including confidence in China's growing economic and political ability to "manage" Tokyo—especially given Japan's ongoing political and economic disarray and weakness—and a deepening belief that the United States regards the alliance with Japan as a key component in its presumed effort to counterbalance growing Chinese power in the Asia-Pacific region.⁵⁴

In addition, from a narrower perspective, China's leaders also see Japan's national security and defense policies, and in particular Tokyo's stance toward disputed resource and territorial claims in the East China Sea, as a separate (albeit United States-backed) challenge to China's national security interests and a trigger for the expression of intensified (and potentially destabilizing) nationalist sentiments and behavior in both countries—but especially in China. This outlook was most recently demonstrated during the intensified confrontations over the Senkaku/Diaoyu Islands in late 2012 and early 2013. By holding Chinese "sacred" territory that Beijing (and large numbers of ordinary Chinese) claim was unjustly seized by an imperialist Japan, Tokyo poses a challenge to the competency of the PRC regime in dealing with this highly emotionally charged issue, and hence to its legitimacy as an agent of Chinese nationalism. In this sense, Japan is viewed by many Chinese as a national security threat somewhat separate from the United States-Japan alliance.⁵⁵

Alongside these basic security-related interests and concerns exists a range of other Chinese leadership outlooks toward Japan and the alliance that influence Beijing's current and future military posture and defense thinking. Many of these observations operate at cross-purposes to one another:

- *The effect of new U.S. military operational concepts.* Many Chinese defense analysts are increasingly concerned that the United States will adopt (or has already adopted) the goal of acquiring all the elements of a so-called Air-Sea Battle operational military

concept, designed to neutralize China's A2/AD type capabilities, using bomber strikes at tactical inland C4ISR targets, along with precision-guided munitions, stealth, cyber, and other capabilities.⁵⁶ This and other new operational concepts, discussed in other chapters, could demand more extensive or reinforced U.S. basing capabilities in Asia, including in Japan.

- *Continued Japanese desire for a larger regional military role.* Some Chinese also believe that at least some (and perhaps many) Japanese political and economic leaders want Japan to drop all its current constitutional and other legal restrictions on the use of its military and develop a much stronger regional capability, in large part to contain a rising China and play a more fulsome role as a regional security partner of the United States in Asia. This danger is often associated, in Chinese minds, with the reemergence of the kind of Japanese “militarism” that ravaged China in World War II.⁵⁷
- *Japanese encouragement of a more adversarial United States–China relationship.* Some Chinese elites (and undoubtedly some of the public; see below) also apparently believe that some Japanese political and economic leaders have the eventual goal of establishing Japan as the predominant power in East Asia, either with or without the United States. Hence, for some Chinese, elements of the Japanese political elite conspire or maneuver to draw the United States more fully into an adversarial stance toward China, in order to support such long-term goals for Japan.⁵⁸
- *Continued Japanese opposition to militarism.* At the same time, some Chinese political leaders (and at least some of the educated public) also most likely recognize that many elements of the Japanese public, and some important parts of the Japanese political and economic elite, are opposed to Japan’s “remilitarization” and wish to remain under current constitutional limits and the protection that the alliance with the United States affords.⁵⁹
- *The positive effect of growing Sino–Japanese economic ties.* Many Chinese leaders also recognize that Japan is constrained in its strategic and military objectives by its political and economic circumstances, especially those that have emerged in recent years. On the economic front, Japan is now facing considerable structural problems, and it is also increasingly dependent on trade and investment with China for its future growth. And Beijing also highly values its economic relationship with Japan as a key source of critical technologies, components, and investment. The growing Sino–Japanese economic link is thus viewed as an important incentive in Japan for maintaining good relations with Beijing, as it is by many in China.⁶⁰
- *Possibly growing support for a more independent Japan.* There is also an awareness among Chinese observers that some less conservative Japanese leaders seek a more independent foreign policy for Japan, more oriented toward Asia, and less supportive

of acting in lockstep with the United States. Such sentiments are viewed favorably by many Chinese. However, most Japanese political leaders are also seen as recognizing the limits of Japan's autonomy, especially given U.S. influence.⁶¹

- *Strong support in some quarters for more cooperative ties with Beijing.* Chinese elites also understand that though overall concern has grown notably among both elites and the public in Japan about a rising China, some strong Japanese voices nonetheless continue to advocate cooperative ties with Beijing, emphasizing the strategic and economic benefits that such cooperation would likely bring. A few Chinese intellectuals even believe that China and Japan could cooperate over the long term to form the basis of a regional entente that would support Asian interests separate from and possibly against the “hegemonic” desires of the United States.⁶²

Some of these factors arguably provide China with increased maneuverability in deterring or dissuading Japan from aligning itself entirely with the United States in support of policies that would, by intention or effect, undermine Chinese interests. Indeed, for some Chinese, the potential exists, despite recent high tensions, to build support within Japan for much closer Sino-Japanese ties, if Beijing can make full use of its growing political, economic, and military influence in Asia and avoid falling into a worsening dispute with Tokyo over territorial and resource issues.

At the same time, several other factors listed here suggest the existence of considerable limits in the willingness or ability of Chinese leaders to strengthen relations with Tokyo, deriving from the presence of potentially hostile Chinese public and elite opinion toward Japan, an increasing tendency in some quarters to regard the United States and the alliance as threats to Chinese security interests (including resource and territorial claims), the competitive dimensions of Sino-Japanese economic relations, and of course the possible efforts of some Japanese and American political leaders to prevent the bilateral Sino-Japanese relationship from becoming too close.⁶³

Strategy and Policies Toward Japan and the United States–Japan Alliance

Taken as a whole, the above-noted Chinese attitudes and beliefs toward Japan and the United States–Japan alliance translate into a complex set of overall strategic objectives that center on the search for strong and enduring relations with Tokyo in the economic, political, and diplomatic realms, alongside efforts to increase Beijing's leverage over potential areas of bilateral contention (such as resource and territorial disputes) and generally maximize Japan's incentives to avoid aligning itself too closely with the United States or other Asian powers in opposing Chinese interests.

In the security realm, these goals are reflected in a multifaceted approach involving efforts to

1. Deter aggressive Japanese (and United States–Japan alliance) behavior regarding territorial and resource disputes (including, of course, Taiwan) and strengthen Chinese leverage in such disputes—through the deployment of an increasingly potent set of offshore, regionally oriented, conventional military, paramilitary, space, and cyber capabilities;
2. Maintain or enhance domestic Japanese public and elite sentiment against “militarism” or the development of a more offensively oriented, anti-China military posture in the Western Pacific (either independently, or in alliance with the United States), through the pursuit of increasingly cooperative diplomatic, economic, and military relations with Tokyo (and Washington); and
3. More broadly deter or complicate any potential attempt by Japan (or the United States–Japan alliance) to threaten the Chinese Mainland (and in particular China’s critical northeast) or China’s maritime economic supply routes to the outside world—through the acquisition of a highly credible set of conventional and nuclear military capabilities designed to defend against direct attacks and threaten Japanese (and U.S.) territory.

It is unclear whether this security strategy also includes efforts to acquire the capability to threaten Japan’s economic lifeline by posing a credible threat to maritime commercial and energy supply routes at long distances from Japanese territory. As suggested above, such an ambitious SLOC interdiction mission is not reflected in China’s current defense doctrine and force modernization program, although a variant of this mission could emerge within the time frame examined in this study in the most unlikely and extreme trajectory (described below).

In support of the above-noted strategy and approach, and as part of its overall foreign policy and military modernization program, Beijing is pursuing a range of specific policies toward Japan and the alliance, including:

- A foreign policy toward Japan that emphasizes the common, long-term interests of both countries in peaceful, stable, and mutually productive relations, while remaining clear and steadfast in defending China’s interests in disputed areas and reminding Japanese and other peoples of the ongoing need for Tokyo to avoid giving support to “militarist” elements in Japanese society. This policy also stresses the deepening of “Asia-oriented” views and approaches in Japan and between Japan and other regional nations, including enhanced Sino-Japanese–South Korean ties.
- A policy toward the United States–Japan alliance that avoids any overt opposition or strong criticism, and accepts the existence, and in some limited respects the utility, of the alliance (as a means of restraining Japanese “militarism” and possible nuclearization), while doing nothing to encourage or strengthen it. This policy requires a somewhat delicate balancing act, with Beijing supporting U.S. alliance-based efforts

to deter supposedly aggressive Japanese behavior while opposing closer United States–Japan military ties. As indicated above, on balance, Beijing shows signs of increasingly preferring a more autonomous Tokyo.

- A military modernization and defense policy centered on the acquisition of a range of naval, missile, space, air, and cyber capabilities designed to establish a strong, sustained military presence along China’s maritime periphery, and a clearly credible ability to defend Chinese territory from any coercive or kinetic threats and attacks, and to provide China with critical influence in managing and possibly resolving specific sovereignty, resource, or other disputes involving Japan and the alliance.⁶⁴
- Economic policies and approaches that directly or indirectly encourage ever closer Sino-Japanese trade, tourism, investment, and technology transfers, thereby increasing Tokyo’s commitment to maintaining positive bilateral relations with Beijing while providing China with greater potential political leverage over Japan.
- A broader set of relations with Asian powers—and a formal security concept—that stresses peaceful coexistence and cooperative bilateral and multilateral political, economic, and military relations, the peaceful resolution of disputes through negotiation, and the creation of regional forums and structures to address common problems—as potential alternatives to a reliance on “Cold War”-style military alliance structures, and as a means of strengthening an Asia-oriented perspective in Japan and elsewhere.

As suggested above, Beijing must tread very carefully in implementing many of the above-noted policies, in order to maintain a balance between the need to reflect and to some extent defuse potentially volatile Chinese public views toward Japan and the need to strengthen productive relations with Tokyo. Differing opinions undoubtedly exist within the Chinese leadership over how best to do this.

At one extreme, some leaders likely emphasize a tough-minded, more adversarial approach toward Japan that makes greater political and diplomatic use of China’s growing economic strength and is perhaps more deeply rooted in the strong nationalist sentiments found among some elements of the public. At the other extreme, some leaders no doubt emphasize the need to increase the level of cooperation and reduce strategic distrust between Beijing and Tokyo, for obvious geostrategic and economic reasons. Between these extremes probably resides a variety of more complex combinations of both views.

However, overall, these somewhat contending approaches almost certainly exist within a general consensus that recognizes the need to improve China’s political and military leverage over Japan while increasing Tokyo’s incentives to cooperate with Beijing and to adopt security policies that are less dependent on its alliance with the United States. Although the current intensified imbroglio between China and Japan over the Senkaku/Diaoyu Islands could result in a stronger emphasis on the potentially confrontational elements of Chinese

policy, it is unlikely that the issue will significantly alter the strong strategic and economic reasons for Beijing to sustain cooperation with Tokyo.

MILITARY CAPABILITIES

Since at least the middle to late 1990s, Beijing has undertaken a systematic, well-funded, and focused program of military modernization in support of the above national strategy, force doctrine, and foreign policies. Among these efforts, perhaps the most notable overall systemic improvements include

- The downsizing and reorganization of China's overall force structure;
- The professionalization of the officer corps;
- The promulgation of new doctrinal regulations that respond to the challenges posed by high-technology warfare;
- The development of more expansive and realistic training regimens;
- The holding of more realistic, complex, and large-scale military exercises (involving "integrated joint operations");
- Improvements in logistics, and especially C4I capabilities;
- The emergence of a more capable defense industrial complex possessing improved research-and-development and production capabilities (more on this below); and
- The deployment of increasingly advanced short- and medium-range ground, air, and naval weapons systems.

More specifically, those PLA capabilities that have either already been deployed—or are likely to be deployed to varying extents within the next fifteen to twenty years—and are of particular relevance to the United States–Japan alliance include

- Intermediate-range ballistic missiles (IRBMs) with high levels of accuracy and sophisticated defense countermeasures;
- Long-range, standoff, antiship weapons, including antiship cruise missiles (AS-CMs), advanced modern torpedoes, and antiship ballistic missiles (ASBMs);
- Sophisticated, largely Soviet-designed antiaircraft missiles with ranges extending well past China's shoreline;
- Increasingly advanced air-to-air and air-to-surface missiles;

- Medium-range fourth-generation fighter/interceptors;
- A pair of fifth-generation stealth fighters;⁶⁵
- A demonstrated offshore, medium-range bomber or strike aircraft capability;
- A rudimentary aircraft carrier capability;
- A large and growing number of modern conventional attack submarines;
- A large and growing number of modern surface combatants;
- Growing mine warfare capabilities;
- Research and development of exo-atmospheric missile defense capabilities;
- Improved C4I and carrier detection systems involving ground, naval, air, and space-based assets;
- Improvements in special operation and reconnaissance forces;
- Short- and long-range unmanned aerial vehicles with reconnaissance capabilities; and
- More sophisticated antisatellite, cyberwarfare, and electronic warfare capabilities.

As indicated in chapter 1, the current state of these capabilities will be analyzed in terms of five military domains: maritime, air, land, space, cyber, and C4ISR. Possible trends in these domains over the next fifteen to twenty years are analyzed later in the chapter, when four possible future trajectories are discussed.

The Maritime Domain

China's capabilities in the maritime domain are significant and growing, with its greatest strengths in the arena of denial-oriented antisurface warfare, as embodied in China's antiship cruise missile inventory, ASBMs, submarine fleet, and mine warfare capability. By contrast, China's antisubmarine warfare (ASW) and offensive power projection abilities remain relatively limited, though the PLAN is likely to make some strides in this area in the next fifteen to twenty years.

Currently, submarines are the most formidable aspect of the PLAN's antiaccess force, due in part to the relatively high proportion of modernized vessels within the PLAN's undersea fleet, particularly in comparison with its surface combatants, along with serious limitations in naval aviation capabilities.⁶⁶ By contrast, ASW remains one of the weakest links in both the PLAN and the PLA Air Force's (PLAAF's) capabilities, although China appears to be laying the basic foundations for improved ASW capabilities.⁶⁷

China's undersea fleet comprises more than 60 vessels, of which about half are modern, including two Shang-class (SSN) 093 nuclear-powered attack submarines, 12 Russian-made (SS) Kilo attack submarines, 13 Song-class (SS) 039 diesel electric submarines, and eight or more Yuan-class 041 diesel electric submarines. China is also reportedly developing new models of both nuclear-powered and conventionally powered attack submarines.⁶⁸ Conventionally powered submarines, which can reach well beyond China's EEZ, may constitute the majority of growth in China's undersea fleet in the coming years. Conversely, a substantial increase in the number of nuclear-powered attack submarines (which presently seems unlikely) would suggest more ambitious missions for its undersea forces, such as interdicting SLOCs or threatening approaching naval forces from extended ranges.

Another of China's strengths in the maritime domain is its mine warfare capabilities, which can be an effective method of denying access to naval assets in the event of a conflict. Chinese mine warfare strategists have discussed offensive mine laying using submarines in egress lanes near U.S. naval bases in Japan and Guam, in an effort to form a blockade out to the first island chain. Comparatively little is known about the PLAN mine inventory, but estimates suggest that China currently possesses between 50,000 and 100,000 mines of 30 varieties, including rocket-propelled mines, drifting mines, and deepwater mines. The U.S. Office of Naval Intelligence reported that China has developed a system for inspecting and maintaining its mine inventory. Nonetheless, PLA mine capabilities on balance still lag behind U.S. mine technology, and offensive mine placement could be difficult for China in the event of a conflict. Although mines can be laid by a variety of submarines and surface combatants, the most effective method is via airplane; however, China's persistent weakness in the air domain (and especially in medium and long-range naval aviation) could cripple its ability to deploy mines from the air in the event of a Japan-related conflict (though perhaps not a Taiwan contingency). Furthermore, China's own mine countermeasure technology remains relatively limited, although the PLAN is cognizant of this shortcoming and is making efforts to rectify it.⁶⁹ Finally, some observers argue that given the huge expanses of water in many areas of strategic value near Japan, such as sea lanes and egress points, the use of mines would actually have a very limited effect on allied military operations.⁷⁰

In terms of its relevance to antisurface naval warfare and A2/AD, perhaps no program has received as much attention as the DF-21D, an antiship ballistic missile modeled after the CSS-5 DF-21C with a reported range exceeding 1,500 kilometers.⁷¹ In principle, the ASBM could be launched from a road-mobile land-based platform at critical mobile assets such as an aircraft carrier. The 2011 Taiwan defense white paper asserted that the Second Artillery Force had deployed the missile, and in December 2010, Admiral Robert Willard of U.S. Pacific Command stated that the missile had reached a stage of "initial operational capability."⁷² However, it is important to note that this assessment of the missile's capability may refer to the fact that the ASBM has been tested successfully over land, as no evidence exists to suggest that a successful test has been executed at sea. Given the precision targeting required from an array of satellite and other assets, the missile system likely has years of

testing ahead and may not be able to be successfully utilized in a conflict in the near future, though it is certainly possible within the time frame of this study.⁷³

There have also been some reports that China may be developing an intermediate-range conventional ballistic missile, perhaps the next variant in the DF-21 series, that could have a longer range than the DF-21D. Although little public information is available on the subject and it is unclear how soon such a missile could be produced, it could conceivably be deployed before 2030.⁷⁴

Beyond the headline-grabbing ASBM, China is also fielding a range of increasingly capable ASCMs, particularly Russian-made supersonic missiles. These ASCMs can be delivered from an array of platforms, including Kilo-class submarines, Sovremenny destroyers, or littoral Houbei fast-attack craft. If successfully integrated with a capable over-the-horizon radar (OTHR) targeting system, the effective range of these ASCMs could be extended to take better advantage of the maximum ranges, which can be as far as 200 to 300 kilometers.⁷⁵

Although China's surface fleet contains a lower proportion of modern vessels than its undersea force, new classes of indigenously produced destroyers and frigates armed with surface-to-air missiles (SAMs) and ASCMs have increased the PLAN's ability to operate within and beyond its nearby seas. In particular, the U.S. Office of Naval Intelligence has noted that the most important upgrade made to the PLAN surface fleet in recent years has been the deployment of a shipboard area air defense capability.⁷⁶ As of 2010, the U.S. Department of Defense classified 26 percent of the PLAN's *total* surface force as modern, compared with 10 percent in 2000, while 43 percent of the PLAN's destroyers and frigates were deemed high-capability and equipped with advanced SAMs and antiship cruise missiles. However, some naval experts question whether the Jiangwei frigates and Sovremenny and Luhai destroyers should in fact be categorized as modern, given their very limited air-defense capability.⁷⁷ In any event, the trend of surface force modernization continues; 2012 revealed an additional six Luyang II (eight total), at least a pair of Luyang III air defense destroyers and up to sixteen Jiangkai II frigates either being built or in commission.⁷⁸ China has also produced a limited number of long-range amphibious ships intended principally for use in military operations other than war, and it is evidently producing a new class of corvette to replace its aged Jianghu light frigates.⁷⁹

The PLAN's fledgling aircraft carrier program has also attracted a considerable amount of attention. The *Liaoning*, a refitted Soviet carrier, was formally commissioned in September 2012, but as yet it has not been fitted with aircraft, and in any event, its functions are likely to be limited to training and research and development, rather than actual patrolling.⁸⁰ In addition to this vessel, China is also planning to develop its own indigenous aircraft carrier. Some sources speculate that China could build multiple operational carrier battle groups over the next decade.⁸¹ However, this could be a high-end estimate. Even if China does build multiple carriers, they may not be fully outfitted and operational by 2030, they will likely exhibit capabilities far inferior to U.S. carrier groups, and they will almost certainly have no actual combat experience.⁸²

In addition to these more power-projection-oriented elements of the PLAN fleet, China also has deployed about 60 stealthy fast-attack vessels (Type 022 Houbei class) oriented toward littoral defense, each of which can be equipped with up to 8 advanced antiship cruise missiles. These vessels would likely form an important element of Chinese efforts to deny access to U.S. surface ships in the event of a Taiwan or East China Sea contingency.⁸³

Although some of the above-noted technologies already introduce a degree of uncertainty into a potential maritime battle between the PRC and the United States within the first island chain, the PLAN's surface fleet still does not directly compare with advanced U.S. or even Japanese naval forces.⁸⁴ In this regard, China is still far from achieving the sort of naval capabilities envisioned in the 1980s by Admiral Liu Huaqing, a prominent figure in the development of the Chinese navy. Liu reportedly felt that China should seek to establish control over the first island chain by 2000, exert sea control out to the second island chain by 2020, and create a global, carrier-driven force by the mid-twenty-first century, between 2040 and 2050.⁸⁵ However, compared with this highly ambitious and decidedly unofficial statement of long-term PLAN objectives by a strong advocate of Chinese seapower, as indicated above, Beijing's overall naval modernization program remains quite limited in scope and capability, focusing on antiaccess or counterintervention missions over sea control.

The Air Domain

Relative to other capabilities—particularly conventional missiles and submarines—China's air force, naval aviation, and army aviation are at a relatively immature stage of development. The PLAAF's reported goal of conducting air campaigns within 1,000 kilometers of China's periphery by 2010 has proven elusive.⁸⁶ Only one-quarter of China's current aircraft possess basic capabilities comparable to Western fourth-generation aircraft, and only a small fraction of those aircraft can operate beyond 500 to 1,000 kilometers of China's shores, at night, and in poor weather.⁸⁷ Only a small fraction of China's fighters are combat-ready at any given time, and the PLA lacks the demonstrated capability to sustain a rapid sortie rate at long ranges.⁸⁸ Moreover, PLA air forces apparently do not conduct any training in close air support operations. To contest airspace in a Japan-related contingency, China would have to develop the advanced avionics required for a fifth-generation fighter and improved aerial refueling capabilities to extend the combat range of its fighters beyond the airspace over its near seas.

The PLA Air Force has at least 150 Su-27/30 fighters, as well as 95 J-11s and more than 44 J-11Bs.⁸⁹ The J-11 is similar to the Su-27 in that it is designed primarily for air-to-air combat (equipped with the advanced PL-12 missile), whereas the J-11B is supplemented with a surface attack capability and has been described by some observers as superior to that of the U.S. F-15.⁹⁰ The PLAAF also possesses as many as 150 indigenously produced J-10 fighters, whose combat radius without inflight refueling is between 463 and 555 kilometers. With aerial refueling from an H-6U tanker (of which the PLA currently has about 10 in total), the range of the J-10 could, in principle, be extended further.⁹¹

In the realm of naval aviation, the PLA Navy possesses an additional 24 Su-30MK2 fighters, a Russian-produced class of long-range strike fighters equipped with the Kh-31A air-to-surface missile.⁹² These 24 planes, which are assigned to the PLA's Naval Aviation Fourth Division's Tenth Fighter Regiment at Feidong Air Base in Zhejiang Province, have a combat radius of between 1,300 and 1,600 kilometers without refueling. However, the primary doctrinal mission of PLAN aircraft remains the defense of ports and coastal maritime areas, which is reflected in PLAN training.⁹³

In principle, the PLAN's Su-30MK2 planes and the PLAAF's Su-30MKKs and possibly the J-11B are also capable of inflight refueling, which could extend their range by at least another 500 kilometers. However, China's only current refueling tanker, the H-6U, is not able to refuel the Su-30, and there is no evidence that Su-30 or J-11B refueling is conducted in practice. In part to fill this gap, China has sought to acquire eight IL-78 MIDAS tankers from Russia, but Russia has struggled to fill the order. It is also possible that, over time, China may be able to indigenously develop a tanker based on a large transport aircraft that is in the early stages of development.⁹⁴ At present, however, China conducts minimal aerial refueling training with the tankers it does have, possesses limited ground infrastructure to support refueling tankers, and has comparatively few individuals experienced with inflight refueling.⁹⁵

The PLA also possesses more than 600 bomber and attack aircraft—approximately 520 in the PLAAF and 120 in the PLAN. This includes between 120 and 150 JH-7/A fighter-bombers, a plane that has a combat radius of up to 1,650 kilometers and carries a variety of precision-guided air-to-air, antiship, and air-to-surface missiles.⁹⁶ China's dedicated long-range strategic bomber force includes more than 100 H-6, in a range of variants, such as the H-6H, which is equipped with land-attack cruise missiles; the H-6G, which is equipped with YJ-83 antiship cruise missiles; and, most recently, the H-6K, which is capable of carrying up to six air-launched cruise missiles.⁹⁷ Some of these aircraft could theoretically be brought to bear in a Japan-related contingency—for example, through coordinating with land- and sea-based platforms to launch joint anti-air raids against U.S. bases in Japan.

China has also been attempting to build its inventory of aircraft capable of advanced airborne early warning and control (AEW&C) and electronic warfare, as evident in its efforts to adapt the Y-8 airframe for the Gaoxin series of aircraft, as well as its acquisition of aircraft under the KJ-2000 program. Such systems can play an important role in supplementing air defense, reconnaissance, jamming, and data relay efforts; however, they are also limited by their vulnerability and need to fly within range of air defense. Further developments in such systems are thus contingent in large part on improvements in air defense, not solely on numerical growth.⁹⁸

Unmanned aerial vehicles (UAVs) are also playing an increasing role in PLA operations. Although UAVs were not reported operating in the PLAN until the summer of 2011, they have since then appeared on several occasions as part of naval exercises occurring in both the East and South China seas, apparently performing target identification and reconnaissance roles. The PLA has had a UAV-type research program since the 1960s, it has

displayed recent advances in many relevant technologies (such as guidance and refueling systems, composite materials, and lightweight, precision-guided, high-impact munitions), and there is little doubt that such vehicles will play an increasingly important role in PLA activities of relevance to Japan and the alliance, possibly including ISR, communication relay, missile defense, precision targeting, electronic jamming, and other combat duties.⁹⁹

During the next fifteen to twenty years, China will continue to expand its inventory of fourth-generation fighter aircraft. One major component of this expanding inventory will likely be variants of the J-10 fighter, which is more aimed at coastal defense (as well as a Taiwan scenario), though its 550-kilometer combat radius and inflight refueling capabilities could make it relevant in some East China Sea and Senkaku/Diaoyu Islands scenarios.¹⁰⁰ The PLA will also likely continue developing more advanced indigenous J-11 variants, including the J-11B (with a range of improved radar and avionics capabilities) and a carrier-based J-15.¹⁰¹ Moreover, the precision-guided munitions—including air-to-air, air-to-ground, and antiship missiles—carried by these fighters are likely to continue to advance during the next two decades.

China is also working to produce a fifth-generation stealth fighter, with two variants currently under development—the J-20 and J-31. Some observers have speculated that the J-20, a larger and heavier aircraft, will be intended more for surface-attack roles, whereas the smaller and nimbler J-31 could serve as a fighter-interceptor, potentially for deployment on an aircraft carrier.¹⁰² The aircraft are still in the prototype and testing phase, and most estimates suggest that it will be between five and ten years before they become operational and enter into mass production.¹⁰³

Nonetheless, significant obstacles to the successful development and deployment of fifth-generation fighters remain, including (1) persistent difficulties in developing a supersonic jet engine and advanced avionics; (2) the inherent challenges in acquiring and maintaining true “stealthiness”; (3) potential constraints on the sortie rate stemming from lack of combat experience and insufficient training in rapid deployment of fighter jets, which would inhibit the PLAAF’s ability to sustain long-range assaults; and (4) the above-noted aerial refueling shortcomings, which could limit these advanced fighter jets’ range.¹⁰⁴ Given these obstacles, along with the possibility of broader systemic disruptions or stagnation in the PRC, the production of advanced stealth fighters could be delayed further than expected.

Despite its overall weaknesses in long-range aircraft capabilities, the PLA could still hobble the ability of U.S. air forces to intervene in a conflict in areas near Japan. As noted above (and as discussed in greater detail in the “Ground Domain” subsection below), Chinese missile capabilities could pose a serious threat to U.S. air bases in Japan, making it more difficult for U.S. aircraft to take off and land. Indeed, some observers have suggested that saturation missile attacks on U.S. and Japanese air bases could largely incapacitate much of the non-carrier-based alliance air forces stationed in the Western Pacific.¹⁰⁵ At present, it is not unambiguously certain that Chinese missile capabilities are sufficiently strong and U.S. base defenses are sufficiently weak for such a scenario to unfold; however,

without a significant strengthening of passive and active base defenses, it is likely that such a scenario will become much more plausible during the next fifteen to twenty years.

In defensive terms, China has deployed an array of SAMs along its coastline and in critical areas that could intercept hostile aircraft. This technology could assist China in defending against long-range bombers aiming for Chinese C4ISR targets located on the Mainland. (These SAMs are also relevant to cruise missile defense, as discussed in the “Ground Domain” subsection.) However, as Ken Allen has observed, the PLAAF does not practice sending aircraft out through the SAM/antiaircraft artillery belt to intercept hostile aircraft and then return home through the same belt. Such a deficiency in training could complicate PLA efforts to deploy air assets in a crowded aerial environment, possibly exposing its aircraft to friendly fire.¹⁰⁶ The development of such a capability is something to watch for over the next several years.

The Ground Domain

In the ground domain, China’s growing inventory of conventional ballistic and cruise missiles is one of the most potent elements of its antiaccess arsenal, and arguably one with the greatest potential to yield asymmetric gains against adversaries. As of 2011, China had roughly 80 to 120 IRBMs and medium-range ballistic missiles (MRBMs), 1,000 to 1,200 short-range ballistic missiles (SRBMs), and 200 to 500 ground-launched cruise missiles (also known as land-attack cruise missiles, or LACMs).

China’s conventional missiles offer deterrence at a relatively low cost and without the practical constraints and escalatory dangers of nuclear weapons. Missiles can compensate for shortfalls in the PLAN and the PLAAF’s capabilities, holding technologically superior foes at a distance from China’s shores. MRBMs and IRBMs mounted on mobile launchers could fire on U.S. bases in Japan or, in the case of an ASBM, carrier groups operating up to perhaps 2,000 kilometers off China’s shores, depending on where the missiles are located.

Nonetheless, China’s increasingly sophisticated missiles are not immune to the technical and operational challenges faced by the PLA as a whole. In particular, the tracking, targeting, and homing systems necessary for a precision strike are themselves under development, and—with the arguable exception of space satellites—can be vulnerable to attack. The survivability of unevenly developed maritime and aerial platforms is far from assured, becoming yet another potential weak link in a chain of systems required for China’s antiaccess campaigns.

Besides this missile inventory, China possesses little offensive PLAN or PLAAF ground assault capability beyond short-range multirole strike fighter aircraft (such as the JH-7/A, J-10, and J-11B) oriented toward a Taiwan contingency, a very limited number of amphibious vessels (such as the Type 071 and reported Type 081 ships) intended principally for use in military operations other than war, and a limited number of strategic bombers.¹⁰⁷ There does not seem to be any indication that China is seeking to acquire a heavy bomber capability. However, the Pentagon’s 2011 report on the Chinese military suggested that

the H-6 bomber is being modified in such a way that would extend its reach and enable its air-launched cruise missiles to reach targets as far as 3,300 kilometers from the Chinese coastline, a range that includes Guam.¹⁰⁸

The PLA has also been making advances in the more traditional aspects of the ground domain—that is, improved ground troop organization, professionalization, and equipment. Indeed, although, as described above, China's air force and navy have been making strides, the army continues to dominate the PLA in many key respects. During the past couple of decades, Beijing has reduced the number of its ground troops significantly, while simultaneously professionalizing and modernizing its forces. Organizationally, it has recently begun expanding its special operations forces and moving its force structure toward a modular combined arms brigade focus, an approach that should eventually improve the agility and flexibility of PLA troops.¹⁰⁹ In the realm of matériel, the PLA has deployed new helicopter and amphibious assault assets in its ground troops, although the overall number of the PLA's rotary-wing assets relative to the size of its ground troops remains limited.¹¹⁰

In terms of defensive capabilities, as noted above, most of China's air and naval assets are oriented toward coastal, littoral, and continental defense. In the event of offensive strikes against inland Chinese C4ISR targets, the PLA would likely rely principally upon these assets for its defense. However, China has also been developing a missile defense system that would include land-based interceptor SAMs to help defend against such strikes. Thus far, China's SAMs (including the Russian-made SA-15 and SA-20 and the indigenous HQ-9) have principally been oriented toward intercepting aircraft, cruise missiles, and some SRBMs and MRBMs. However, the PLA is also moving forward with research on an "umbrella" missile defense system that could intercept ballistic missiles in the upper atmosphere. By further developing technology successfully tested in 2007 and 2010, China may be able to intercept some ballistic missiles near major cities and strategic assets.¹¹¹

The Space Domain

During the past decade, the PLA has been building the space-based infrastructure for what may eventually serve as an integrated communications and command system. Although its current capabilities in space-based C4ISR are limited and still do not compare with those of the United States, China has modernized and expanded its communications and surveillance systems at a rapid pace in recent years, particularly in the maritime environment. As observers such as Eric Hagt and Matthew Durnin argue, China's maritime ISR coverage will not rival that of the United States anytime in the near future, but Beijing has nonetheless made important advances that could potentially, inter alia, facilitate a precision-strike capability for an ASBM.¹¹² Indeed, the status of China's space-based ISR is perhaps the most crucial variable in determining the future success of an ASBM system, with significant implications for China's potential to undertake comprehensive antiaccess campaigns.¹¹³

Most of the advances in China's space-based C4ISR capabilities have occurred within the past decade, and especially the past few years. In the realm of command-and-control

communications, the Qu Dian satellite communications system, the inaugural satellite of which was launched in 2000, provides a command-and-control network somewhat analogous to the United States' Joint Tactical Information Distribution System, linking the General Staff Department headquarters and service headquarters with military regions. However, some of the satellites in China's standard DFH-4 series have reportedly experienced failures that have incapacitated the satellites or reduced their life span, suggesting that China's communications satellites networks may not be entirely reliable.¹¹⁴

China is also in the process of developing and deploying a network of navigation satellites known as the Beidou system that will eventually provide Beijing with an indigenous alternative to the GPS system. The PLA has launched between 10 and 20 Beidou satellites in recent months and years, with a goal of creating a constellation of 35 satellites with global coverage by 2020. Such an indigenous capability will be crucial for successful targeting and navigation of a range of commercial and military technologies, including China's missile assets.¹¹⁵ China has also deployed a network of data link satellites, including three in the Tianlian-1 series, intended to facilitate the transfer of information (such as targeting imagery) to surface-based assets up to 2,000 kilometers offshore, which would be vital in supporting an ASBM.¹¹⁶

In the reconnaissance realm, China has also deployed a network of satellites in the Yaogan series that have substantially improved target imaging within the second island chain, although such capabilities currently fall short of the coverage necessary to reliably guide precision air or missile strikes. China possesses more than 15 Yaogan and other imaging satellites that operate at an altitude of about 400 miles above the Earth's surface, within low Earth orbit (LEO). The average potential coverage provided by these satellites has increased to as much four and a half hours per day; however, current orbital configurations also mean that satellite flyovers would be unevenly distributed, with possible gaps of a few hours between views. (That said, it is also worth noting that successful targeting of an ASBM may not necessarily require continuous coverage.¹¹⁷)

Some of China's Yaogan satellites are reportedly capable of limited electronic and signals intelligence (ELINT and SIGINT), capabilities that are central to conducting sustained scanning of wide areas. However, the PLA will need to develop more robust launch rockets before it can support launches of the much heavier geostationary satellites, such as those used for ELINT and SIGINT by the United States. Although such rockets are currently under development, there are also signs, as the 2012 Pentagon report on China's military notes, that China's rapid pace of rocket launches has taxed its deployment systems.¹¹⁸

To supplement these satellite capabilities on the ground, China has deployed a small number of OTHRs that can detect and track surface ships and aircraft out to the second-island chain, though not yet with the precision necessary to provide for an air or missile strike.¹¹⁹ Such fixed, land-based ISR systems would be particularly vulnerable in a potential conflict. Conversely, China's truck-mounted troposcatter arrays enable mobile SAM batteries such as the SA-20 PMU2 or HQ-9 to remain connected to command stations, and could potentially assist in targeting antiship cruise missiles as well.¹²⁰ Additionally, as

discussed in the “Air Domain” subsection above, China’s AEW&C and UAV capabilities also form a key component of the ISR system. However, not only are these systems reliant upon air defense, but it is also not clear how well integrated they are with space-based and OTHR systems.

At present, China’s confirmed antispace capabilities appear to be limited to targets in LEO. After three failed tests, China successfully tested an antisatellite (ASAT) vehicle against a defunct weather satellite in 2007, using a variant of the DF-21C MRBM to destroy the target at an altitude of 865 kilometers (537 miles).¹²¹ Given the unreliability of current direct-ascent launch vehicles, one analyst estimates that China would need as many 20 launch vehicles to disable 6 or 7 satellites.¹²² Soft-kill weapons such as ground-based lasers could also incapacitate satellites in LEO, and may have been tested in as early as 2006.¹²³

At the same time, however, China also appears to possess little capacity to protect its own satellites from attack. As is true for the United States, China’s space-based assets are highly vulnerable to jamming and other offensive efforts, which could present a serious challenge to the PLA’s efforts to conduct thorough reconnaissance and employ effective precision-guided munitions in the event of a conflict.¹²⁴

The Cyberspace Domain

Although little information on the cyberspace domain is available in the unclassified domain, there is some evidence to suggest that China may already possess the ability to infiltrate essential unclassified networks and disrupt key nodes in vulnerable networks at the outset of a conflict. China’s efforts to improve its information warfare capabilities are far less sensitive to budget constraints and economic shocks than, for example, its expensive space programs.

Cyber attacks could be launched with the aim of crippling enemy C4ISR systems, preventing the United States from deploying forces into the regional theater and possibly paving the way for joint firepower or antiair raids. China would most likely target relatively unshielded, unclassified military networks such as Non-Classified Internet Protocol Router Network (NIPRNET) that are nevertheless crucial for C4ISR. (Civilian infrastructure—for example, power plants in cities—would actually be a less appealing target due to the possibility of uncontrolled escalation.)¹²⁵

That said, cyber operations alone would not turn the tide of a conflict, as they would not be able to completely cripple tactical operations on the ground. As is discussed in later chapters, the United States would likely be able to defend and recover from such attacks relatively soon after the early attacks. At the same time, as China itself continues to modernize and informatize its forces and become more reliant on cyber networks, it too is becoming more vulnerable to offensive cyberwar. There are some limited indications that China is attempting to prepare for this threat, though its defenses are certain to prove at least equally porous to those of the United States and probably more so.¹²⁶

The Nuclear Domain

Relative to the rapid buildup of its conventional antiaccess forces, China's nuclear modernization has been far more modest and incremental. At present, China's inventory of nuclear weapons consists of roughly 240 nuclear warheads, about 50 of which are ICBMs capable of reaching the continental United States.¹²⁷ Some estimates suggest that China could have as many as 100 ICBMs capable of reaching the United States by 2025.¹²⁸ At the same time, China will continue to phase out its aging liquid-fueled missiles in favor of road-mobile, solid-fueled missiles such as the DF-31 and DF-31A.¹²⁹ However, China's nuclear modernization remains focused on making qualitative, rather than quantitative improvements in its nuclear forces, enhancing the efficacy and survivability of a largely fixed number of warheads. In this regard, China will continue to field maneuvering reentry vehicles, decoys, jamming devices, and other penetrating aids to thwart allied missile defense.

While China is pursuing an undersea deterrent in the form of the Jin-class submarine and the JL-2 SLBM, such capabilities will likely remain flawed and immature. Technical failures have repeatedly delayed the rollout of the JL-2, while the Jin-class nuclear-armed submarine, or SSBN, remains noisier than most 1970s-era Soviet SSBNs, and thus highly vulnerable to sophisticated ASW systems.¹³⁰ Moreover, China has relatively little experience in maintaining the secure communications needed to ensure constant contact between central leaders and patrolling SSBNs that, unlike the rest of China's strategic forces, would be entrusted with operationally deployed warheads. Owing to these challenges, China's new Jin-class SSBNs have yet to conduct a deterrent patrol. Given China's continual reliance on legacy bombers unlikely to survive contact with modern air defenses, land-based missiles seem likely to continue to form the backbone of China's nuclear deterrent in the near future.

From a broader standpoint, China continues to maintain a minimal deterrence posture that largely precludes the use of its small nuclear force as an instrument of war fighting or coercion. A long-standing no-first-use policy continues to impose painful doctrinal and operational constraints on the Second Artillery's strategic forces, as Chinese nuclear warheads—with the possible exception of the future JL-2—are not mated with missiles except in times of elevated readiness or in preparation for launch.¹³¹ Although *internal* debates regarding the continued viability of China's nuclear posture occurred during the 1990s and early 2000s, Chinese civilian and military representatives have since overwhelmingly reaffirmed the country's commitment to the no-first-use policy and minimal deterrence.¹³² Powerful historical legacies and a strong consensus among civilian leaders will likely ensure that China's nuclear posture remains numerically limited and defensively oriented, with little chance of a sudden buildup or a "sprint to parity."¹³³

Yet China's nuclear posture may face pressure from shifting operational realities imposed by new advances in allied conventional capabilities. Members of China's defense establishment have pointed to a trifecta of capabilities that could be combined to execute a decapitating first strike against China: space-based ISR capable of tracking mobile targets,

conventional prompt global strike (CPGS) systems, and ballistic missile defense (BMD) networks. Partially in response to these developments, China has sought out a number of ASAT capabilities, ranging from kinetic missile interceptors to directed energy weapons to neutralize CPGS, BMD, and space-based surveillance.¹³⁴ Some Chinese analysts have also advocated an expansion of the country's nuclear arsenal, although such arguments do not appear to have gained traction with the central authorities.

In this vein, it is not inconceivable that China could lower its nuclear threshold if it perceives an existential threat to its nuclear deterrent. For instance, it remains unclear whether China would view a conventional precision strike on the Second Artillery's command-and-control facilities as a decapitating "first use" that could then justify nuclear retaliation.¹³⁵ It is worth noting China has deliberately sought to cultivate ambiguity regarding the specifics of its nuclear doctrine, its decisionmaking calculus, and its force structure. To a great extent, China's resistance to transparency reflects the ample weaknesses that plague its nuclear capabilities, and the vast disparities between the Second Artillery's strategic forces and those possessed by the United States, as well as Russia. Although China's relatively restrained nuclear posture could contribute to strategic stability, the nuclear domain could nevertheless have unanticipated spillover effects for conventional engagements in the Western Pacific.¹³⁶

Command and Control

During the past decade, the PLA has made some progress in implementing its stated doctrinal requirement for integrated joint operations (*yitihua lianhe zuozhan*, 一体化联合作战) in an effort to aid its goal to develop "system of systems combat capabilities under informationized conditions." As China's 2010 defense white paper stated, "The PLA takes the building of joint operation systems as the focal point of its modernization and preparations for military struggle." This doctrine has been manifested to some degree on an organizational level, as the CMC now includes representatives from all services, and the PLA has established a Joint Logistics Department in each military region headquarters.¹³⁷

Moreover, as Kevin Pollpeter notes, the PLA's training goals have evolved over time in a way that reflects increasing sensitivity to the requirements of joint interoperability. For example, the PLA's 2008 training goals emphasized the need to organize units around crosscutting missions rather than the objectives of particular services. According to Pollpeter, PLA leadership and publications in 2009 used strong language calling for the implementation of these goals to move toward real joint training. In response to these demands, the Jinan Military Region in particular has provided a testing ground for joint exercises, executing the PLA's first joint war zone exercise in 2009.¹³⁸

This progress notwithstanding, the PLA is still a long way from developing a truly jointly interoperable force. Although the PLA has made advances in developing the hardware necessary for an integrated communications and command network, this progress has outpaced necessary changes in the force structure.¹³⁹ The PLA Army still dominates the PLA's leadership hierarchy in a way that impedes the development of true interoperability.

Joint training has not yet been adequately institutionalized through, for example, permanent joint organizations at the level of military regions. Some analysts have suggested that the aforementioned efforts to establish joint training organizations in 2008 and 2009 have thus far yielded few results. True joint exercises are few and far between, and what joint training has occurred has largely been ad hoc, “rudimentary or superficial.” As Pollpeter has observed, “Jointness, it seems, is still largely anathema to the PLA.”¹⁴⁰

Of particular relevance to this net assessment, China is apparently not at present conducting regular joint training in many of the capabilities that would be of most relevance to an A2/AD strategy—such as closely coordinated cyber, submarine, mine, and missile attacks, coupled with integrated air defense. These capabilities would require participation from and coordination among all services of the PLA, including most prominently the Second Artillery Force, Navy, and Air Force—none of which has predominant influence in the PLA’s current military structure. Instead, most of the PLA’s training is conducted within services and still emphasizes littoral defense and Taiwan-relevant scenarios.

The integration of combat forces within individual PLA services has made somewhat more progress than jointness among services, but it still remains weak. The PLAN, for example, has only recently begun to conduct cooperative rather than oppositional training between its naval and aviation divisions (as noted above). The PLAN conducted an unprecedented combined-arms exercise involving the North Sea, East Sea, and South Sea fleets in 2009, but this is apparently a rare event.¹⁴¹

Looking ahead, impediments to the further development of PLA joint interoperability and training include:

- Insufficient representation from all services among senior PLA leadership, particularly in the four General Departments;
- Lack of a permanent joint organization or joint headquarters on the military region level;
- Differences in the pace of technical modernization across forces and services; and
- Limited doctrine that does not give clear mandates for much of the training that would be required to prepare for a scenario directly involving the United States–Japan alliance at a medium- or long-range distances from China’s littoral.¹⁴²

PLA writings have recognized the need to move forward on some of these fronts. Joint interoperability and realistic training are key components of the PLA’s drive toward informationization, and China has set a goal of “attaining major progress in informationization by 2020.”¹⁴³ In light of this emphasis, it is possible that the PLA could indeed make significant progress by 2030.

However, given the inertia of military bureaucracy and the lag time in implementing doctrinal shifts, it is unlikely that any major breakthroughs or leapfrogging will occur in the next twenty years. As one observer of the PLA has noted, it takes well over eight years for

significant doctrinal change to be implemented at the troop level. For example, the PLA took the better part of a decade after the first Gulf War to move from theoretical examinations of joint operations to focusing on integrated joint operations and testing in the field, suggesting a slow process of implementation. Assuming this lag time persists in coming decades, training on the ground in 2030 will likely represent the doctrine being promulgated in 2020.¹⁴⁴

Furthermore, the ultimate direction of organizational reform within the PLA remains to be settled, as debate continues over how to integrate forces and reduce overcentralization in command. Disagreements over how to proceed and the resistance of traditional power centers within the PLA may hamper organizational changes necessary for expanded joint operations.¹⁴⁵

Finally, one must emphasize that, regardless of its future rate and level of development, during the next fifteen to twenty years the PLA will continue to confront major obstacles in translating its expanding capabilities into a genuine capacity to conduct warfare against not only a sophisticated opponent such as the United States, but also capable U.S. allies such as Japan, for three major reasons:

- The PLA has never engaged in combat against an adversary armed with modern weaponry; indeed, it has not conducted a significant military operation of any kind since the Sino-Vietnamese clash of 1979. Only a very few senior PLA officers have combat experience.
- Although the PLA has enunciated a sophisticated joint warfare doctrine, mastering this ambitious doctrine involves a very steep learning curve. Indeed, by its own admission, the PLA is still experimenting in training efforts designed to implement its new joint doctrine, and such efforts are still at the rudimentary stage.
- The timeline that the PLA has set for attaining its modernization objectives is 2049. Not only is this date past the time frame of this net assessment, but more important, it indicates the PLA's awareness of the major challenges it confronts.

ECONOMIC CAPACITY

China's economy has grown rapidly since its economic opening and reform was initiated in the late 1970s, except for slowdowns in growth in 1989–1990 after the Tiananmen Square crackdown and a less severe decline during the Asian financial crisis in the late 1990s. Growth has been robust in the twenty-first century, as China's annual gross domestic product (GDP) growth rates from 2001 to 2010 averaged 10.48 percent. China surpassed Japan to become the world's second-largest economy behind the United States in 2010—though in terms of per capita GDP, it ranks 94th among world economies.

The Chinese economy weathered the 2008 financial crisis and the resulting slowdown in economic growth particularly well, in large part because of a nearly \$600 billion fiscal stimulus (including an investment plan, a set of funding mechanisms, and a series of industrial policies) and a massive program of government-directed bank lending. In fact, many experts have noted that China's recovery significantly assisted the global recovery, particularly the recoveries of other Asian economies.¹⁴⁶

In 2012, China's economy slowed somewhat, feeding speculation by observers who have fretted over the prospects of a "hard landing" or a much more major slowdown in GDP growth. However, these concerns obscure the reality that this slowdown was primarily the result of policy efforts by Beijing intended to prevent overheating in the economy and stem rising inflation, as well as a result of continued anemic external demand due to persistent weakness in Chinese export markets.¹⁴⁷

Despite this comparative resilience, however, many observers point to a host of economic challenges confronting China, including periodic spikes in inflation rates, a heavy debt load, a weak, government-dominated financial system, imbalanced consumption and savings, and depressed demand from the developed world. These features combine to limit the policy options open to Beijing as it attempts to maneuver its heavily statist economic system.

Observers often express concerns about periodic overheating in the housing market and spiking consumer price inflation, but thus far the Chinese government has shown the ability to implement incremental macroeconomic corrections that have averted the threats posed by such factors. Nonetheless, potential future upticks in consumer prices and real estate inflation could give China less flexibility to adopt bold stimulus measures in the context of a global double-dip recession or a crisis with roots in China's own economy.¹⁴⁸

China faces a particularly challenging problem in the form of its growing levels of local government debt, which the People's Bank of China estimated to be 14 trillion RMB in mid-2011. Much local debt consists of government-subsidized loans provided during the recent stimulus, and has been devoted to new infrastructure investments, many of which are estimated to be incapable of generating sufficient revenue to pay their interest. Although economists acknowledge that such debt is, in essence, guaranteed by the central government, some argue that Beijing could nonetheless be forced to direct valuable financial resources toward managing bad debt and tightening monetary policy. This would in turn lead to slower overall growth, while swallowing resources needed to address other social, environmental, and structural problems.¹⁴⁹

On a more fundamental level, many analysts argue that these problems are symptomatic of deeper imbalances in China's growth model, which relies on government-subsidized lending to finance investment in infrastructure, industry, and housing, at the expense of household income and consumption. Observers point to China's unprecedentedly low consumption as a share of GDP—35 percent of GDP in 2010, according to official PRC statistics—as evidence of the effects of such "financial repression." In addition to debt and property bubbles, this imbalanced model has led to an overreliance on export-oriented growth, an underdeveloped services sector, and rising income inequality.¹⁵⁰

Furthermore, China is increasingly confronted with the need for greater domestic innovation in order to move its production up the value chain and become more competitive in higher technology sectors, lest it become ensnared in a “middle-income trap.” Many analysts argue such innovation requires not only greater government investment in research and development but also an increased emphasis on investment efficiency and greater protection of intellectual property. Some observers charge that Beijing’s strategy of fostering “national champions” in an effort to facilitate China’s move up the value chain will ultimately prove counterproductive.¹⁵¹

In light of the complex and interrelated nature of these challenges, some observers argue that China must implement far-reaching reforms to rebalance its basic growth model if it is to avoid a sharp slowdown in growth or a prolonged period of economic stagnation.¹⁵² Such a shift away from an emphasis on domestic infrastructure, industrial investment, and exports to an economy centered on services and domestic consumption would require a paradigm shift in Chinese policies, structures, and institutions involving difficult economic and political choices. Although the Twelfth Five-Year Plan acknowledged the need to pursue many, if not most, of these reforms, some observers contend that powerful entrenched interest groups, the need to focus on political consolidation after the 2012–2013 leadership transition, and an inherently conservative ruling elite will combine to prevent the necessary changes from being implemented in short order, if at all.¹⁵³

However, other economists are far less pessimistic about the strength and sustainability of China’s long-term economic growth. While acknowledging the reality of debt performance issues, they argue that China is in a strong economic position, with enormous foreign exchange reserves that will enable it to absorb any fallout from these challenges. They point to the fact that the Chinese leadership has reached a broad consensus about the need to rebalance the economy, and will thus be more likely to adhere to the reforms laid out in the Twelfth Five-Year Plan. They point to efforts made during the past year to cool the real estate market and battle inflation as evidence of the government’s successful stewardship of these economic challenges.¹⁵⁴

Beyond monetary policy, Beijing has also attempted to address some of the structural impediments to long-term, stable growth by increasing investments in social safety nets, creating a bond market, further opening its capital markets, introducing modestly leveraged investible instruments (for example, a rudimentary secondary mortgage market), expanding the role for the renminbi in trade and investment, and increasing consumer lending of various sorts. The Twelfth Five-Year Plan places a strong emphasis on these priorities.¹⁵⁵ Other analysts point to China’s success in promoting indigenous innovation in the clean energy sector as evidence that its efforts to move up the value chain are already bearing fruit.¹⁵⁶ Some observers stress that China’s deep and long-term investment in low-income housing, rural infrastructure, utilities, transportation, education, and the environment (among other sectors) will encourage stability domestically by mitigating unemployment and boosting consumption.¹⁵⁷

Some analysts also contend that the consumption/investment imbalance is not as problematic as is commonly thought. These observers stress that China still has significant room to invest further in production-enhancing infrastructure, because capital stocks remain relatively low in comparison with other countries. These analysts deemphasize the need for an explicit rebalancing strategy and instead argue that the most important reforms should focus on expanding the services sector, increasing social welfare spending, improving environmental safeguards, and implementing other measures aimed at enhancing labor productivity.¹⁵⁸ Furthermore, it is also possible that the low numbers for Chinese consumption as a share of GDP may not accurately reflect China's consumption levels, and that they obscure the massive absolute growth in consumption that has occurred in China in recent years.¹⁵⁹

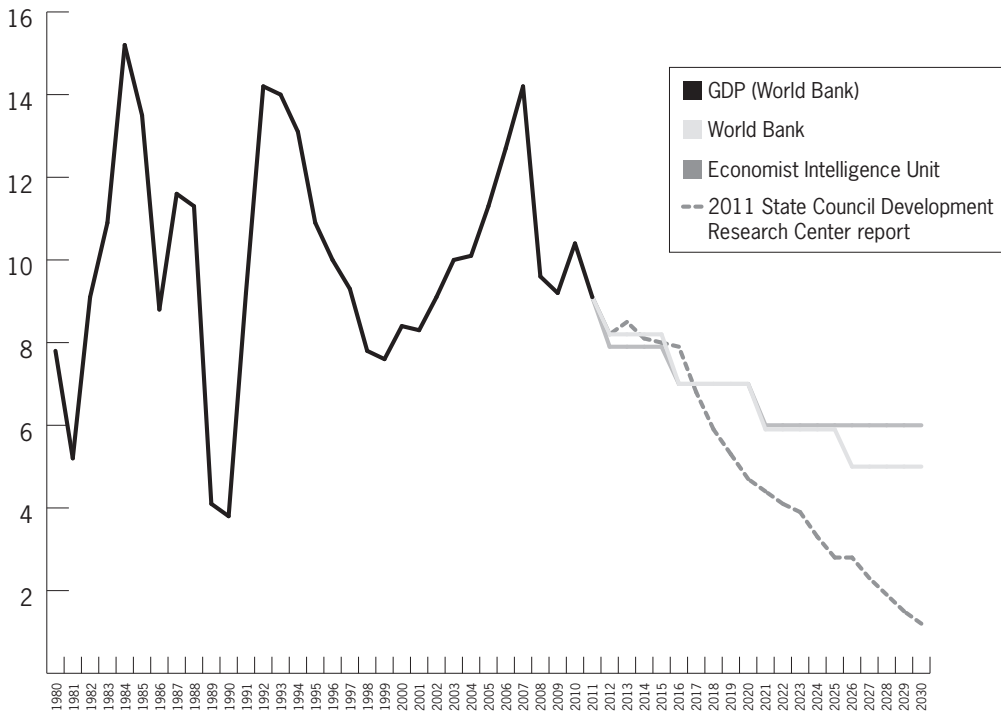
Economic Growth Trends

Reflecting this range of views on the need for economic reforms and the likelihood that such reforms will be implemented, GDP growth projections for the Chinese economy in coming decades vary widely. Striking a somewhat cautious tone, China's official Twelfth Five-Year Plan set a target for average growth of 7 percent from 2011 to 2015. However, a report produced by the State Council on Development's Research Office estimated in 2011 that the most likely economic scenario during that period would lead to an average growth rate of 8 percent, before declining to 7 percent from 2016 to 2020, and 6 percent from 2020 to 2030. Under this scenario, coupled with a 2.8 percent growth figure for the United States from now to 2030, China would grow to just over half the size of the U.S. economy by 2020, and nearly three-fourths its size by 2030.¹⁶⁰

Many analysts basically concur with these projections, suggesting that Chinese growth will slow slightly but remain stable in coming years. The World Bank projected in early 2012 that China's economic growth would average 8.6 percent from 2011 to 2015, 7 percent from 2016 to 2020, 5.9 percent from 2021 to 2025, and 5 percent from 2025 to 2030. Pieter Bottelier has argued that "there is a high probability" that GDP growth will move toward 7 percent in the near future, but he notes that such a trend would actually be a positive development for China's economy, because "the composition of growth should be a healthier one." The Economist Intelligence Unit forecast in April 2012 that annual GDP growth will average 8.1 percent from 2012 to 2016; however, it has also predicted a more rapid falloff in growth in the medium to long terms as China's economy matures (figure 2.1).¹⁶¹

On the more pessimistic side, those economists who are most concerned about China's structural imbalances, particularly the looming threat of repressed consumption and unsustainable debt, offer much less generous predictions for Chinese economic growth. For example, Nouriel Roubini argues that there is a "meaningful probability" that China will face a hard landing after 2013. Ian Dreyer concurs that such a scenario is "a real possibility" and could result in 4 percent annual growth, though the "most plausible" scenario would be one in which China suffers from a financial collapse originating in its debt and

FIGURE 2.1
Chinese GDP Growth From 1980–2011 and GDP Growth Forecasts for 2012–2030



Sources: GDP growth data 1980–2011 from the World Bank; GDP growth forecasts data from the World Bank, Economist Intelligence Unit; and a 2011 State Council Development Research Center report.

housing bubbles but recovers swiftly “thanks to some financial and structural reforms” and regains growth rates of 6 to 7 percent. Perhaps reflecting this unease, a Bloomberg poll in September 2011 found that 59 percent of global investors believed that China’s growth will slow to less than 5 percent annually by 2016.¹⁶²

From a related perspective, Michael Pettis, a finance professor at Peking University’s Guanghua School of Management, predicts growth levels of 3 to 4 percent for China during the coming decade arising both from the risks posed by China’s debt burden and overinvestment and also from needed reforms that will be implemented by the Chinese leadership to increase consumption and reduce investment as a share of GDP. If managed well, Pettis argues, such a downward shift will not necessarily result in major social turmoil, because average Chinese citizens actually stand to benefit from a rebalancing toward greater household income and consumption.¹⁶³

Although estimates of China’s growth rate during the next fifteen to twenty years thus vary significantly, it is important to remember that pessimistic projections have existed since the early years of the reform program and at frequent intervals over the past thirty years.¹⁶⁴

And yet, despite several episodes of high inflation and lowered production during this period, China's technocratic leaders have managed to sustain an overall high level of growth and avert major social unrest. Moreover, even some of those economists who predict a significant drop in China's future growth rates (such as Pettis) do not see such a development as necessarily resulting in a destabilizing "hard landing" for China.

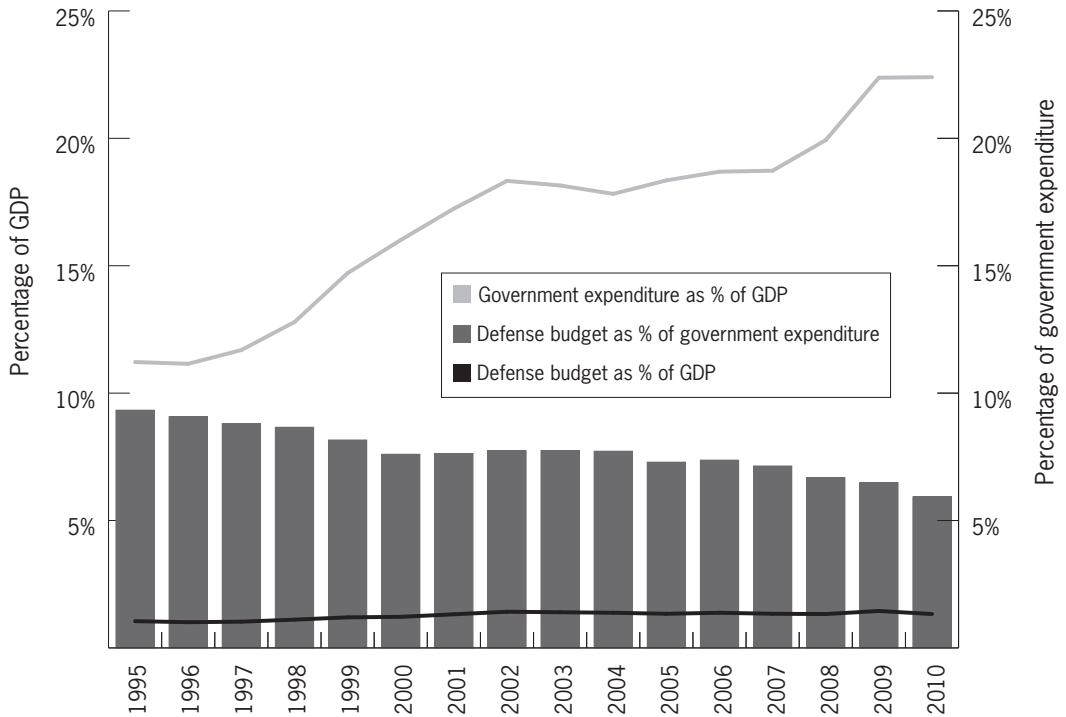
Nonetheless, most analysts agree that China's history of rapid growth under the reforms has produced a range of increasingly serious and in many cases unprecedented problems during the past ten to fifteen years. These problems could adversely affect, both directly and indirectly, Beijing's foreign and defense policies and military capabilities in a variety of areas relevant to Japan and the alliance. For example, significantly lower annual economic growth rates, combined with increasing demand for higher levels of government investment in social welfare programs and potential negative consequences of major structural adjustments in the economy, could combine to reduce overall defense spending in favor of a variety of domestic programs and also slow the defense industrial economy. In addition, the emergence of a more domestically oriented economic growth model, along with lower growth rates and increasing trade with developing states, could combine to reduce the significance of the Sino-Japanese economic relationship, thus weakening an important incentive for both countries to maintain strong ties. And both increases and decreases in economic growth during the next fifteen to twenty years could result in significant leadership conflicts over the best way to handle the social unrest that would probably accompany such change. Such conflict could have serious implications for Beijing's foreign and defense policies.

DEFENSE SPENDING

Supported by its rapid economic development, China has steadily increased its level of defense spending for nearly twenty years, and especially during the past decade. As a share of GDP, however, official Chinese defense spending has remained relatively constant—averaging 1.3 percent of GDP between 2000 and 2010. During the same period, Chinese defense spending has gradually declined as a share of overall government expenditures, from 7.6 percent in 2000 to 5.9 percent in 2010 (figure 2.2).

China's official 2011 defense budget was \$91.5 billion (601 billion yuan), but most defense analysts agree that this number likely understates Chinese defense spending. The Stockholm International Peace Research Institute (SIPRI) estimates that China actually spent \$121.1 billion on its military in 2011, equivalent to 2.1 percent of its GDP. The U.S. Department of Defense estimates that China's defense spending was between \$120 and \$180 billion in 2011, or between 1.6 and 2.5 percent of its GDP.¹⁶⁵ In comparison, China's defense spending surpassed Japan's in absolute terms in 2004, and Beijing spent more than twice as much on defense as Tokyo in 2010 (using SIPRI data). The PRC's annual military expenditures are now the second-largest in the world behind the United States (whether

FIGURE 2.2
Chinese Defense Budget in Relation to GDP and Government Expenditure, 1995–2010



Source: National Bureau of Statistics, www.stats.gov.cn/english/statisticaldata/yearlydata.

measured by official data or higher external estimates), although total U.S. defense spending remains more than five times that of the PRC (table 2.1).¹⁶⁶

Beyond these estimates, purchasing power parity (PPP) must be taken into account for at least some portion of China’s defense budget, because differences in personnel wages, manufacturing costs, and other domestic spending dictate that a dollar’s equivalent of Chinese defense spending can purchase more in China than \$1 of U.S. defense spending could in the United States. The International Institute for Strategic Studies utilized an implied PPP inflator factor of 1.6 to conclude in its 2012 report that the PPP estimate for total defense spending in 2010 (the most recent year for which the institute provided this analysis), including off-budget items, was \$178 billion. The defense experts Eric Heginbotham and George Gilboy have offered a more conservative estimate, employing a methodology with different multipliers for different parts of the Chinese military budget that resulted in an overall implied PPP multiplier of 1.22 for 2010. More generally, however, they recommend

against the use of PPP figures, because they are difficult to estimate accurately and can thus easily be misleading (table 2.2).¹⁶⁷

Observers of the Chinese military have noted that China’s steep defense spending increases during the past two decades come at a time when there is no obvious external threat, in contrast to earlier periods in the PRC’s history, when there was “a close correlation between China’s external threat environment and defense spending.”¹⁶⁸ Part of this rapid increase from the end of the 1990s may be attributable to Beijing’s effort to compensate the PLA for the large annual losses it incurred when the central leadership forced the military to divest itself of commercial holdings, and thus may not represent real growth in military spending. Some of the increase may also be accounted for by the fact that the PLA’s budget transparency has improved significantly during the past ten years, resulting in a defense budget that likely contains items that were previously off-budget and thus not accounted for in past budget figures.¹⁶⁹

Moreover, a large percentage of the increase in military costs has gone to rising personnel wages and pensions for demobilized personnel, who have increased in number after the force streamlining and reductions in manpower implemented in 1997. Such increased

TABLE 2.1
2011 Chinese Military Expenditure (in billions of nominal U.S. dollars)

OFFICIAL PRC	SIPRI ESTIMATE	U.S. DOD ESTIMATE
91.5	129.3*	120–180†

* In constant 2010 U.S. dollars.

† In 2011 dollars and exchange rates.

TABLE 2.2
2010 Chinese Military Expenditure (in billions of U.S. dollars)

NOMINAL OR PURCHASING POWER PARITY (PPP)	OFFICIAL PRC	IISS ESTIMATE	GILBOY AND HEGINBOTHAM ESTIMATE	SIPRI ESTIMATE	U.S. DOD ESTIMATE
Nominal	78	111.1	113.3	121.1*	>160
PPP	94.9˘	178†	138.2‡	—	—

* In constant 2010 U.S. dollars.

˘ Estimate for the 2010 official PLA budget from Eric Heginbotham and George J. Gilboy, *Chinese and Indian Strategic Behavior* (New York: Cambridge University Press, 2012), 307, with an implied PPP conversion factor of 1.21.

† Implied PPP conversion factor of 1.61, as given by International Institute for Strategic Studies, *The Military Balance 2012* (London: International Institute for Strategic Studies, 2012).

‡ Implied PPP conversion factor of 1.22; Heginbotham and Gilboy, *Chinese and Indian Strategic Behavior*, 307.

personnel spending does not necessarily translate into real funding of enhanced capabilities. Between 1994 and 2006, of three key budgetary categories—(1) personnel; (2) operations, training, and maintenance; and (3) equipment—personnel expenditures grew the most—581 percent. Moreover, large pay raises were authorized in 2006, 2008, and 2011; the 2011 raise provided a 40 percent hike in the salaries and benefits of noncommissioned officers.¹⁷⁰

Defense Spending Trends

From an economic perspective, most analysts expect that, during at least the current decade, China will sustain its past double-digit increases in annual defense spending and continue to deploy advanced military platforms and technologies of concern to the United States. Estimates for Chinese defense spending during the next fifteen to twenty years are less determinate, however, largely due to possible significant variations in future economic growth levels and the possible demands and pressures placed on government expenditures as a result of social tensions and other domestic needs.

On balance, defense spending will likely remain relatively constant or decline slightly as a share of government expenditures during the next fifteen to twenty years, while government expenditures as a share of GDP should continue to grow. Thus, Chinese military spending as a share of GDP could increase slightly, particularly if China's GDP growth rates decline. However, an attempt to indefinitely sustain double-digit annual growth rates in defense spending under slowing growth conditions would result in levels of spending relative to GDP that the Chinese government would likely find uncomfortable during peacetime.

It is possible that such a projection could overestimate future defense expenditure growth. In fact, as noted above, the rate of annual expansion could drop significantly from the level seen in recent years if GDP growth decreases and Beijing feels the need to direct greater resources toward social welfare, internal security, and other domestic investments. Even if such a scenario were to unfold and the nation's GDP were to expand per annum at much lower levels than it has in recent years (for example, at 3 to 5 percent), however, China's military budget will almost certainly continue to grow in *absolute* terms.

Conversely, if China's internal social environment remains relatively stable and Beijing instead perceives growing danger from external threats (particularly related to Taiwan, disputed maritime areas, and the United States–Japan alliance), then the PRC's military spending could increase more rapidly relative to both GDP and government expenditures. The PLA could also potentially succeed in redirecting more funds toward the defense budget if it were to exert growing influence over the decisionmaking and budget allocation process (see more below). Indeed, some observers suggest that, despite possible fluctuations in growth rates, Beijing nonetheless possesses the economic capacity to significantly increase its defense spending both as a share of GDP and government expenditures and could choose to do so in the future. However, such a trajectory is quite unlikely, due to a

wide range of economic and social constraints discussed below, as well as the geopolitical, security, and diplomatic costs that China would incur from pursuing such a path.¹⁷¹

That said, if Beijing can implement key financial reforms, such as improvements in its tax regime, it could significantly increase its government revenue and thus increase its level of government expenditures from the current (official) rate of about 22 percent of GDP to perhaps as high as 35 or even 40 percent of GDP, which is more in the realm of what is spent by most countries that belong to the Organization for Economic Cooperation and Development (OECD).¹⁷² Such an expansion in overall government expenditures could also benefit the defense sector. However, most of any potential increase in government expenditures would likely go toward social services, for which spending is currently quite low. Indeed, that has been the trend in recent years, as Chinese defense spending as a share of government expenditures has been very gradually declining, from about 9.3 percent in 1995 to 6.5 percent in 2009 (or 5.9 percent in 2010, but that may have been an anomalous year due to the recession and the Chinese economic stimulus).¹⁷³

In terms of the composition of the Chinese defense budget, it is likely that more resources will be devoted to the PLA Navy and PLA Air Force, and comparatively less funding to the Army over time, with somewhat less overall spending on personnel. This shift is already under way, and is in line with the Chinese military's aims to modernize its structure, shrink the size of its personnel force, and build up its technological capabilities. Such shifts could also result in greater support for an A2/AD type of counterintervention strategy, which relies more upon naval and air assets than ground forces. Despite the likelihood of such incremental redistribution, however, any major budgetary realignment is unlikely because of the dominant position that ground forces hold in the PLA.¹⁷⁴

Finally, in comparative terms, Beijing's overall level of defense spending will almost certainly continue to lag behind that of the United States during the coming fifteen to twenty years—both in absolute terms and as a share of GDP.¹⁷⁵ By contrast, the gap between Beijing's and Tokyo's annual defense spending will almost certainly grow increasingly large in coming years (see chapter 3 for a discussion of Japanese defense spending).

DOMESTIC DEFENSE INDUSTRIES

Historically, the PRC's defense industrial complex has been relatively weak, hobbled by backward policies first instituted under Mao Zedong aimed at fostering a "self-sufficient" industrial base, with many factories located in hard-to-reach inland areas. When economic reforms were implemented in the late 1970s, state-owned defense companies suffered from tightened military budgets, while conservative PLA leaders failed to reorganize and streamline defense production. By the late 1990s, 40 percent of China's defense companies were estimated to be losing money, and were only staying afloat thanks to massive state subsidization. Many plants in the most remote "Third Front" region of the country were only being utilized at a rate of 10 to 30 percent.¹⁷⁶

As a result, China has traditionally been forced to rely upon foreign acquisition for much of its advanced technologies. Such dependence has placed major constraints on the PLA's technological modernization. In particular, when Western countries imposed sweeping arms embargoes on Beijing after its 1989 Tiananmen Square crackdown, Beijing was left with far fewer acquisition options. Since that time, China has relied primarily upon Russia for its weapons imports.¹⁷⁷ Between 1989 and 2010, China purchased more than \$28 billion of arms from Russia (previously the Soviet Union), and some observers point to evidence that Russia has helped supply China with crucial designs and capabilities for key technologies.¹⁷⁸ Despite these transactions, however, Beijing often finds Moscow a less-than-willing trading partner when it comes to highly sensitive, valuable weapons systems and components.¹⁷⁹ Some observers have suggested that economic conditions in Europe could influence European nations to lift certain embargoes on weapons exports to China; however, thus far, the United States "continues to apply pressure" in a way that has precluded such a development.¹⁸⁰

To overcome the disadvantages of overreliance on foreign weapons acquisition, Beijing's leadership has identified the development of the Chinese indigenous defense sector as a top priority for the PLA. Its chief strategies in this arena have been to (1) foster growth in dual-use technologies that have both commercial civilian value and military significance;¹⁸¹ (2) streamline balkanized weapons production facilities; (3) boost investment in research and development by constructing major research laboratories and training large numbers of personnel; (4) improve the regulatory and legal framework (such as the intellectual property rights regime) that would support a vibrant domestic defense industry; and (5) better integrate technologies acquired from abroad to augment indigenous defense production capabilities.¹⁸² As part of the effort for this fifth strategy, Chinese defense industries will often reverse-engineer technologies or produce some parts of weapons systems domestically, while using foreign components for other elements of the system.¹⁸³

As this effort has unfolded, Chinese military planners have apparently decided to focus their defense sector modernization drive on key areas that have both major strategic significance, as well as practical likelihood of progress.¹⁸⁴ Reflecting Beijing's emphasis on dual-use technologies, the 2011 Pentagon report on China's military observes that "progress within individual defense sectors appears linked to the relative integration of each, through China's civilian economy, into the global production and research-and-development (R&D) chain."¹⁸⁵

Specifically, analysts identify missiles, shipbuilding, defense electronics, aviation, and certain space technologies as the areas where China has made the greatest headway in developing domestic production capabilities. These industries have proven particularly successful at being innovative, competitive, and globally integrated, in large part by "forging close ties between the civilian and defense economies."¹⁸⁶ China's strengths in these areas have translated into improvements in its submarine force, surface combatants, aircraft carrier program, and naval aviation, as well as its missile arsenals. China has also produced increasingly advanced armored ground vehicles.¹⁸⁷

Despite these advances, China still faces major obstacles to indigenously producing the C4ISR and weapons technologies necessary to support the operation of its advanced hardware. According to the Pentagon, China's capabilities in "fire control systems, cruise missiles, surface-to-air missiles, torpedo systems, sensors, and other advanced electronics" remain weak.¹⁸⁸ Furthermore, high-technology capabilities such as "high-performance computers, advanced applications software, and specialized top-end semiconductors/microprocessors" have lagged behind other areas, in part because they lack analogues in the civilian economy.¹⁸⁹ Such capabilities are particularly crucial for the operation of advanced C4ISR systems and antiship ballistic missile guidance processes and the development of advanced aerojet engines and unmanned combat aerial vehicles. China's inability to produce such technologies domestically thus provides an obstacle to Beijing's efforts to wage information warfare and implement key antiaccess strategies.¹⁹⁰

The aerospace sector has historically been another weakness of China's military industrial complex. In recent years, however, Beijing has made great progress in improving the investment environment, lifting the industry from being a net loser at the end of the 1990s to posting a profit every year since 2003. This dynamic has enabled China to achieve some important milestones: By 2009, Aviation Industries Corporation of China had earned more than 5,300 patents and was listed as one of the world's *Fortune* 500 companies. That same year, more than 90 percent of the fifteen types of aircraft displayed at the 60th national anniversary parade were said to have been produced domestically. Moreover, China has acquired the ability to produce its own modern fourth-generation fighters and even a prototype of the Chengdu J-20 and Shenyang J-31 fifth-generation fighters.¹⁹¹

Despite these significant developments, Chinese aerospace production capabilities are still far from comprehensive. In particular, China's engine and avionics technologies remain acutely underdeveloped. It is precisely this weakness that has led many analysts to conclude that the J-20 will not be operational for seven to ten years, because China is unlikely to be able to acquire those technologies from abroad. It lacks the advanced engine production capability required to supply an aircraft with an engine capable of reaching supercruise, and its indigenous avionics are not yet of sufficient quality to make the J-20 a truly "stealthy" fighter jet.¹⁹² China also lacks the capability to produce long-range heavy transport aircraft, limiting its ability to operate at long ranges from its shores.¹⁹³

Defense Industrial Trends

Looking out to the next fifteen to twenty years, it is likely that Beijing's investment in reforming and developing its domestic defense industrial complex will enable it to make incremental progress in most sectors, with the potential for notable innovations in a limited number of technological areas. As one analyst has argued, Beijing's "structural and process reforms are likely to bear fruit over the next decade and will play an influential role in advancing the defense economy's innovation performance."¹⁹⁴ Specifically, China's Twelfth Five-Year Plan identified the shipbuilding and electronic information industries as

key sectors meriting further restructuring. Beijing has also placed a priority on developing advanced indigenous “radar, counterspace capabilities, secure C4ISR, smart materials, and low-observable technologies” by 2020.¹⁹⁵

However, analysts also note that Beijing’s efforts to develop its defense industries remain primarily driven by the state, rather than the private sector, a trend that intensified after China implemented its massive stimulus effort to stave off the effects of the 2008 financial crisis. Some analysts identify this as a major structural impediment to China achieving its objectives in this arena.¹⁹⁶ And, of course, China’s overall economic capacity and defense spending are key variables that could constrain (or accelerate) the development of its defense industries.

In any event, China’s indigenous defense sector is likely to continue to see progress in the coming fifteen to twenty years. Although it is unlikely to rival the defense industrial complexes of the United States and the leading European countries by 2030, Tai Ming Cheung asserts that in light of “the gradual decline of the Japanese defense industry and the chronic inability of India to overcome deep-seated structural obstacles ... China will become the dominant regional military technological power over the next decade.”¹⁹⁷ Whether even this prediction will hold true, of course, will depend in large part on the PRC’s future economic growth trajectory.

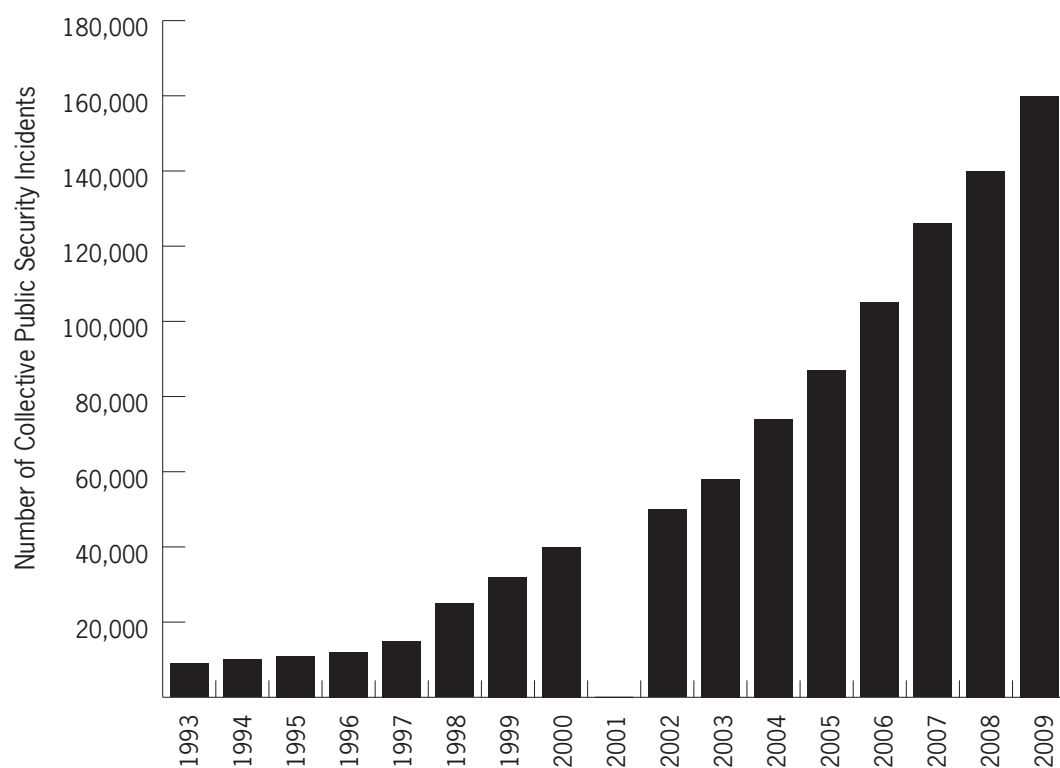
SOCIAL AND DEMOGRAPHIC ISSUES

Another category of variables that has the potential to exert a significant impact on Chinese security policy and external behavior as it relates to Japan and the United States–Japan alliance includes social and demographic factors, such as rising inequality, government corruption, environmental degradation, ethnic conflict, and age and gender imbalances. Such variables can themselves heavily influence the trajectory of China’s economic growth, shape its resource allocation decisions (including how much it devotes to defense spending), affect how Beijing responds to foreign policy crises, and even have an impact on its broader foreign policy strategy and decisionmaking.

During the past three decades, the CCP regime has demonstrated a formidable ability to adapt to the unprecedented changes sweeping through China in ways that have often weakened, blunted, or otherwise neutralized widespread political opposition or serious social unrest—with the notable exception of the mass demonstrations of 1989.¹⁹⁸ Today, despite its efforts to neutralize and suppress opposition, Beijing apparently finds itself confronted with an increasing gap between the expectations of the Chinese people on a range of social and economic issues and with the realities on the ground. Local protests regularly erupt over issues such as confiscation of land by local officials, food price inflation, factory closings, state-owned enterprise layoffs, home evictions for urban development, and environmental degradation. Overall, both official and unofficial accounts suggest that the number of protests has been increasing in recent years (figure 2.3).¹⁹⁹

One basic trend that CCP leaders often decry is the growing inequality in Chinese society, which is particularly evident between urban and rural areas and between legal urban residents and itinerant, undocumented urban laborers. Reliable data on income equality are difficult to obtain, in part because the wealthiest Chinese possess so much unreported “grey income”; however, it is estimated that China’s Gini coefficient has increased from as low as 0.25 to about 0.47 during the past three and a half decades of rapid economic growth.²⁰⁰

FIGURE 2.3* ‡
Frequency of Collective Public Security Incidents in China, 1993–2009



* This graph depicts the frequency of China’s “collective public security incidents,” which the PRC government officially defines as when “a group of people illegally gather to disrupt public order and destroy public properties” and usually refers to protests involving more than five people.

‡ The number for the year 2000 was estimated based on nine months of data, and data for 2001 was unavailable.

Sources: Jae Ho Chung, Hongyi Lai, and Ming Xia, “Mounting Challenges to Governance in China: Surveying Collective Protestors, Religious Sects and Criminal Organizations,” *China Journal*, no. 56 (July 2006), who based their research on official data. Data for 2006 through 2009 was extrapolated and gathered from unofficial sources and summarized by Yukon Huang. See Yukon Huang, “China’s Conflict between Economic and Political Liberalization,” *SAIS Review of International Affairs* (forthcoming).

The PRC government has, at least rhetorically, made income inequality one of its chief concerns. Both the Eleventh and Twelfth Five-Year Guidelines addressed it explicitly and aimed to close the rich/poor gap through various forms of wage and distribution reforms, social safety net improvements, and educational and infrastructural investments.²⁰¹ Despite these rhetorical overtures, many observers argue that entrenched interests in the banking sector, local governments, and state-owned enterprises have thus far prevented such efforts from being adequately implemented.²⁰²

Analysts also point out, however, that the primary source of China's overall income inequality is the divide between urban and rural areas, a gap that will gradually decrease as China continues to develop and as economic geography leads to the further development and urbanization of inland provinces. Moreover, China's Gini coefficient, though higher than that of developed countries, is lower than that of many developing countries, especially those of Latin America and Africa. And as a 2012 OECD report explains, official Chinese government statistics and OECD estimates suggest that the Gini coefficient, the urban/rural income gap, and regional income disparities alike have all actually declined in the past few years.²⁰³

Challenging though income disparities may be in and of themselves, government corruption and cronyism as visible manifestations of inequality inspire the most vehement anger among Chinese citizens.²⁰⁴ Such corruption arguably stems from underlying structural problems in Chinese economic governance: Executive compensation in China's state-owned enterprises is structured in a way that directly incentivizes rent-seeking using opaque subcontracting procedures and financial vehicles, and local government procurement bidding often lacks transparency and impartiality. The latter phenomenon has at times resulted in shoddy or dangerous infrastructure and construction that has in turn precipitated high-profile accidents. Public outrage over such events has led some observers to conclude that the Chinese citizenry is becoming more restive and dissatisfied with CCP rule.²⁰⁵

In addition to challenges presented by systemic inequality and political corruption, environmental pollution is both an economic challenge and a potential catalyst for social discontent. Estimates of the total costs of environmental pollution in terms of cleanup expenses, lost productivity, illness, and mortality range from 3 to 6 percent of GDP. When factoring in resource scarcity, estimates of such environmental costs can soar to as much as 10 percent of GDP.²⁰⁶ Furthermore, as Elizabeth Economy has argued, pollution has been one of the major causes of protests in China for decades. According to official Chinese media, there were 51,000 such protests in 2005, and Economy suggests that reported protests were as numerous as 180,000 in 2010. Although the Chinese government recognizes the severity of these problems and has taken some steps to remedy them, environmental degradation will continue to be a persistent challenge in coming decades.²⁰⁷

Ethnic conflict—particularly in China's western provinces of Xinjiang, Tibet, and Sichuan, though also in places such as Inner Mongolia—poses another serious challenge to Beijing, demanding state resources for internal security. Since major protests in Tibet in the spring of 2008 and Xinjiang in the spring of 2009, tensions have continued to simmer

in those restive regions, including a series of incidents in 2011 and 2012 wherein Buddhist monks self-immolated in protest of Chinese oppression. In addition to punishing dissent, Beijing has gone to great lengths to co-opt dissidents in these regions through economic development projects and “Hanification” (that is, resettlement of large numbers of Han Chinese to these locales).²⁰⁸ However, given the entrenched historical, social, and religious tensions involved, it is unlikely that these challenges to the regime will be resolved by 2030.

On the demographic front, China faces the daunting prospect of a shrinking labor force and an aging population. Since China’s economic opening and reform, its working population has grown by an average of 2 percent a year. However, it is estimated that the overall size of China’s labor force peaked in 2011, and the growth rate of China’s consumers will exceed the growth rate of its producers beginning in 2013. By 2030, analysts project China’s working-age population will be contracting by 0.7 percent each year. As this shift occurs, China will benefit increasingly less from the “demographic dividend” proffered by a large labor force. Over time, as the size of China’s labor force declines and its aging population grows, a smaller number of workers will have to shoulder a heavier burden of elder care. One observer estimates that this will result in a GDP growth rate that is reduced by half a percentage point each year.²⁰⁹

Despite these concerns, however, China retains certain demographic advantages vis-à-vis other developing countries, such as high literacy rates and high female labor force participation rates, that could enable it to cushion the effects of demographic decline. This fact leads some observers to argue that the country’s medium-term demographic outlook during the next fifteen to twenty years (the time frame for this study) will remain quite positive and will exert a minimal impact on economic growth, though it may cause greater difficulty in the longer term.²¹⁰

Beyond the issue of an aging population and shrinking workforce, gender imbalance and urbanization present unique demographic challenges for China. Sex-selective abortion and the one-child policy have led to a major male/female gender imbalance that some observers argue could endanger social stability. Among Chinese under the age of nineteen, boys outnumber girls by 23.77 million, and the gender ratio at birth in 2010 was 118.08 males per 100 females.²¹¹ Urbanization will continue in China, which will likely be positive for economic growth and rebalancing, but could potentially contribute to more social unrest if reforms are not implemented to better integrate migrant laborers into growing metropolitan areas.²¹²

If these various problems continue to worsen and are not managed successfully, they could prompt widespread domestic unrest—particularly if combined with either weak or rapid and destabilizing economic growth, high inflation, repressed wages, and rising unemployment. Because the legitimacy of the PRC regime rests principally on its capacity to maintain domestic order and sustain rising living standards, such developments would stoke leadership fears, and likely result in decisions to devote more resources to internal security, environmental protection, and social welfare, perhaps at the expense of military spending. They would also likely prompt Chinese leaders to continue to prioritize a stable external

environment, while they focus their time and energy on containing domestic problems. As discussed further below, these trends would thus likely combine to result in a less, not more, assertive China that seeks peaceful relations with Japan and the United States, and avoids actions that would upset the Northeast Asian security balance.

At the same time, it is also possible that severe levels of internal discord—generated by either continued rapid yet destabilizing growth or a major economic downturn—could lead to serious rifts among Chinese decisionmakers, loosened centralized control over foreign policymaking, and perhaps less oversight of the military. Such developments might result in greater levels of domestic repression and eventually in the emergence to power of ultra-nationalists espousing a highly assertive brand of foreign policy toward Japan and the West. Although such an outcome could occur under either high- or low-growth scenarios, it is more likely to take place in the former instance, for reasons discussed below.

That said, less sweeping foreign policy missteps could result from either type of development scenario, if internal dissension and discord increase the potential for miscalculations and hence crises in the trilateral United States–Japan–China security dynamic. Because the PRC regime's legitimacy depends not only on providing economic prosperity and employment but also on the leadership's ability to defend China's international reputation and core national interests against foreign threats, such missteps could lead to a negative feedback mechanism that would further weaken the legitimacy of the regime in the eyes of the Chinese people.

It is of course also possible that severe domestic problems could result in even more extreme scenarios, such as regime collapse and a prolonged period of internal disarray or, alternatively, the relatively rapid emergence of a more open and democratic political system. Both would pose significant implications for China's foreign and defense policies. Although such scenarios cannot be ruled out, they are both highly unlikely during the next fifteen to twenty years, given (1) the probable willingness of China's leaders and ordinary citizens to contemplate virtually any measures necessary to avoid internal disorder; (2) the likely continued absence or scarcity of the structural conditions and belief systems that could precipitate the total collapse of the PRC regime and/or the emergence of a viable democratic system during this period; and (3) the often-demonstrated capacity of the CCP leadership to adapt to rapid societal change.²¹³ Moreover, as discussed in the next section, China's leadership succession and governing processes tend to imbue the PRC system with a significant degree of stability that makes it quite resilient against events that could prove catastrophic to CCP rule.

LEADERSHIP AND FOREIGN POLICY ACTORS

China's leadership system is centered on a party-based, oligarchic, consensus-driven structure that reflects a balance of constituencies among the party, government, geographical regions, public security organs, and the military. Within this system, senior leadership

bodies such as the Politburo are organized to serve as arenas for balanced and rational decisionmaking among various institutional and geographic interests.

Although leadership competition continues, it is not based, as it was during the Mao and Deng eras, on largely informal, personal, and vertically organized factions, but instead on an increasingly established lattice of institutions and processes that operate on the basis of largely consensus-oriented, codified norms. This institutionalized leadership structure makes dramatic shifts in national security strategy unlikely and reinforces a gradual approach to policy change and a preference for a stable external security environment.²¹⁴

Many observers point to the existence of certain leadership cliques within the PRC, notably the populist *tuanpai* or Communist Youth League clique represented by Hu Jintao (sometimes derogatorily referred to by elite Chinese as “shopkeepers”), and the elitist, princeling, or Shanghai clique represented by Xi Jinping (and previously, Jiang Zemin). Other experts on the Chinese regime dispute this classification, particularly questioning whether there is any cohesive ideology that binds the so-called princeling clique. Alice Miller of the Hoover Institution has argued that factionalism plays an increasingly marginal role in Chinese politics; instead, institutional balancing among different CCP organs and hierarchies serves as a more important consideration in leadership decisions. In any event, the CCP leadership has been quite successful at establishing power-sharing arrangements that have enabled more or less equal representation for its various divisions.²¹⁵

Leadership Transition

A high-level leadership transition took place in the fall of 2012 at the Eighteenth Party Congress, involving the retirement of the majority of the members of the CCP Politburo and Politburo Standing Committee (PBSC) and the emergence of a new leadership under Xi Jinping and Li Keqiang. Precedent indicates that they will serve for a ten-year term, when they will be replaced with a “sixth generation” of leaders, who will serve from 2022 to 2032.

Looking out to the nearer ten-year horizon, some analysts have speculated about the foreign policy views of China’s new president, Xi Jinping, including his views on Japan and the United States–Japan alliance. Beyond the standard boilerplate rhetoric about the importance of Sino–Japanese and Sino–American cooperation and friendship, however, Xi’s public statements give little insight to his personal views on Japan and the United States.²¹⁶ An examination of his background also provides few clues, although some of his former posts do suggest that he might enjoy closer relations with the Chinese military than did his predecessor.²¹⁷

Li Keqiang, China’s new premier, favors free trade and economic openness and has been described as a more liberal-minded political reformer. Li has called for closer Sino–Japanese economic ties, apparently as part of an effort to invite more investment to revitalize the northeastern region of China.²¹⁸ But, as with Xi, his specific views on foreign policy issues, including security policy toward Japan and the alliance, are not known and are generally indistinguishable from official policies at present.

Most observers have therefore concluded that it is difficult to decipher what impact Xi's and Li's backgrounds will exert on their foreign policy once they ascend to the top CCP posts. Furthermore, given the increasingly consensus-driven and institutionalized nature of CCP leadership, Xi and Li will only be two voices shaping policy among a cadre of top CCP leaders.²¹⁹

Significant turnover in high-level military posts is also expected in the next few months, as seven of the ten uniformed members of the CMC will likely retire, signifying the largest shift in military leadership in two decades. The three members that will remain include General Chang Wanquan, director of the General Armament Department, Admiral Wu Shengli, commander of the PLAN, and General Xu Qiliang, commander of the PLAAF.²²⁰ These posts represent the major priorities of the PLA as it seeks to modernize its forces, build up its domestic defense industries, and enhance the capabilities of the navy and air force in particular. In fact, outside observers of the PLA predict that the CMC will be significantly less dominated by army officers than ever before after the Eighteenth Party Congress, representing the increasing influence of the navy and air force within the Chinese military.²²¹

More generally, some observers have noted that the fifth-generation of leaders soon to take office will differ from previous leaders in that they are less likely to be technocrats, engineers, and geologists and more likely to be economists, political scientists, and lawyers. Although this group of leaders grew up during the Cultural Revolution era and has little international experience, their sixth-generation advisers and future replacements will have come of age in an era of greater Chinese openness, and they will likely have much more international exposure from studying abroad.²²²

Ultimately, it is difficult to divine the specific implications of the upcoming leadership transition for the United States–Japan alliance, much less the rise of the following set of leaders who will be in power in twenty years. On balance, Beijing is most likely to continue to pursue a broad national security strategy similar to what it has pursued during the past few decades (as described above), given the clear advantages that that strategy offers to China's long-term interests, the consensus-oriented nature of the Chinese regime, and the growing internal checks and balances in the Chinese system.

Although it is possible that the greater exposure of the PRC's future top-level leaders to foreign countries and international institutions could lead them to take China in a more internationalist, cooperative direction, it is easy to take this assumption too far. Even if they are more familiar with or sympathetic to some Western norms and institutions, CCP leaders will almost certainly continue to place utmost priority on what they perceive to be fundamental Chinese core interests, including regime survival and party cohesion, territorial sovereignty and integrity, and stable economic development.

Some observers have argued that intraparty divisions and dissension could lead to unstable leadership transitions or even more fundamental governmental divisions or reforms. This argument has become particularly salient in the wake of the so-called Wang Lijun incident, which unfolded in early 2012 and ultimately resulted in the removal of Chongqing

mayor Bo Xilai from the Politburo. According to both Chinese and foreign observers, this episode represents the most significant challenge to the CCP regime since the Tiananmen Square protests in 1989.²²³

Despite the seriousness of this event, however, China's top leaders have thus far demonstrated (at least publicly) unified resolve in deposing Bo Xilai from the Politburo, excommunicating him from the party, and charging him with treason. In the process, top leaders censured Bo for overtly campaigning for a position on the PBSC and reprimanded him for employing populist and leftist ideology as a divisive political tool.²²⁴ Their response has again demonstrated how the CCP leadership, despite its internal disagreements, is ultimately committed to regime cohesion around a more-or-less status quo set of policies, including a general commitment to "peaceful development" and gradual reform. This suggests that, barring the sort of political and policy consequences of radical economic change and social unrest outlined above and discussed in further detail below, Beijing's stance toward Japan and the alliance will likely continue to display the sort of relatively benign, cooperative/competitive elements evident throughout the reform era.²²⁵

That said, the same features that imbue the Chinese political system with internal stability could also make it more difficult for the leadership to implement those major reforms needed to sustain stable growth levels. In particular, the growing influence of a range of political, bureaucratic, and commercial interests could increasingly tie the hands of CCP leaders when it comes to tackling economic woes, social unrest, and other challenges, which could hobble China's growth and development—and possibly its political and social cohesion—over the longer term.²²⁶ As noted above, this trend toward greater atomization could also challenge Beijing's ability to coordinate among various foreign and defense policy actors during an external political-military crisis with Japan or the alliance.²²⁷

Civil-Military Dynamics

Outside observers increasingly claim that the PLA—as a conservative, highly nationalistic, and increasingly confident actor in the Chinese political system—is exerting ever more influence over China's foreign policy decisionmaking process.²²⁸ In reality, however, the PLA today wields far less political power than it did during the Mao Zedong and Deng Xiaoping eras. Ultimate decisionmaking authority regarding fundamental foreign and defense policies resides in the PBSC, which has had no professional military representative since 1997.²²⁹

There is little doubt that the PLA is an intensely nationalist organization committed to a vigilant defense of national sovereignty and territorial integrity, not unlike the militaries of other nations. And military figures have apparently exerted sporadic influence over foreign-policy-related issues by expressing their views publicly. Specifically, PLA officers often have little regard for what they view as the Ministry of Foreign Affairs' excessively accommodating stances toward other countries, including the United States and Japan, particularly over such sensitive issues as the Senkaku/Diaoyu Islands and foreign military activities in China's EEZ.

However, such views do not necessarily translate into a cohesive, widespread, and explicitly enunciated institutional “interest” distinct from those of other PRC organizations, or result in concerted, autonomous, ongoing “external” pressure on the senior civilian party leadership. Unlike the military in many developing countries, the PLA does not behave as a separate institutional force in Chinese power politics and within senior policy channels. Its mandate is almost exclusively defined by its professional responsibilities, and both civilian and military elites in China remain unified by a common commitment to regime survival and increasingly institutionalized norms of policy formulation and conflict resolution.²³⁰

Furthermore, those entities that provide regularized institutional channels between the senior military leadership and senior civilian officials with authority over foreign policy (that is, the CCP’s CMC and relevant Leading Small Groups) perform primarily advisory, coordinating, and consensus-building functions regarding major national policy issues; they do not usually make major formal policy decisions, even though their views and recommendations can exert significant influence over those bodies (such as the PBSC) that do exercise such authority.²³¹ Of these organizations, the CMC offers the strongest avenue for military influence on aspects of foreign policy, albeit largely via the civilian CCP general secretary, who serves as the CMC’s chairman.²³²

Of particular importance, however, is the fact that although China’s civilian party leadership wields ultimate authority over all major aspects of foreign policy, it most likely does not exert clear and decisive control over two interrelated types of operational military activities that can pose significant implications for PRC foreign relations: (1) specific military tests and exercises, and (2) military operations undertaken outside China’s territorial borders, including activities in waters such as the East China Sea.

In the United States and many other Western countries, such potentially disruptive, foreign-policy-related military actions are usually coordinated beforehand with senior civilian national security or diplomatic officials, as part of a well-established interagency vetting and oversight process usually administered by a national security council (NSC) type of apparatus. In contrast, no clear, explicit, codified regulations or executive orders exist in China today to ensure such coordination between civilian and military authorities. Indeed, it is quite possible that little if any regular and detailed contact occurs between any parts of the Chinese military and China’s foreign affairs system regarding military activities of relevance to foreign policy, given both the absence of a NSC-type system and the generally secretive and insular nature of the military in China.²³³

By contrast, there is some evidence that Chinese maritime law enforcement agencies, including the State Oceanographic Administration and the Bureau of Fisheries Administration, appear to operate under more direct guidance from Beijing, particularly in the South China Sea at times of significant political sensitivity.²³⁴ In addition to enforcing China’s right to regulate marine resources, the activities of these maritime law enforcement agencies are a key part of Beijing’s overall strategy in the South China Sea, which is to delay resolution of territorial disputes while consolidating China’s claims to sovereignty. A similar dynamic is at play in the East China Sea, where these agencies have also begun conducting

regular patrols in recent years for both resource protection and “rights defense” purposes. The PLAN also plays an indirect role in this strategy by displaying shows of force to other claimants in the region through exercises and patrols, and by on occasion supporting the activities of civilian maritime law enforcement vessels by following behind them, at a distance, as they operate in contested areas, and by shadowing the vessels of other disputants.²³⁵

During the next fifteen to twenty years, it is unlikely that there will be a dramatic increase in PLA representation in high-level PRC decisionmaking regarding broad national security strategy or strategy toward the United States–Japan alliance in particular. Some analysts have speculated that the growing strength and allegedly rising influence of the PLA within the policy process will eventually result in the reintroduction of PLA membership into the PBSC. In the absence of major leadership conflict, however, such a move is highly unlikely, because it would (1) weaken the position of the CCP general secretary in providing oversight and coordination on military affairs; and (2) reinsert the military into top-level policy decisionmaking and power relations, thus reversing the clear trend of the past fifteen years and drawing it away from its main professional defense duties, while possibly exacerbating elite power rivalries.²³⁶

At the same time, however, it is also unlikely that future efforts to improve coordination between the PLA and the activities of China’s civilian foreign affairs system and various civilian maritime law enforcement agencies, if they occur, will prove successful, even over the next fifteen to twenty years. At the central level, it is unlikely that senior party leaders, including the general secretary, will undertake serious efforts to alter those long-standing stove-piped structures and practices that serve to sustain the current separation between the military and foreign affairs systems in China, despite the arguably increasing need to provide for such policy coordination. Undertaking such a task would require considerable political clout, a clear recognition of the problem as significant enough to justify the political risks involved, and an ability to overcome entrenched bureaucratic resistance—all qualities in short supply among China’s political leadership in the post–Deng Xiaoping era. Even at the local level, for example, within disputed maritime territories, establishing centralized and coordinated control over both military and civilian entities operating at some distance from China’s coastline could prove extremely problematic.

On balance, these foreign-policy-related features of the Chinese civil-military system increase the likelihood that local Chinese actors operating in disputed areas of the East China Sea could precipitate or aggravate a crisis with Japan over resource and territorial claims.

PUBLIC OPINION

In recent years, Chinese public opinion has also been exerting a growing influence on Beijing’s national security decisionmaking, though there is debate over how and to what extent it shapes government policy.²³⁷ Alastair Iain Johnston and Daniella Stockmann have summarized various explanations for the way public opinion might shape PRC foreign pol-

icy.²³⁸ Some government officials might place direct weight on the value of public opinion, either out of a normative sense of duty or affinity or out of fear that a restive public may be more likely to agitate against a regime that does not appear to them to be adequately promoting Chinese national interests. One often-cited permutation of this explanation is that autocratic officials in Beijing may fear that antiforeign protests will get out of hand and lead to broader instability, with the protests becoming aimed at the CCP rather than the foreign country.²³⁹

Public opinion might also be used as a bargaining tool both in internal CCP debates and by PRC officials in international negotiations. In a domestic context, advocates of a particular viewpoint within the CCP could utilize the weight of public opinion to support their arguments, as a tool for applying leverage in intraparty competition. In an international context, PRC officials might use public opinion in negotiations with other countries as a reason for why their options are constrained or as a rationalization for their stances on certain issues. Jessica Weiss has argued that this dynamic was evident in 2005 in China's negotiations with Japan surrounding a series of anti-Japanese protests.²⁴⁰ Public opinion might also influence or constrain the outlook of foreign policy experts, including scholarly advisers to senior CCP officials. According to many accounts, such individuals have been exerting more influence on policymakers in recent years, including through direct briefings and informal communication.²⁴¹

Some of the most often-cited examples of public opinion influencing Chinese foreign policy through one or more of the above mechanisms have to do with issues related to Sino-Japanese relations.²⁴² With this in mind, it is important, then, to understand the contours of Chinese public opinion toward Japan and the United States-Japan alliance. Generally speaking, trends in Chinese public opinion toward Japan tend to be driven by events in the bilateral Sino-Japanese relationship. This is particularly true when questions are asked about the favorability of views of Japan, Japan's influence in the world, the quality of Sino-Japanese relations, or whether Japan is viewed as an enemy or a partner. Examining the Chinese public's views on specific issues, their perceptions of Japanese people, and their idea of the differences between Japan and China can help paint a more nuanced picture of underlying attitudes among the Chinese public toward Japan.²⁴³

Public Opinion Toward Japan

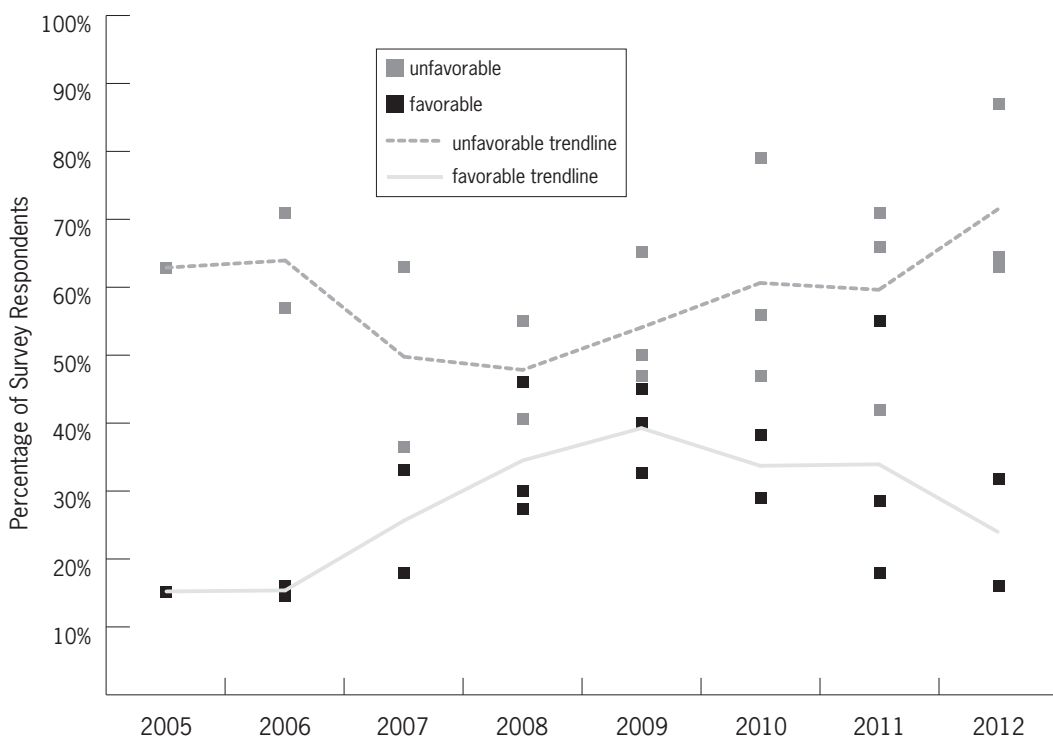
In the first years of the twenty-first century leading up to 2006, Chinese views toward Japan were overwhelmingly negative.²⁴⁴ A likely explanation for this animosity can be found in Chinese anger over a variety of historical issues that were particularly sensitive at the time, due to such factors as then-prime minister Koizumi's visits to the Yasukuni Shrine, which honors Japanese soldiers (including those who fought against China, along with some convicted war criminals), in addition to frustration over how Japanese history textbooks addressed Japan's historical military aggression in the First and Second Sino-Japanese Wars and other conflicts. Indeed, as alluded to previously, widespread anti-Japanese protests

broke out in 2005 over such concerns—protests that escalated to vandalism, beatings, and boycotts, before the PRC government finally shut them down.

From 2006 through mid-2010, these Chinese views toward Japan improved somewhat, while still remaining negative on balance.²⁴⁵ This change was probably due in part to the improvement in Sino-Japanese ties after Koizumi left office and subsequent prime ministers discontinued their predecessors’ practice of visiting the Yasukuni Shrine. Sino-Japanese summits and agreements over pursuing joint development of resources in the East China Sea in 2008 further contributed to the warming in bilateral relations and likely helped bolster Chinese public opinion toward Japan in that era.

However, in late 2010 such favorability indicators again plummeted in the wake of Japan’s detention of a Chinese captain of a fishing boat that had crashed into two Japanese coast guard vessels in waters near the disputed Senkaku/Diaoyu Islands. After some slight warming in 2011, Chinese public opinion toward Japan again cooled in 2012, particularly after renewed tensions flared up over the Senkaku/Diaoyu Islands in the latter part of the year (figure 2.4).²⁴⁶

FIGURE 2.4
Chinese Public Opinion Toward Japan, 2005–2012



Sources: This graph plots datapoints from twenty public opinion surveys conducted by *China Daily*/Genron NPO, *Xinhua Oriental Outlook Weekly*/*Yomiuri Shimbun*, the BBC/PIPA/GlobeScan consortium, and the Chicago Council for Global Affairs from 2005 to 2012, with trendlines showing the annual average of the datapoints.

The Chinese public expresses the strongest positions on questions related to the Senkaku/Diaoyu Islands territorial issue and historical issues (especially related to World War II), as well as Japanese military power. A 2008 Pew survey found that fully 76 percent of Chinese feel that Japan has not sufficiently apologized for its military actions in World War II. A Chicago Council on Global Affairs poll conducted the same year found that 80 percent of Chinese believe the PRC should not compromise on the Senkaku/Diaoyu Islands dispute. Territorial disputes and historical issues tend to be perceived as possessing relatively equal importance in bilateral relations.²⁴⁷ A majority of Chinese also express at least some concern that Japan's military will pose a major threat to China in the future.²⁴⁸

In the economic and cultural realms, Chinese respondents tend to have more positive assessments of Japan, though they still remain low in comparison with other countries. In the 2011 Yomiuri/Xinhua Poll, a large majority (77 percent) of Chinese said they believed that Japan would have a strong influence on the international economy. In the 2008 Chicago Council poll, 68 percent of Chinese felt Japanese businesses had a positive influence on China, and 79 percent favored a free trade agreement with Japan.²⁴⁹ Conversely, only 29 percent of respondents felt that China and Japan shared similar values and way of life, and 63 percent of Chinese rarely or never consumed Japanese cultural products such as film, TV, and music.

Chinese also tend to see a relatively large difference between themselves and Japanese or between China and Japan. The Beijing Area Study, an iterative Chinese opinion poll, has revealed a persistent, significant gap between perceptions of the characteristics of Chinese and Japanese people since the question was first asked in 2000.²⁵⁰ In the 2008 Chicago Council poll, 64 percent of Chinese indicated that they felt China shared little or no similar values and way of life with Japan, more than twice the combined total of those who felt the two countries shared values to some extent (23 percent) or a great extent (6 percent). By comparison, a somewhat smaller majority (55 percent) of Japanese felt they shared little or no similar values and way of life with China.

Public Opinion Toward the United States

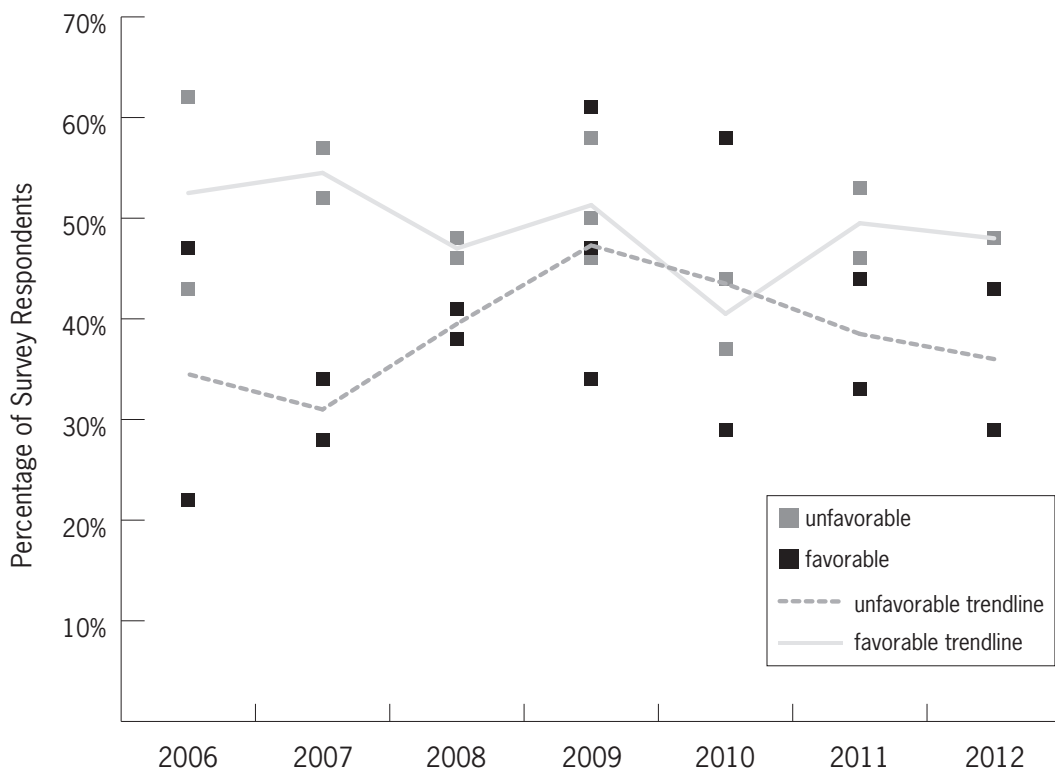
Chinese attitudes toward U.S. influence in the world also tend to be negative, and the United States is generally viewed as a potential threat to China's development and security. In the 2010 and 2011 BBC/GlobeScan/PIPA polls, there were 15- and 20-point gaps, respectively, between the percentage of Chinese who viewed U.S. influence in the world negatively and those who viewed it positively (figure 2.5). In a 2009 Lowy Institute poll, 50 percent of Chinese felt the United States would pose a threat to the security of China during the coming decade.²⁵¹ Views on Sino-U.S. economic ties are somewhat more positive, with Chinese viewing bilateral trade and investment as important and beneficial to China's economy.²⁵²

Chinese views of the American people are also relatively dim, and perceptions of difference between Chinese and American people have been growing over time. In a 2011 Pew

Research Center poll of 23 countries, 47 percent of Chinese expressed an unfavorable opinion of Americans, while only 42 percent expressed a favorable opinion, the sixth-lowest proportion of all countries surveyed.²⁵³ The 2008 Chicago Council poll found that 68 percent of Chinese felt that China shared little or no values and way of life with America. Moreover, the gap between Chinese people’s perceptions of themselves and their perceptions of American people steadily increased in the Beijing Area Study’s polls between 2000 and 2009.²⁵⁴

U.S. influence in Asia and the world is perceived by Chinese to be in a relative state of decline, though Chinese are not unique in this perception. In the joint October 2011 Yomiuri/Xinhua poll, when asked to indicate whether they thought China or the United States would “be more influential in the Asia-Pacific region from now on,” 73 percent responded by choosing China, while only 23 percent chose the United States—though these numbers do not differ vastly from those posted by South Korean and Japanese respondents.

FIGURE 2.5
Chinese Public Opinion Toward the United States, 2006–2012



Sources: This graph plots datapoints from sixteen public opinion surveys conducted by the Pew Research Center, the BBC/PIPA/GlobeScan consortium, the Chicago Council for Global Affairs, and the Lowy Institute from 2006 to 2012, with trendlines showing the annual average of the datapoints.

In a 2011 Pew Research Center poll, 57 percent of Chinese felt that China would eventually replace the United States as the world's leading superpower, while 6 percent felt that it had already done so. Interestingly, however, the 6 percent of Chinese saying China had already replaced America was the lowest of all 22 countries surveyed, and China was the only country to witness a decline from 2009 to 2011 in the number of people saying that China would replace or already had replaced the United States, indicating a certain degree of humility about China's current, if not future, role in the world.²⁵⁵

Public Opinion Toward the Alliance and Possible Future Trends

Perhaps unsurprisingly, given the combination of the above-mentioned views, the Chinese public overwhelmingly perceives the United States–Japan alliance as a threat to China.²⁵⁶ These Chinese perceptions of Japan, the United States, and the alliance reflect China's national hyperconsciousness over its “century of humiliation” at the hands of Japan and other foreign powers, as well as its fears of “encirclement” and its suspicion that the United States is committed to constraining China's rise on the regional and international political stage, using its alliance with Japan as a potent military tool in a policy of containment.

However, it is also important to note that the Chinese public places great importance on Beijing's relationships with both Tokyo and Washington and generally expresses a desire for a cooperative approach toward these countries.²⁵⁷ They also express cautious optimism about the future of Sino-Japanese ties and Sino-U.S. relations.²⁵⁸

Generally speaking, younger Chinese (especially those in the 18- to 24-year-old category) tend to perceive Japan and the United States as a greater threat than do older generations, though this trend is also evident in Chinese threat perceptions vis-à-vis other countries.²⁵⁹ If this generational cohort maintains these negative attitudes as it ages, such alarmist perceptions could present a potential challenge to cooperation among the three countries; however, it is by no means certain that these attitudes will hold over time. Indeed, the *fenqing* (愤青, “angry youth”) has been a familiar archetype in Chinese nationalism for decades, and greater levels of xenophobia among youth writ large (rather than any specific generational cohort) can account for at least some of this divergence in views. Moreover, despite their greater defensiveness and nationalism, some polling suggests that younger Chinese tend to be more optimistic about the direction of Sino-U.S. relations.²⁶⁰

TRAJECTORIES FOR CHINESE STRATEGY TOWARD JAPAN AND THE ALLIANCE AND MILITARY CAPABILITIES

As indicated in chapter 1 and above, several possible variations in the above-noted variables provide the basis for alternative trajectories in China's level of defense spending, military capabilities, and foreign and defense strategies, policies, and actions. In the Chi-

nese case, and in partial contrast to the Japanese case, alternative projections of economic and technological capacity will likely play an important independent role in determining the various levels of defense spending and types of military capabilities that could emerge within the seven domains during the next fifteen to twenty years. At the same time, several intervening variables associated with Chinese leadership views, levels of domestic political and social stability, and various bureaucratic and political factors, along with the tenor of Japanese and U.S. policies toward China, will likely exert the strongest long term influence on China’s foreign and defense policies toward Japan and the alliance.²⁶¹ Finally, individual crises or “wild card events” over the Senkaku/Diaoyu Islands or resource disputes, if severe enough, could also exert a major and lasting impact on Chinese policies.

The following subsections describe four possible trajectories for China through 2030 (table 2.3). They are classified according to (1) the overall degree of Chinese military capa-

TABLE 2.3
Possible Trajectories for China Through 2030

		1: CAUTIOUS RISE	2: ASSERTIVE STRENGTH	3: COOPERATIVE WEAKNESS	4: AGGRESSIVE ULTRANATIONALISM
CHARACTERISTICS	Probability	Likely	Likely	Possible	Possible
	Military capabilities	Mid	High	Low	High
	Policy toward Japan and the alliance	Engage and hedge, emphasis on engage	Engage and hedge, emphasis on hedge	Relatively cooperative and benign	Highly nationalist and assertive
DETERMINANTS	Average annual GDP growth 2012–2030	4–5%	6–8%	3–4%	6–8%
	Defense spending as % of GDP	1–1.5%	1.5–2%	1%	> 2%
	Social unrest	Mid	Low	High	Mid
	Political dynamics	Regime focused on domestic stability	Increasingly confident leadership	Unstable regime focused on internal security	Unstable regime, emergence of ultranationalist leadership
	Public opinion	Dissatisfied with regime, somewhat nationalist	Nationalist	Highly dissatisfied with regime	Highly nationalist (precipitated by wild-card event)

bility vis-à-vis Japan and the alliance; and (2) the level of emphasis in foreign and defense strategy and policy placed on cooperation versus competition or confrontation. These four trajectories are ordered according to their likely probability, although the first two trajectories are deemed roughly similar in likelihood.

Trajectory 1: Cautious Rise

Under this “Cautious Rise” trajectory, China would adopt a restrained and largely defensive stance toward Japan and the alliance, involving a balanced approach to cooperation and competition, an increased focus on domestic unrest, and medium-range defense capabilities.

FOREIGN POLICY AND MILITARY STRATEGY

Under this trajectory, the basic underlying logic behind China's current foreign policy approach to Japan would not change markedly during the coming fifteen to twenty years. Specifically, Beijing would continue to focus on strengthening its economic, diplomatic, and political ties with Tokyo, while also emphasizing the further development of cooperative relations with the United States and the region. Beijing's continued emphasis on such positive foreign policy approaches would be stronger under this trajectory than under the following “Assertive Strength” trajectory.

In the military sphere, this relatively strong emphasis on maintaining cooperation with Japan and the alliance would be reflected in a clearer balance between efforts to enhance deterrence over key regional security issues regarding Japan and the alliance (such as maritime territorial disputes) and efforts to enhance military cooperation with both Tokyo and the United States. Moreover, under this trajectory, Beijing would not openly espouse some version of an A2/AD type of strategy, much less present it as directed at Washington or Tokyo. Instead, it would maintain a largely defensive mindset and continue to orient its military under the “active peripheral defense” and “limited war under local conditions” concepts introduced in the late 1980s and 1990s. In addition, under this trajectory, Beijing would continue to remain hesitant toward involvement in bilateral and multilateral military exercises, yet nonetheless would continue to work with Japan and the United States regarding various international or UN peacekeeping, disaster relief, and noncombatant evacuation operations.

DETERMINANTS AND UNCERTAINTIES

The balanced and restrained policy stance outlined above would be partly the result of a more mixed picture in the economic and social realms. Although China would continue to develop as a significant global and regional economic power, its growth rate would slow notably under this trajectory, giving rise to greater domestic political and social tensions. In particular, China would confront higher levels of labor unrest, unemployment and under-

employment, continued deficiencies in the social welfare system, huge disparities in regional income and other factors that together would serve to limit Chinese confidence in the future and focus leadership attention increasingly on the domestic environment. Despite these challenges, under this trajectory, China would also manage to maintain an economic growth rate and level of political cohesion and direction sufficient to avert truly regime-threatening levels of social upheaval.

This trajectory assumes that any possible “wild cards” that might occur during the next fifteen to twenty years (such as additional crises over territorial issues) would not be sufficiently severe to alter the basic orientation of China’s foreign and defense policies. Although the possibility of such policy and behavior-altering events cannot be entirely excluded under this trajectory, their severity would likely be reduced significantly due to the effects of the economic and social phenomena outlined above. In particular, declining levels of economic development and moderate to high levels of domestic political and social unrest would restrain arguments or decisions in favor of much greater assertiveness over territorial disputes and generally lower the confidence of those elites who might support a move toward more ultranationalist foreign policies. In general, genuinely damaging levels of aggressive external behavior (for example, those that threaten to escalate into major conflict) are less likely to occur when China’s leadership is beset with domestic challenges (as is argued in greater detail under Trajectory 3).

DEFENSE SPENDING AND MILITARY CAPABILITIES

This midrange level of development would place significant constraints on resources available for military modernization, and thus reduce somewhat annual increases in defense spending. As a result, military and technological capabilities and deployments—in particular those of greatest relevance to Japan and the alliance (see below)—might develop at less than expected levels in many areas. Over time, and especially if the United States and Japan begin rebounding from their respective economic problems (a possibility discussed in subsequent chapters), this development would mean that Beijing would be effectively unable to alter the perception and the reality that Washington and Tokyo will continue to operate their forces in the Western Pacific near Japan as a superior combined force. Indeed, under this trajectory, China’s improvements in force capabilities would not be perceived as clearly superior to those of Japan alone.

While, under this trajectory, the PLA will have developed significant capabilities relevant to an A2/AD type of strategy by 2030, including ever more accurate ballistic and cruise missiles, more modern submarines, growing offensive cyber capabilities, and a large inventory of mines, Chinese power projection would remain relatively limited. Moreover, China’s defensive vulnerabilities would persist, particularly for the PLAN surface fleet and PLAAF assets.

The Maritime Domain

Under this trajectory, China would likely focus on securing its adjacent seas by fielding greater numbers of diesel submarines and smaller surface ships equipped with ASCMs. As a result, the PLA's ability to defend its littoral or prevail in a Taiwan scenario would have continued to improve. Its sea mine capabilities would also increase over time, though its ability to deploy mines rapidly would continue to be hobbled by its lack of air superiority (airplanes being the most efficient method to rapidly emplace or resow mines).

The PLA will have demonstrated an ASBM capability at sea, though it would still encounter obstacles and uncertainty in the precision targeting of missiles due to uneven implementation and defense of sea-based cueing and space-based and OTHR technology. The PLAN would be able to regularly conduct patrols and assist in military operations other than war beyond the first island chain using an enhanced surface fleet, but its ability to engage in combat at those distances would remain limited. Although it might have composed a couple of indigenous aircraft carrier battle groups by 2025–2030, they would be minimally outfitted, based on technology that is categorically inferior to that of U.S. carriers, and still engaged in the early stages of training and patrolling.

The Air Domain

China would still lack the sort of air combat capabilities boasted by the alliance, though its inventory of short-range fighter jets largely relevant to coastal defense and a Taiwan scenario would be increasingly robust. It would be building out its fleet of advanced fifth-generation fighters, but they would still be inferior in key ways to U.S. stealthy jets. At the same time, its fledgling aircraft carrier battle groups, including modern Luyang-II and Luyang-III destroyers, could play a helpful role in providing air defense—though such assets would not long be survivable in actual combat against U.S. assets.

The PLA's missile inventory would pose a highly formidable threat to allied air assets. Although it is possible that this threat could be mitigated by robust base-hardening and missile-countermeasures implemented by the alliance, Chinese missiles would at the very least act as a serious factor complicating the employment of allied manned, short-range tactical aircraft assets in a conflict.

The Ground Domain

China would likely have continued to expand its inventory of MRBMs capable of targeting fixed, land-based targets, such as U.S. bases in Japan. The Chinese navy and air force would continue to possess little medium-range offensive ground-assault capability. PLAN carrier aircraft could prove useful in this regard (most likely in relation to a South China Sea scenario), but aerial refueling capabilities for advanced fighter jets would be lacking.

However, China would possess an increasingly sophisticated range of short-range naval and air assets capable of engaging in coastal defense or a Taiwan scenario. China's sea- and

land-based SAM batteries would also present a formidable challenge to incoming attacks aimed at the Chinese Mainland.

The Space and Cyberspace Domains

China's space-based C4ISR capabilities would be increasingly advanced under this trajectory, particularly when combined with a growing network of OTHR arrays and a more frequent deployment of ISR-oriented UAVs. However, these capabilities would still provide incomplete surveillance coverage and imperfect targeting assistance.

China would possess the capacity to threaten allied satellites in low- and medium-Earth orbits, although its own space-based assets would also be susceptible to attack from allied sources. It could launch potentially debilitating cyberattacks at the outset of a conflict, though its ability to defend itself against such attacks would also remain very limited.

The Nuclear Domain

Under all the trajectories discussed in this chapter, Beijing will continue to uphold its policy of maintaining a minimum deterrence, second-strike capability. Even an ultranationalist leadership (posited in Trajectory 4) would be unlikely to explicitly abandon a no-first-use policy or implement a massive nuclear buildup, absent a highly improbable precipitating shock such as Japanese nuclearization.

Instead, Beijing will devote its efforts to implementing qualitative improvements in its nuclear capabilities, including (1) boosting the survivability of its own nuclear assets and (2) developing more advanced methods of breaching allied missile defense systems. The former effort would involve transitioning ever more of its warheads to road-mobile, solid-fueled missiles such as the DF-31 and DF-31A, as well as developing quieter, more advanced SSBNs. The latter effort would entail fielding more advanced maneuverable reentry vehicles, decoys, jamming devices, and other penetration aids. These efforts are likely to be somewhat more successful under Trajectory 2 and Trajectory 4, given the higher levels of resources available, but the variations will be minimal.

Command and Control

The question of effective central control will not be resolved as a function of levels of defense spending or economic capacity. Instead, the ultimate outcome will hinge on the future of civil-military relations in China regarding offshore PLA operations. As a result, this particular feature is unlikely to correlate directly with these different trajectories.

Although training and interoperability would continue to improve under this trajectory, it is also quite possible that interservice competition over budgetary resources and lagging administrative reforms would prevent a highly effective integration of PLA forces. A desire to avoid provoking the Japanese could lead Beijing to constrain the PLA from regularly exercising or training in ways or areas that could be perceived by the Japanese as

threatening, which could diminish the PLA's readiness or expertise in a conflict. Moreover, PLA troops would continue to lack the sort of operational experience that U.S. forces possess.

Trajectory 2: Assertive Strength

Under this "Assertive Strength" trajectory, Beijing would pursue continued cooperative engagement with Tokyo, combined with increasingly competitive and assertive (but not extremely hostile) security policies and high-range defense capabilities.

FOREIGN POLICY AND MILITARY STRATEGY

Under this trajectory, China would continue to adhere to its current, generally cooperative approach to Japan and the alliance, but with increasingly competitive and assertive elements. Specifically, Beijing's approach would consist of a foreign policy toward Japan and the alliance that is focused on four main elements:

- Continued efforts to strengthen Japanese economic links with China and establish closer diplomatic and political ties with Tokyo;
- More active and open attempts to discourage Japanese support for any regional or U.S. alliance policies that might counter or challenge Chinese influence in the Western Pacific;
- General efforts to create as much policy "space" between Tokyo and Washington as possible, without prompting excessive alarm in both capitals; and
- More pronounced and energetic efforts to leverage growing Chinese military and economic influence in Asia into greater influence over regional multilateral political, economic, and security-related issues, forums and structures, and in some (not all) cases, to limit U.S. and Japanese influence in those areas; this would include greater openness to cooperative military exercises with countries in the region.

As part of this policy approach, Beijing might also at times press for changes in some international norms that strengthen the ability of Asian nations to restrict the military, political, and economic activities of supposedly "outside" powers such as the United States. However, such efforts would run the risk of significantly undermining past Chinese practices (for example, its support for free trade areas with many Asian and other powers) and alarming Japan, driving it further toward the United States. Thus, the Chinese leadership would probably remain cautious overall in revising critical norms in ways that directly challenge U.S. interests or alienate U.S. friends or allies, including Japan. This would especially prove true if the United States and/or Japan maintains at least midrange levels of military capabilities and presence (as discussed in chapter 5).

With regard to territorial and resource disputes, the Chinese preference under this trajectory would be to continue efforts to avoid provoking aggressive or other adverse reactions among other powers in Asia and elsewhere, especially if the United States and Japan remain strong economically. Greater Chinese assertiveness on this issue (that is, greater than seen in 2012)—and particularly with regard to the Taiwan issue—could provoke a sharp U.S. reaction that would likely in turn precipitate a major confrontation, perhaps leading to military conflict. Such a conflict would almost certainly derail China’s efforts to peacefully transition Asia away from a heavy dependence on U.S. maritime power along its periphery. Hence, Beijing would seek to avoid such an outcome.²⁶²

That said, it is possible that China would become more militarily and politically assertive toward its claims in the South and East China seas under this trajectory, especially if the various claimants could not work out a cooperative arrangement to exploit energy deposits there, or establish a more stable basis for asserting and defending their various sovereignty claims. However, the intensity and scope of such assertive or aggressive Chinese behavior would likely depend primarily on the actions of the other claimants and the United States. This would prove especially true in the case of the Senkaku/Diaoyu Islands issues and PRC relations with Japan, given the volatility of Chinese emotions toward Japan, as discussed above.

Under this trajectory, China would pursue a defense strategy and doctrine clearly intended to place steadily increasing military pressure on Japan and the United States–Japan alliance (via military deployments and new capabilities), in order to more effectively *deter* (1) the acquisition and deployment of greater Japanese military capabilities toward China; (2) efforts to strengthen Japan’s legal position or to prevail in crises regarding disputed territorial or resource claims or in disputed waters; or (3) efforts to assist the United States fully in undertaking actions that would be perceived as threatening PRC interests during possible crises over North Korea and Taiwan.

In support of these goals, something close to an explicit A2/AD type of strategy designed to severely complicate, if not neutralize, potential Japanese and U.S. military operations of a threatening nature within the first island chain might emerge. Given this emphasis, PLA efforts would still be oriented toward coastal defense and operations in the near seas. SLOC operations in that area, including the South China Sea, may become an element of Chinese military planning, although such missions would probably not be emphasized and their wisdom would likely remain under debate within the PLA. China’s far seas capabilities would be growing but would most likely still lag far behind those of the United States, and PLA doctrine would be unlikely to emphasize far seas operations or SLOC interdiction beyond the first island chain.

DETERMINANTS AND UNCERTAINTIES

Under this trajectory, China’s economy would avoid a hard landing, growing instead at rates that are still fairly high but gradually slowing as policy shifts to prioritize more equi-

table and sustainable growth. Such an economic scenario would largely dampen the likelihood of severe domestic unrest, as economic gains would be distributed more evenly and ever-growing numbers of Chinese would be brought into the urban middle class. Economic success and relative domestic stability would also imbue the political leadership in Beijing with a greater sense of security and an affinity for a foreign policy that is strong but not destabilizing. This more successful economic scenario is only marginally less likely than the more problematic economic scenario under the previous trajectory.

China would continue to be a major engine of global economic growth under this trajectory, with sustained or increasing trade flows and growing overseas investments in both developed and developing economies. China's economic interdependence would probably balance more toward the developing world as it diminishes with the United States and Europe. As a result, China's economic leverage over other regions and countries, especially in Asia, would probably increase markedly under this trajectory.

In this time frame, China would grow increasingly competitive with Western developed economies and Japan in terms of innovation and technology. Its defense industrial base would be able to overcome many of the weaknesses that have hobbled it in the past, and China would be increasingly capable of developing military technologies such as turbojet engines, advanced avionics and stealth capacity, and sophisticated radar that it previously had to forgo or attempt to acquire from Russia or elsewhere.

DEFENSE SPENDING AND MILITARY CAPABILITIES

As a result of such strong economic and technological success, Beijing would retain the capacity to continue to increase annual defense spending at or above levels of growth in GDP and government expenditures (depending on political calculations regarding domestic budgetary priorities and external threat perceptions) and notably strengthen its capacity in many high-technology areas relating to defense modernization. The military hardware and systems capabilities and deployments of greatest relevance to Japan as well as relevant economic and technological capabilities will thus develop at or above maximum estimated levels.

Depending on the economic capacity and military capabilities and deployments of the United States and Japan, the Chinese military could establish—through, for example, military presence, deployments, exercises, and increasingly direct challenges of U.S. and Japanese military operations in China's EEZ and in other waters near China—a capability to at the very least call into serious question the ability of the United States and Japan to operate their forces in the Western Pacific near Japan as a superior combined force. Equally important, as a result of such a development, the PLA would likely convey the perception, during the fifteen- to twenty-year time frame, that it is achieving (or, in the view of some, has already achieved) military superiority over Tokyo in many areas of relevance with respect to a variety of military contingencies that might occur in the region surrounding Japan, including confrontations over resource and territorial issues in the East China Sea.

The Maritime Domain

Under this trajectory, and perhaps most notably, China would attain a fully operational precision targeting system for its ASBM and other missile assets crucial to an A2/AD strategy, utilizing space-based assets and an extensive OTHR network. These missiles would allow the PLAN to threaten credibly U.S. and Japanese naval surface assets. However, despite improvements over the status quo, Chinese ASW technology would likely continue to exhibit some key weaknesses, inhibiting the PLAN's ability to eliminate the alliance forces' undersea advantage.

The PLAN will have fielded a wide range of naval surface assets relevant to littoral defense and a Taiwan scenario, such as fast attack craft made more sophisticated destroyers and frigates. It will also likely have acquired limited power projection capabilities reaching beyond the first island chain, with more prominent roles for surface warships, nuclear-powered submarines, replenishment ships, and rudimentary carrier battle groups, although China's overall strength in this area and at these distances would continue to lag behind that of the United States. Within the first island chain, however, Chinese capabilities in the maritime domain would pose a much more formidable potential threat to allied forces than at present or under the previous trajectory.

The Air Domain

China's most significant air advances will have been in building out its fleet of short-range strike fighters (such as the JH-7/A, J-10, and J-11B), as well as its naval aviation capabilities (including the production and/or acquisition of aircraft assigned to carrier battle groups). It will also have begun to mass produce a fifth-generation stealth fighter, though Beijing might choose to place some constraints on the numbers and deployments of this system out of a desire to avoid provoking Tokyo and other neighbors.

Despite these advances, China would not yet be able to establish consistent air superiority vis-à-vis the alliance. However, its increasingly advanced missile technologies could pose a much more serious threat than at present to U.S. air bases on Japan and Guam in the event of a conflict, and a strengthened Chinese land-based air defense system could thwart potential offensive strikes from alliance forces.

The Ground Domain

In offensive terms, as noted above, China's formidable missile inventory and improved targeting systems would pose a threat to U.S. bases in Japan and Guam. Although ground-assault naval and air assets would be oriented toward coastal defense and a possible Taiwan scenario, the PLA would possess a nascent medium-range offensive ground-assault capability, primarily in the form of land-based MRBMs, and to a lesser extent sea-based LACMs. By 2030 the PLA may also have made some advances in the long-range aerial refueling capacity necessary to make the J-20 relevant to a Japan- or Guam-related

contingency, if it were to decide that such systems would be a worthwhile and efficient investment.

In defensive terms, a robust SAM defense network would enable China to guard itself against coastal and deep-strike attacks. SA-20 and HQ-9 SAMs would enable China to intercept and destroy incoming aircraft, while shorter-range SAMs such as the SA-15 would enable it to intercept incoming LACMs and precision-guided munitions. Littoral and onshore naval and air assets would also present a challenge to offensive allied air attacks directed at targets on the Chinese Mainland.

The Space and Cyberspace Domains

China's offensive space and cyber capabilities could become quite formidable under this trajectory. Not only could China have the ability to use ballistic missiles to attack allied satellites, but it could successfully field a laser blinding method for attacking space-based assets. Its offensive cyber capabilities could also be capable of infiltrating and targeting unclassified U.S. military systems that are used in military communications, which could impair U.S. operations in the event of a conflict.

China's C4ISR technology will have become relatively advanced, with an expanding network of indigenous satellites, OTHRs, and UAVs enabling more advanced surveillance and reconnaissance, as well as the above-mentioned precision missile targeting. Of particular importance, however, these assets would also likely be vulnerable to offensive operations themselves. Likewise, as the PLA becomes increasingly reliant on information technology for communication and management of its more advanced weapons systems, it will become more vulnerable to offensive cyberattacks.

Command and Control

Training and interoperability would continue to improve under this trajectory, particularly because ample resources would be available to sustain exercising. However, as in Trajectory 1, political considerations might lead Beijing to constrain the PLA from regularly exercising or training in ways or areas that would be likely to provoke the Japanese, which could diminish the PLA's readiness or expertise in a conflict. And PLA troops would still lack the sort of operational experience that U.S. forces possess.

Trajectory 3: Cooperative Weakness

Under this trajectory of "Cooperative Weakness," China would adopt a highly cautious and defensive stance toward Japan and the alliance, involving a strong emphasis on cooperative engagement, a very high focus on containing domestic unrest, and low- to medium-range defense capabilities.

FOREIGN POLICY AND MILITARY STRATEGY

Under this trajectory, China's leaders would become more cautious and conservative in their actions abroad than at present or than under the previous trajectories, favoring pragmatic, stability-maximizing, and growth-oriented external and domestic policies. In particular, Beijing would be forced by economic and social necessity—to an even greater degree than under the preceding trajectories—to avoid any highly assertive or confrontational policies toward Japan and the alliance. Indeed, China's leaders would likely seek to sustain or expand trade, investment, and resource-oriented activities with the outside world, to strengthen the nation's overall political, economic, and social stability.

Maintaining cooperative, nonconflictual ties with Japan and Taiwan in particular would likely remain especially important to China during the next fifteen to twenty years under this trajectory, given the continued high importance to Beijing's long-term political goals of maintaining strong bilateral political and economic relations with both entities. This would especially hold true if the United States and Japan recover from their current economic problems and display more enduring global and regional strength (see chapter 5). But even under conditions in which both countries experience sustained, low levels of development (resulting in a more genuinely multipolar environment), Beijing would probably continue to prefer the use of persuasive, peaceful measures, not openly coercive, aggressive ones, for the reasons already noted above.

Such conditions would likely prompt the Chinese leadership to pursue a highly cautious and defensive military doctrine that stresses keeping a relatively low profile and building cooperation with other regional militaries. Beijing would likely continue to remain very hesitant toward involvement in bilateral and multilateral military exercises, given its declining capabilities. But it would also likely seek to work with Japan regarding international or UN peacekeeping or disaster relief or noncombat evacuation-type operations.

DETERMINANTS AND UNCERTAINTIES

Beijing's highly cautious and defensive foreign and defense policy stance would to a great extent reflect a variety of economic, social, and political constraints and pressures. Under this trajectory, China's annual growth rate would decline to a *maximum* of approximately 3 to 4 percent, in the context of a prolonged hard landing rather than a policy-induced rebalancing. Such a scenario would result in unacceptably high levels of unemployment and underemployment, a persistently inadequate social welfare system, continued huge disparities in regional income, worsening levels of elite corruption, and increasingly severe levels of water and air pollution. Such developments would lead to a more severe and prolonged level of social unrest than any envisioned under the previous trajectories.

Regime instability and/or a major decline in legitimacy would likely emerge under such conditions, almost certainly resulting in major leadership rifts over economic and social development strategies (for example, regarding whether to focus efforts on maximizing overall growth levels or addressing growing regional and income disparities) and/or various

personal political rivalries. These developments would fixate the attention of China's political and economic leadership on domestic policy issues.

That said, it is not inconceivable that the combination of a sustained drop in growth rates, the emergence of a Chinese leadership that is increasingly divided and conflicted over how to respond to such a development, and continued friction with Japan and Washington over sensitive territorial and sovereignty issues such as the Senkaku/Diaoyu Islands and perhaps Taiwan could prompt more aggressive PRC foreign policies. Severe social unrest—brought on by a combination of higher levels of unemployment and underemployment, a weak social welfare system, huge disparities in regional income, limits on labor migration, and continuing excessive levels of water and air pollution—could result in intense pressure on the regime, compelling China's leaders to adopt aggressive and provocative foreign policy actions in order to distract public attention from the domestic situation and strengthen support for the government.

Although this contingency is perhaps plausible to some observers as a “logical” course of action for a beleaguered regime facing declining domestic legitimacy, such a variant of the so-called diversionary war theory has little basis in empirical reality. Extensive research has demonstrated no systematic relationship between past episodes of domestic, economic-induced unrest in China and involvement in militarized interstate disputes. Historically—as Alastair Iain Johnston, M. Taylor Fravel, and other specialists on China's external use of force have observed—although Chinese leaders have at times mobilized society in response to external challenges that questioned their domestic credibility as leaders, they have not done so in response to domestic discontent from which attention needed to be deflected. In fact, with regard to territorial disputes, in the past, regime insecurity at home most often caused China to make major concessions abroad.²⁶³ Thus, though efforts to provoke confrontations (*as opposed to military conflicts*) with other nations to deflect domestic criticism of the regime are not inconceivable, it is more likely that internal pressures will cause Beijing to seek stability in its external relations.

Instead, a basic shift toward more aggressive Chinese policies would almost certainly require the emergence of a highly risk acceptant, militant, and in many ways irrational senior civilian leadership, given the domestic pressures and constraints posited by this trajectory. As indicated in Trajectory 4, the rise of such a leadership holding such a foreign policy stance is more likely under conditions of a strong China possessing greater confidence than a weak China focused on internal challenges.

DEFENSE SPENDING AND MILITARY CAPABILITIES

The above-noted economic and social constraints would restrain China's level of defense spending significantly, as slower economic growth and domestic unrest would force the government to redirect budgetary resources toward economic stimulus, social welfare, and internal security. This limited defense spending would contribute to persistent weakness in the defense industrial sector, which would be unlikely to successfully produce many

of the more advanced components necessary for the development of a PLAN and PLAAF capable of projecting power well beyond the littoral. These shortcomings would limit the PLA's capacity to deploy the numbers and types of advanced weapons systems expected in many projections proffered by outside observers of the PLA. As a result, barring a major decline in Japanese and American capabilities, Chinese military forces would remain clearly inferior to both nations' forces, especially in critical areas relevant to military operations beyond Chinese territory.

In short, Beijing's offshore capabilities would continue to remain centered on a limited number of ballistic missiles, a navy with highly limited blue water and endurance capabilities, and very limited offshore air support capabilities.

The Maritime Domain

In this trajectory, Beijing's naval posture would remain largely focused on littoral and coastal defense and Taiwan-related contingencies. Modernization of the undersea and surface fleets will have stagnated as increasingly constrained resources are directed away from power projection systems and toward such assets as fast-attack craft and other brown- and green-water naval capabilities.

China's submarines would still present a challenge, despite some vulnerability to allied ASW, but China itself would possess limited ASW capability. PLAN sea mines would also pose a formidable antiaccess threat, but the porousness of its broader A2/AD umbrella would make it difficult for the PLA to deploy those mines in the event of a conflict.

Under this trajectory, China would likely experience difficulties deploying a fully operational precision targeting system for its ASBM and other assets crucial to an A2/AD type of strategy, especially given the likely constraints it would encounter in its space-based and both surface and sub-surface warfare capabilities.

The Air Domain

The PLA would still be able to mount saturation missile attacks against bases in Japan, but such attacks would likely be susceptible to counterdefense. Furthermore, they would suffer from lack of integration with a broader A2/AD-type capacity.

China would continue to suffer from an overwhelming imbalance in terms of symmetric air-to-air combat capabilities. Its growing but still limited inventory of advanced stealthy fighter jets will have encountered persistent technical problems, and would be clearly inferior to allied air technology. However, China could still benefit from advanced land- and sea-based SAMs that could ameliorate its air defense shortfalls.

The Ground Domain

Although China's missile inventory would continue to pose a threat to bases in Japan under this trajectory, Beijing would lack the capacity to launch an offensive campaign

against the Japanese islands using air or naval assets. Aerial refueling and long-range bombers would continue to be an underdeveloped sector in PLA capabilities.

In defensive terms, China's coastal SAM inventory would enable it to intercept some incoming cruise missiles. In the event of a major conflict, this could become a battle of inventories, where Japan and the United States run out of LACMs before China runs out of SAMs (or vice versa). Moreover, the PLA's littoral and onshore naval and air assets would present an imperfect but not insignificant challenge to any potential offensive allied air attacks at targets on the Chinese Mainland.

The Space and Cyberspace Domains

Although the PLA will have continued to expand its network of space-based and OTHR assets, the ability to conduct successful missile targeting will continue to prove elusive. China would possess a basic direct-ascent ASAT capability that could threaten U.S. satellites, but U.S. countermeasures (cyberattack, kinetic C4ISR attacks, possibly satellite maneuvering) could render it ineffective.

Similarly, though China would be able to launch cyberattacks against unclassified U.S. and Japanese military networks, such attacks would likely not prove completely debilitating to allied operations. At the same time, the PLA's own informationized forces and space-based C4ISR assets would be highly susceptible to cyberwarfare and laser blinding attacks.

Command and Control

Central oversight of PLA decisionmaking could become more episodic under this trajectory, in light of significant regime instability and insecurity. Interservice competition over limited resources may impede efforts to promote joint interoperability. Although training will have continued to become more sophisticated, exercising will remain incomparably frequent to that practiced by the United States, in part due to constrained resources.

Trajectory 4: Aggressive Ultrationalism

Under this trajectory of "Aggressive Ultrationalism," Beijing would pursue a strategy of lessened cooperative engagement with Tokyo, accompanied by a largely hostile and confrontational stance toward the alliance, and high-range defense capabilities.

FOREIGN POLICY AND MILITARY STRATEGY

Under this trajectory, Beijing would adopt a far less compromising, more adversarial foreign and defense policy stance toward Japan and the United States–Japan alliance. This could include an array of highly assertive diplomatic, economic, and military efforts intended (1) to intimidate Tokyo in the contest over territory and resources in the East China Sea and with regard to any possible support it might provide in a Taiwan crisis; (2) to push

back vigorously against alliance activities (such as military exercises and ISR operations) in the vicinity of Japan; and (3) to actively undermine support for the policies of the United States and Japan among other Asian nations and regional multilateral organizations and with regard to sensitive areas such as the South China Sea. In other words, China would adopt a largely adversarial posture toward Japan regarding regional security issues, designed to reduce Japanese power and influence in specific areas and to undermine Japan's relationship with the United States, if possible.

Despite such a confrontational posture, and given its larger regional and global interests, under this trajectory, Beijing would also continue to seek cooperation with both Washington and Tokyo in addressing an array of common, multilateral regional and global concerns, such as international financial and economic stability, climate change, the proliferation of weapons of mass destruction, and other nontraditional security threats (such as pandemics), primarily relying on its growing global economic and political influence and its enhanced regional military presence. In doing so, the Chinese leadership would signal a sharp contrast between its stance on security issues relating to its maritime periphery and its attitude toward other international issues and concerns.

DETERMINANTS AND UNCERTAINTIES

Such a partial, yet major, break with China's current policies and approach could result from one or more possible "wild card" incidents or developments in the Western Pacific, such as a severe Sino-Japanese or Sino-U.S. dispute over territory or resource claims in the South or East China seas (above and beyond anything witnessed in the recent past), or a crisis over Taiwan or North Korea involving Japan.²⁶⁴ Such incidents could intensely sharpen mutual suspicion, greatly enflame Chinese public and elite opinion toward Japan and the United States, and thereby increase support for a more muscular policy toward both Tokyo and the alliance on traditional security matters, without necessarily provoking Beijing to obstruct broader U.S. or Japanese efforts on nontraditional security threats.

Another development that could produce such a policy shift would be the emergence of a hardline, anti-Japan leadership in China with strong public support, identified with a more assertive overall foreign policy toward East Asia and/or sensitive issues such as Taiwan and various territorial disputes. Such a leadership would arguably increase the likelihood of the above wild card incidents through the pursuit of more confrontational policies; conversely, the occurrence of one or more such incidents, through miscalculation and overreaction, and resulting in high and sustained levels of intense public and elite pressure on the PRC regime, could also conceivably precipitate such a leadership change.

In addition, the political and social consequences of sustained, high levels of economic and technological development could also contribute to the emergence of an ultranationalist Chinese leadership that advocates significantly increased defense spending and confrontational policies toward Japan and the alliance. Such developments would almost certainly generate, over time, greatly enhanced levels of public and elite confidence and pride in

China's growing relative economic and military capabilities, and more broadly, in its growing influence within international economic and financial circles.

Such consequences of strong economic success were of course also evident in the "Assertive Strength" trajectory. However, in this trajectory, the critical difference resides with the specific decisions made by or political shifts occurring within the Chinese leadership as a result of such success. Whereas in the Assertive Strength trajectory, China's leaders would manage to resist ultranationalist domestic pressures and control social instability associated with sustained, rapid growth, in this trajectory, such pressures and instability, possibly combined with one or more of the above-noted wild card incidents—and perhaps greater tensions in the overall Sino-U.S. relationship—would result in a shift toward hardline leaders and/or policy views.

In particular, under this trajectory, China's continued economic success and the growth of a strong middle class might generate labor unrest and demands for greater political and social freedoms that are met with increased repression and a serious level of leadership insecurity. This dynamic would likely give proponents of a hardline approach more internal political leverage in leadership policy debates over how far a strong China should go toward (1) challenging America's and Japan's strategic positions, especially in the Western Pacific; and (2) playing a more assertive leadership role in both regional and global multilateral institutions.

In addition, regardless of the overall level of aggression displayed in PRC foreign and defense policy, the desire of at least some members of the Chinese leadership to take a more assertive stance toward Japan would increase not only if Beijing's international economic position strengthens but also if it enjoys growing leverage over key Japanese industrial sectors. Such leverage would arguably strengthen the confidence of China's leaders in applying economic, diplomatic, and military pressure on Japan. In other words, under this trajectory, an ultranationalist Chinese leadership would seek to use friction with Japan to support an overall policy of increased domestic controls and an assertive foreign policy in East Asia (especially in areas of relevance to Japan).

Finally, the emergence of a greatly more assertive China in the Western Pacific would likely require that both Tokyo and Washington continue to experience very significant political and economic problems and uncertainties during the coming fifteen to twenty years. The effect of such futures on a "high capacity" China, and the overall consequences for the security environment in Northeast Asia, are discussed in detail in chapter 5.

DEFENSE SPENDING AND MILITARY CAPABILITIES

A Chinese leadership that is more committed to an aggressive, adversarial set of policies toward Japan and the alliance would be more likely to direct or authorize a range of threatening developments. For example, initial decisions could be made to

- Increase defense spending significantly as a share of GDP and/or government expenditures;

- Build larger inventories of MRBMs and IRBMs;
- Place a more deliberate and enhanced emphasis on SLOC operations within and beyond the first island chain in PLA doctrine and planning;
- Produce or acquire more weapons platforms that could be used not only for coastal or littoral defense but also for power projection operations within and beyond the first island chain (such as more advanced long-range strike fighter aircraft, enhanced aerial refueling capabilities, greater numbers of nuclear-powered submarines, and more advanced forms of aircraft carriers—for example, CATOBAR-style);
- Engage in more frequent testing and exhibition of a range of threatening systems, such as ASBMs and ASAT technologies;
- Facilitate a more concerted effort to improve command and control, training, and joint interoperability within the PLA;
- Adopt military doctrines and operational concepts that would enable more regular training of PLA forces in tactics that would be relevant to a Japan-related contingency; and
- Conduct more regular shows of force via patrols and exercises in the East China Sea, near the Japanese islands, and transiting Japanese straits.

However, it is unlikely that such directives would result in major measurable differences in actual PLA capabilities within the time frame of this study. First of all, the emergence of a significantly more adversarial foreign policy orientation in Beijing is unlikely to occur within the coming five years, given the relative stability currently exhibited in the Chinese economic, social, and political system. Rather, if such a shift does happen, it will more likely occur in the middle range of this time frame (ten to fifteen years out). Then, even if such a shift occurred, it would take time for all the above-mentioned decisions to be implemented, even more for them to be realized in enhanced operational capabilities.

As a result, actual PLA capabilities in 2030 under this trajectory would be very similar to those described under Trajectory 2, though with the potential to increase significantly beyond that time frame.

3

JAPAN

STRATEGY AND DOCTRINE

Overall National Security Strategy

After the end of World War II and the San Francisco peace settlement of 1951, Japan pursued a national security strategy of relying upon the United States for national defense and of focusing on economic reconstruction and development. To institutionalize the U.S. security commitment, Japan agreed to the permanent stationing of U.S. forces on Japanese territory and pursued a minimalist rearmament policy that would somewhat placate American pressures for more defense burden sharing and would sustain a domestic defense industrial base. To cultivate political support in Japan for the security relationship with the United States and for the Japan Self-Defense Forces (JSDF) in the context of strong antimilitary sentiments in the Japanese public, the Japanese government, led by the Liberal Democratic Party (LDP), adopted a number of constraints on defense policy—including restrictions on arms exports, the three non-nuclear principles, a ceiling on defense expenditures of 1 percent of gross national product (GNP), and an exclusively defensive defense doctrine.¹ To promote its economic interests, Japan seized export market opportunities, absorbed and commercialized advanced technologies to enhance its international competitiveness, used diplomacy and aid programs to secure stable access to critical

natural resources, and pursued structural adjustment and trade policies to minimize the domestic social and political costs of economic development.

Once Japan achieved its status as the second-largest economy in the world and one of the most advanced in technological terms, the country began to recalibrate (rather than transform) its national security strategy in response to the changing international environment. After the United States' rapprochement with China, Tokyo moved quickly to normalize relations with Beijing and to explore ways to promote its economic interests in China. After the U.S. military disengagement from Vietnam, Japan devoted greater attention and energy to its Southeast Asia policy to enhance its commercial ties with that region. After the intensification of the Soviet-American competition during the late 1970s and early 1980s, Japan began to somewhat relax its domestic constraints on defense policy and move modestly toward a "roles and missions" approach for defense cooperation with the United States. After the end of the Cold War and the first Persian Gulf War and the discovery of North Korea's clandestine nuclear weapons program, Japan incrementally expanded its security policy horizons to participate in noncombat UN-mandated peace-keeping operations and to provide rear-area support for the U.S. military in contingencies that affect Japan's security interests. And after the September 11, 2001, terrorist attacks on America, Japan took the unprecedented step of refueling naval ships from the United States and other countries in the Indian Ocean and deploying ground forces to Iraq for postwar reconstruction. A key Japanese motivation in these recalibrations of national security strategy has been a desire to maintain the alliance with the United States at a time of international uncertainties and concerns about the resilience of American security commitments.²

This emphasis on relations with the United States, however, did not mean that Japan ignored other dimensions of foreign policy. For most Japanese, although the United States-Japan alliance was essential for Japan's national security strategy, it was by no means sufficient. As a consequence, Japan became an active proponent of various regional dialogues and processes (including Asia-Pacific Economic Cooperation, APEC, and the ASEAN Regional Forum), attempted to address the negative regional consequences of its militarist past, and worked bilaterally and multilaterally to cultivate stable and friendly relations with neighboring countries like South Korea, China, and members of the Association of Southeast Asian Nations (ASEAN).³ In short, Japan sought to develop an Asia-Pacific order that would prevent it from having to make a strategic choice between the United States and East Asia. To achieve this, Japan has pursued a multilayered and multidimensional strategy of security cooperation in the region.

Evolution of Defense Strategy and Doctrine

In 1976, with the release of the *National Defense Program Outline (NDPO)*, Japan officially announced its general defense doctrine for the first time in the post-World War II era. The 1976 *NDPO* articulated the concept of a "Basic Defense Force" that could repel a "limited and small-scale aggression without external assistance." The doctrine was de-

veloped at a time when defense planners believed that a full-scale military clash between “East and West” was highly unlikely given the existing military balance, mutual nuclear deterrence, and efforts to stabilize international relations through *détente*.⁴ Nevertheless, prudence demanded that Japan possess a balanced defense force that could respond to a surprise attack so as to deny a *fait accompli*. Japan’s having such a force would then prevent an aggressor from achieving a cheap and rapid victory; and if necessary, Japanese forces could at a minimum resist the aggression until U.S. forces came to the aid of Japan. If international conditions were to deteriorate, Japan, through its balanced Basic Defense Force and its indigenous defense-related industries, would be able to expand its defense capabilities to address a more threatening external environment. To ensure that the JSDF would be consistent with the Japanese Constitution, which denies the right of belligerency, the *NDPO* affirmed that Japan would only possess and use defense forces that would only be minimally necessary to repel aggression. Because the 1976 *NDPO* did not specify an explicit concrete threat or attack against Japan, the “Basic Defense Force” concept was not a threat-based doctrine.⁵

Within a few years after the *NDPO*’s adoption, however, Japanese defense planners became more focused on the Soviet military threat, even while adhering to the Basic Defense Force concept. The Soviet invasion of Afghanistan in 1979 brought Soviet-American *détente* to an end. In the same year, the Soviet Union deployed military forces on the “Northern Territories”—islands off the coast of Hokkaido seized by the Soviet Union at the end of World War II but claimed by Japan as its territory. This action, in addition to the Soviet buildup of its naval and air power in the Northwest Pacific and Soviet access to military bases in Vietnam, provoked Japan to make some adjustments in its defense posture and policies. The JSDF put greater emphasis on the defense of Hokkaido and especially its adjacent straits, which Soviet forces might try to seize during a Soviet-American military confrontation. In 1980 Japan also announced the objective of defending sea lanes out to 1,000 nautical miles.⁶

The 1990–1991 Persian Gulf crisis and war revealed fundamental limitations with the 1976 defense doctrine in light of a world expecting more from an economically powerful Japan. Insofar as the JSDF were restricted to a strictly defensive defense doctrine and the use of force to what is “minimally necessary” to counter aggression against Japanese territory, the Japanese government found it extremely difficult in both political and constitutional terms to dispatch the JSDF to participate in the United States–led multinational coalition against Iraq.⁷ In the aftermath of this crisis, Japan began to relax some of the existing constraints on the JSDF to permit their overseas dispatch for various peacekeeping missions. Japan, however, imposed severe restrictions on the weapons the JSDF could possess and their use on these overseas deployments. Moreover, abiding by the government’s long-standing constitutional interpretation prohibiting the exercise of the right of collective self-defense, the Cabinet Legal Affairs Bureau ruled that Japan could not offer rear-area support to another country that would be *directly* integrated with the use of force (*buryoku kōshi no ittaika*), except in response to an attack against Japan.

In the wake of the North Korean nuclear crisis of 1993–1994, however, Japan took incremental steps to revise its defense policies while formally adhering to the “Basic Defense Force” concept. In 1995, Japan adopted new *National Defense Program Guidelines (NDPG)* to replace the 1976 *NDPO*.⁸ While retaining the “Basic Defense Force” concept, the 1995 *NDPG* recommended that the JSDF needed to become more rationalized, streamlined, and efficient since the security environment still contained “uncertain elements” and was therefore not fully stable. Japan passed in 1999 legislation to implement the new U.S.-Japan Defense Cooperation Guidelines so that Japan could provide rear-area support in “situations in areas surrounding Japan” that have clear implications for Japanese security.

In 2004, Japan adopted a new *NDPG* and moved toward a more explicit threat-based defense doctrine. This new “*NDPG for FY [Fiscal Year] 2005 and Beyond*” explicitly referred not only to North Korean military activities as a major destabilizing factor, but also to China’s military modernization and its expanding “area of operation at sea” as requiring close attention. The document identified the following “new threats and diverse situations” that the JSDF should address (1) ballistic missile attacks; (2) guerilla and special operations forces attacks; (3) invasion of Japan’s offshore islands; (4) patrol and surveillance in the sea and airspace surrounding Japan, and violation of Japan’s airspace and the intrusion of armed special-purpose ships and other similar vessels; and (5) large-scale and/or special-type (nuclear, biological, chemical, and radiological) disasters. Although the “Basic Defense Force” concept was again preserved, the new guidelines stipulated that the JSDF should become “multifunctional,” “flexible,” and “effective.”⁹

In December 2010, the Japanese government finally adopted a new defense doctrine that explicitly replaced the one that had existed since 1976. The 1976 Basic Defense Force concept involved “static” deterrence that focused on “the quantities and size of weapons and troops” that would be deployed evenly across the Japanese archipelago. The new *National Defense Program Guidelines [NDPG] for FY 2011 and Beyond* (adopted by the Japanese Cabinet in December 2010), however, enunciated the concept of “Dynamic Defense Force,” which entails developing JSDF “that [possess] readiness, mobility, flexibility, sustainability, and versatility”—all of which will be “reinforced by advanced technology based on the trends of levels of military technology and intelligence capabilities.” Under this new concept, Japan intends to stress “comprehensive operational performance such as readiness for an immediate and seamless response to contingencies” that are likely to involve short warning times because of “exponential advances in military capabilities.” Rather than emphasizing the maintenance of “a certain level of defense force” in a static sense, Japan would demonstrate “national will and strong defense capabilities through such timely and tailored military operations as regular intelligence, surveillance, and reconnaissance activities (ISR).”¹⁰ Although the “Dynamic Defense Force” concept represented a substantial doctrinal innovation, it built upon earlier Japanese defense initiatives. For example, after the 2004 *NDPG*, Japan established the Central Readiness Force to respond rapidly to various domestic contingencies as well as to support international peace cooperation and disaster relief operations.¹¹

A critical feature of the “Dynamic Defense Force” concept is a deepening of the alliance with the United States. The new *NDPG* mandates greater cooperation with the United States in the following fields: intelligence cooperation, bilateral contingency planning, operational cooperation for “situations in areas surrounding Japan,” ballistic missile defense (BMD), equipment and technology cooperation, information security, and extended deterrence. This agenda will keep Japan’s Ministry of Defense and the JSDF busy in terms of operational and legislative initiatives. Nevertheless, the “*NDPG* for 2011 and Beyond” also reaffirmed a basic continuity in defense policy by explicitly stating that Japan will adhere to “an exclusively defense-oriented policy,” will not become “a military power that poses a threat to other countries,” will maintain the three non-nuclear principles, and will build “a modest defense force.”

Constitutional Constraints

Although U.S. officials drafted Japan’s postwar Constitution during the occupation era, the Japanese people generally embraced this document, and Article 9 of the Constitution became a symbol of the country’s postwar identity and pacifist norms.¹² The Japanese government, however, flexibly interpreted Article 9 to enable Japan to have a national defense policy and adapt that policy to changes in the international environment as well as to constrain rearmament and the use of force.¹³ During the 1950s, officials affirmed during parliamentary deliberations that Japan as a sovereign country had the right to defend itself and could therefore develop and maintain a self-defense force. At the same time, however, the government stipulated that the country’s defense capabilities would be at the “minimum necessary level” (*hitsuuyō saishō gendo*) for self-defense; and because of this restriction, the JSDF differed from the militaries of so-called normal countries.¹⁴ Japan would therefore pursue an “exclusively defense-oriented policy” (*senshu bō’ei*) and refrain from possessing “more military force than is necessary for self-defense and that could pose a threat to other countries.”¹⁵ The government articulated three necessary conditions for using armed force for self-defense: “(1) when there is an imminent and illegitimate act of aggression against Japan; (2) when there is no appropriate means to deal with such aggression other than by resorting to the right of self-defense; and (3) when the use of armed force is confined to the minimum necessary level.”¹⁶

Under this constitutional interpretation, “offensive weapons designed to be used only for the mass destruction of another country” are prohibited; and as a result, the JSDF are not permitted to possess “intercontinental ballistic missiles (ICBM), long-range strategic bombers, or attack aircraft carriers.”¹⁷ Interestingly, however, the Japanese government has repeatedly argued that the Constitution does not necessarily proscribe nuclear weapons if such weapons could be justified as “minimally necessary.”¹⁸ Nor has the government explicitly restricted the use of armed force to the “geographic boundaries of Japanese territory, territorial waters, and air space.”¹⁹ In other words, under certain circumstances, Japan may use force against another country as an act of self-defense, but the government acknowledged

the difficulty of defining such circumstances in advance. During the Koizumi administration in 2003, the cabinet secretariat reportedly floated the idea of purchasing Tomahawk cruise missiles from the United States to prevent a missile attack (presumably from North Korea) by acquiring the means to destroy a missile base preemptively. In the end, Japan opted for a missile defense system, which was more consistent with Japan's exclusively defense-oriented policy. But Shigeru Ishiba, who served as defense minister at the time, supported considering the option of having the "minimum necessary ability to attack an enemy base," even while opposing the acquisition of the Tomahawk cruise missile.²⁰ As early as the mid-1950s, Japanese officials had indeed declared that attacking enemy bases could be justified in terms of the right of self-defense.²¹

Another constitutional gray area involves the deployment of the JSDF overseas. In 1954, based on the Constitution and the people's "peace-loving spirit," the House of Councilors resolved that the JSDF should not be dispatched overseas, and the government confirmed its respect of the resolution. But in 1961, Prime Minister Hayato Ikeda noted that under the Constitution, it might be permissible for the JSDF to participate in a United Nations "police force" whose purpose is the maintenance of global safety, while recognizing that the Self-Defense Law at the time did not permit such participation.²² In response to international developments, the government relaxed the restrictions on overseas dispatch by stretching the concepts of self-defense and "minimum necessary level." During the early 1980s, Japanese officials framed sea-lane defense in terms of individual self-defense.²³ In the wake of the 1990–1991 Persian Gulf crisis and war, Japan moved to contribute more to international security by participating in UN peacekeeping operations. The government insisted that such participation would be constitutional because the JSDF would not be going overseas as armed units with the aim of using force.²⁴ After 9/11, Japan sent Japan Maritime Self-Defense Force (JMSDF) ships to the Indian Ocean to refuel ships and participate in a maritime interdiction mission and deployed the Japan Ground Self-Defense Force (JGSDF) to Iraq to assist in postwar reconstruction. Opponents charged that these deployments violated the Constitution, but the government argued that because these operations were not directly integrated with the use of force, they were constitutionally permissible.

The right of "collective self-defense" has been an additional issue of constitutional controversy. In 1954, while recognizing Japan's right of collective self-defense under international law, the government declared that Japan may not exercise this right. In subsequent years, it elaborated on this prohibition by noting that collective self-defense exceeded "the minimum necessary level of self-defense."²⁵ According to the government's definition, collective self-defense entails "the right to use force to stop a direct attack on a foreign country with which the state has close relations, even if the state itself is not under attack."²⁶ This prohibition of collective self-defense, however, has not precluded Japan from providing rear-area support to the United States as long as such support is not directly integrated with the use of force.²⁷

Critics of this constitutional interpretation point out that proscribing collective self-defense impedes United States–Japan cooperation during certain military contingencies and

unreasonably restricts Japan's role in UN peacekeeping and peace enforcement operations. To address this problem, Prime Minister Shinzō Abe appointed in 2007 a blue ribbon committee chaired by Shunji Yanai (former Japanese ambassador to the United States) to study how to “reconstruct” the legal basis for national security. This panel examined four scenarios: (1) an attack on U.S. naval ships that are engaged in joint operations with JMSDF vessels in international waters, (2) interception of a ballistic missile targeted at the United States, (3) defense of personnel from other countries participating in international peace operations along with Japan, and (4) logistical support for international peace operations that might become an integral part of the use of force by other countries. For the first two scenarios, the Yanai advisory panel report (released in June 2008) stated that Japan would have to exercise the right of collective self-defense. For the latter two scenarios, the committee believed that Japan could engage in such activities without violating the current interpretation of the Constitution, but also noted that a constitutional interpretation that did not “prohibit Japan from exercising the right of collective self-defense or from participating in collective security” would be preferable in addressing the fourth scenario.²⁸

Although the Yanai panel showed how the current interpretation of the Constitution would pose acute problems in highly plausible security scenarios, its recommendations failed to generate broad support. Even political leaders from the LDP criticized Abe for trying to change the Constitution through the backdoor without open debate.²⁹ The defeat of the LDP in the summer 2007 House of Councilors election and the subsequent resignation of Prime Minister Abe demonstrated that the Japanese electorate cared more about social welfare policy and fiscal issues than constitutional revision. Abe's successor, Prime Minister Yasuo Fukuda, responded tepidly to the Yanai panel report recommendations, and the movement to revise or reinterpret the Constitution waned. Despite the demise of the Social Democratic Party as the leading advocate of postwar pacifism, antimilitarist norms in the Japanese public remain strong.³⁰ According to an April 2012 *Asahi Shimbun* poll, 51 percent of the respondents believe that amending the Constitution is necessary, while only 29 percent believe that it is unnecessary. But of those who favor constitutional revision, only 17 percent felt that there was a problem with Article 9. For 69 percent of the “revisionists,” the critical issue was the incorporation of new rights and institutions.³¹ Moreover, many proponents of constitutional revision support changing the Constitution to make it more consistent with existing policies rather than to promote a more robust military.

In general, compared with the LDP, the Democratic Party of Japan (DPJ) has been less favorable to constitutional revision and reinterpretation in order to relax the existing constraints on the JSDF. Although Yukio Hatoyama had previously advocated revising the postwar Constitution according to liberal principles, he refrained from taking up this agenda after becoming the DPJ's first prime minister in September 2009. His successor, Naoto Kan, tended to be just as dovish on security issues and did not engage the issue of collective self-defense. Nevertheless, a number of hawkish DPJ members of the National Diet favor collective defense, and Prime Minister Yoshihiko Noda in July 2012 revealed that he was considering a review of the current interpretation of the Constitution, which

prohibits exercising the right of collective self-defense. But forging a consensus within the DPJ in favor of exercising the right of collective self-defense has been difficult and could further weaken party cohesion. Consequently, during the December 2012 election campaign, the DPJ shied away from addressing the constitutional revision issue and supported maintaining the “exclusively defense-oriented” policy.³²

By contrast, the LDP took up once again the revisionist cause by finalizing its proposal for constitutional revision in April 2012.³³ While retaining the “renunciation of war” principle in the first clause of Article 9, the LDP revision draft changes the second clause so that the “renunciation of war” does not hinder the right of self-defense and adds several sub-clauses that establish a “National Defense Military” [*Kokubō Gun*] with the prime minister as its supreme commander.³⁴ Although the LDP proposal did not explicitly include a clause regarding “the right of collective self-defense,” the party pamphlet on constitutional revision noted that according to the UN Charter, the right of self-defense subsumes collective as well as individual self-defense so there is no need to insert this point in the revision proposal.

The fall 2012 crisis in Japan–China relations triggered by the Japanese national government’s decision to purchase three of the five main Senkaku/Diaoyu Islands has made the Japanese political climate more favorable for constitutional revision or at least reinterpretation. A *Mainichi Shimbun* opinion survey conducted in September 2012 showed a significant upswing in public support for revising Article 9 of the Constitution; 58 percent favored revision, compared with 48 percent in 2009.³⁵ The landslide LDP victory in the House of Representatives election of December 2012 dramatically increased the number of Diet members in favor of collective self-defense. Compared to 33 percent after the August 2009 election, 79 percent elected or re-elected to the lower house in December 2012 support collective self-defense.³⁶ The political path to constitutional reinterpretation and revision, however, is not completely clear. The LDP’s coalition partner, Kōmeitō, remains resistant to changing the Constitution or its interpretation regarding defense, and the pro-revision forces still lack the necessary two-thirds majority in the House of Councillors. But a constitutional shift may not be required to address a direct Chinese threat to the Senkaku/Diaoyu Islands because Japan could simply respond as an exercise of its right of individual self-defense in the strict sense. Nevertheless, the prohibition on exercising the right of collective self-defense reinforces an organizational culture in Japan’s defense establishment that emphasizes autonomy to the detriment of defense integration and coordination with the United States, even in operations for the defense of Japan.

The legal foundations for possible rules of JSDF engagement vis-à-vis Chinese military forces in the East China Sea (short of a blatant attack by China) remain murky. Currently, the mission of protecting Japan’s southwest islands from intrusions by Chinese vessels has fallen primarily to the Japan Coast Guard, which looms increasingly large as it confronts its numerous Chinese maritime security agency counterparts.³⁷ Constitutional constraints are likely to circumscribe active JSDF participation in a Taiwan military contingency that does not involve a direct attack on Japanese territory by China. The Constitution as it is

currently interpreted also constrains Japan's acquisition of defense capabilities that could be used in counteroffensive operations against China. Therefore, Japan's operational role in the context of the United States–Japan alliance during a China-related contingency is likely to be limited to defense of the home islands and rear-area support. That said, in these areas, Tokyo is strengthening its defense capabilities as effectively as possible within existing legal, political, and financial boundaries.

Perceptions of China

The Japanese foreign policy community recognizes that China prefers a stable and peaceful regional security environment so that it can concentrate on domestic economic development and that China faces formidable domestic challenges regarding socioeconomic inequalities, the unevenness of development, and the acute social and environmental negative consequences of rapid industrialization. At the same time, however, Japanese policymakers view as inevitable the expansion and modernization of Chinese military capabilities and activities as China's national power grows. They are concerned that with this strengthening of military and economic power, segments of the Chinese political system that advocate an aggressively nationalistic diplomatic and military policy could become more influential relative to more moderate voices in China. Japanese analysts in fact believe that "China is not fully satisfied with the current international order." They see China's conception of national interest as expanding both geographically and substantively.³⁸

In Japan's view, China has the following objectives for its military buildup:

- Intercept naval operations in waters as far as possible from the country in order to defend Chinese territory and territorial waters.
- Develop military capabilities to deter and prevent Taiwan's independence.
- Acquire, maintain, and protect maritime rights and interests.
- Defend the sea lines of communication (SLOCs) for China.³⁹

China has intensified its naval activity in the region in pursuit of the security goals outlined above. In particular, Japanese defense officials stress the increased tempo of Chinese air and naval activity in the East China Sea and areas surrounding the Japanese archipelago. They also emphasize that the Chinese navy has adopted an "offshore defensive strategy" that entails the "normalization of blue-water exercises," which in turn means more frequent transit of straits adjacent to Japanese islands and the exclusive economic zone (EEZ) claimed by Japan.

The Japanese do acknowledge that Chinese warships are legally free to pass through international waters, and they note that legal advisers often accompany Chinese fleets engaging in such exercises so that China usually adheres to international law. There have been some notable exceptions, however, such as a Chinese submarine's illegal transit through

Japanese territorial waters in 2004. Japanese analysts also point out that China interprets international law inconsistently. While criticizing U.S. surveillance activities in the EEZs claimed by China, the Chinese not only have increased patrols and surveys in the waters of Japan's EEZ but also operate in ways that go beyond the original prior notifications made to Japan under a bilateral agreement. Especially worrisome to Japan is the Chinese military's increasingly provocative behavior toward JMSDF vessels that track Chinese activity, a behavior perhaps emerging from an increased sense of Chinese confidence in light of Japan's objectively long strategic decline.⁴⁰

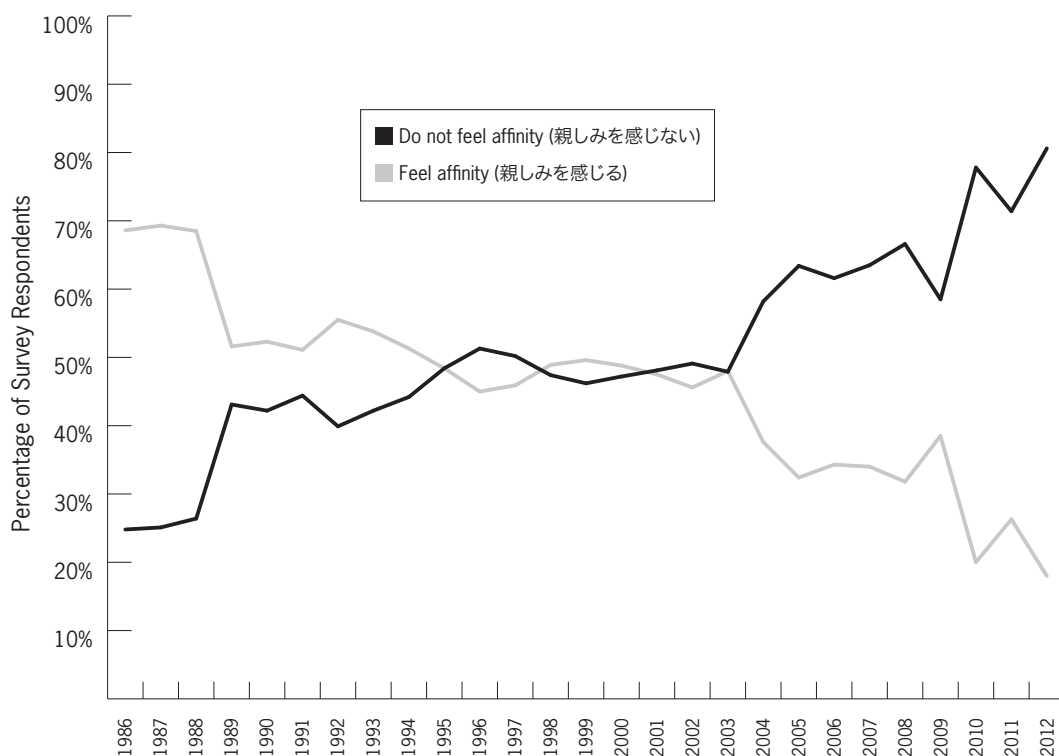
Japanese defense analysts also attribute this increasing Chinese assertiveness to China's growing economic and military capabilities as well as the influence and autonomy of the People's Liberation Army (PLA), and they are concerned that Chinese overconfidence in the region might encourage reckless behavior. Insofar as China's top leadership wants to continue to focus on national economic development and avoid domestic turmoil, most Japanese observers believe that China will avoid openly challenging the United States and its alliance system in the Asia-Pacific region. Nevertheless, as noted in chapter 2, China seeks to prevent the formation of a tight, multilateralized United States-led alliance system to contain or constrain China from pursuing its interests. To do so, Beijing is expected to rely upon a combination of positive bilateral and multilateral diplomatic overtures to Tokyo and other Asian capitals and the attraction of the Chinese market.

Japanese defense planners distinguish between possible high-end conflict with China (such as conflict over Taiwan or an invasion or direct military threat to Japan's main islands) and "gray-zone" competition with China that entails military competition with China short of war and the ratcheting up of Chinese military presence and activity near Japan (especially in the East China Sea). While U.S. defense planners may put greater emphasis on possible high-end military conflict with China, Japanese counterparts place priority on gray-area competition that is unlikely to escalate into full-scale war. Japan's new *NDPG*, adopted in December 2010, explicitly state that "a full-scale invasion against Japan that will threaten its existence, such as a large-scale landing invasion, is unlikely to occur," but it emphasizes that Japan faces "diverse, complex and intertwined" security challenges and destabilizing factors.⁴¹

According to Japanese analysts, Chinese assertiveness in the East China Sea aims to enhance diplomatic and military leverage over Japan and buttress China's sovereignty claims and maritime rights. This assertiveness has come not only from the PLA. China has strengthened the capabilities of maritime law enforcement agencies like Chinese Marine Surveillance and the China Fisheries Law Enforcement Command and has increased their patrol activities.⁴² In 2012 and again in early 2013, for example, Chinese Marine Surveillance vessels repeatedly entered the territorial waters surrounding the Senkaku/Diaoyu Islands claimed and controlled by Japan. Japanese defense analysts are especially concerned about Chinese "low-intensity revisionist actions" in the East China Sea, which include exercising jurisdiction inside Japan's claimed EEZ and territorial waters, developing resources on the continental shelf or waters that China unilaterally claims contrary to Japanese claims, or even occupying the Senkaku/Diaoyu Islands.⁴³

Since the 1989 Tiananmen Square incident, Japanese public perceptions of China have become increasingly negative. This negative trend accelerated during the problematic Koizumi era (2001–2006) in Japan–China relations, caused in large part by harsh Chinese reaction to Koizumi’s repeated visits to the Yasukuni Shrine, which enshrines Class-A war criminals from World War II as well as Japanese soldiers who died in war. After the improvement in Japan–China relations during the Abe and Fukuda administrations, the negative slide in public perceptions of China was checked, and there were some indications that public views of China were improving—especially with growing commercial ties with China and the influx of Chinese tourists to Japan. Since the Chinese fishing trawler incident near the Senkaku/Diaoyu Islands in September 2010 and the renewed tensions over the islands in late 2012, however, Japanese public views about China have again deteriorated sharply (figures 3.1 and 3.2).

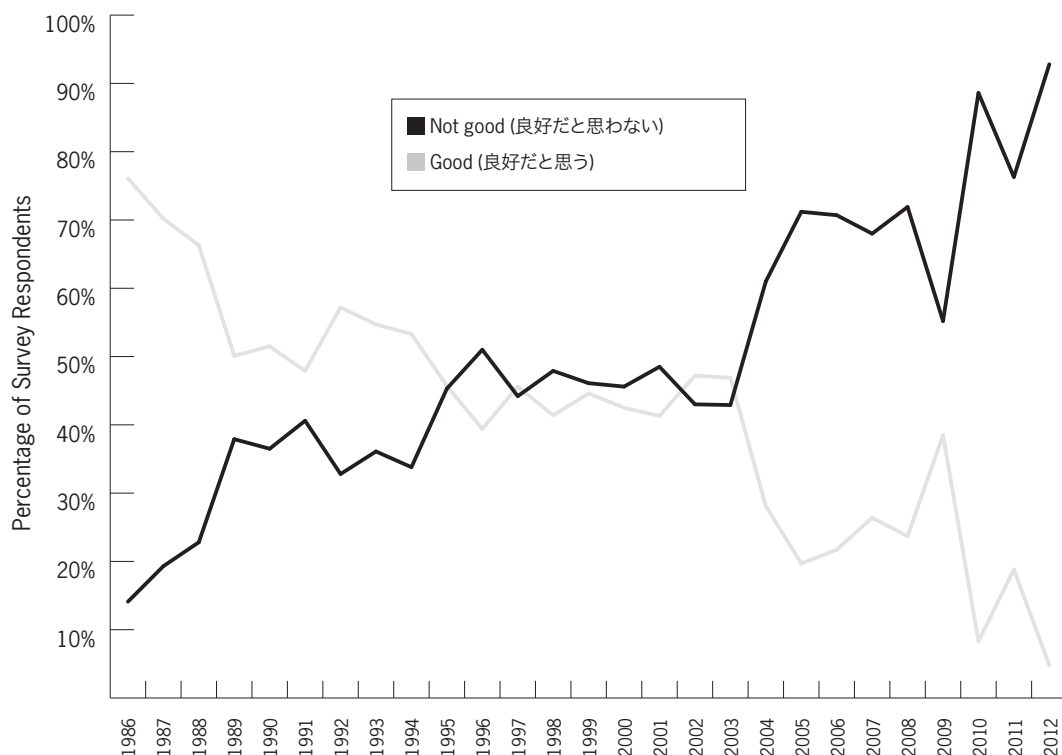
FIGURE 3.1
Japanese Public’s Sense of Affinity With China (中国に対する親近感), 1986–2012



Source: This data comes from 外交に関する世論調査 (Public Opinion Survey on Diplomacy), 内閣府大臣官房政府広報室 (Public Relations Office, Cabinet Office, Government of Japan), November 26, 2012, www8.cao.go.jp/survey/h24/h24-gaiko/zh/z10.html.

FIGURE 3.2

Japanese Public's Views of Japan–China Relations (現在の日本と中国との関係), 1986–2012



Source: This data comes from 外交に関する世論調査 (Public Opinion Survey on Diplomacy), 内閣府大臣官房政府広報室 (Public Relations Office, Cabinet Office, Government of Japan), November 26, 2012, www8.cao.go.jp/survey/h24/h24-gaiko/zh/z12.html.

This trend in public opinion might suggest that the Japanese public is becoming more supportive of a tougher defense policy toward China and of a stronger military alliance with the United States to deter a rising China. But such a conclusion may be premature. For example, a public opinion poll conducted by NHK only two months (November 26–28, 2010) after the Senkaku/Diaoyu Islands collision incident suggests that the Japanese public may not be that supportive of tightening the United States–Japan alliance to counter China. In response to a question about how Japan should respond to Chinese behavior, only 12 percent of those surveyed favored dealing with China by relying on the military deterrence capabilities of the United States. Instead, 57 percent supported collaborating with other Asian countries to deal with China and even 23 percent favored deepening the bilateral relationship with China.⁴⁴ In a poll taken by the *Asahi Shimbun* during the August–September 2012 period when Sino-Japanese tensions were escalating over the Senkaku/Diaoyu

Islands dispute, 90 percent of the Japanese respondents not surprisingly stated that bilateral relations were not going well, compared with 45 percent in 2002. When those polled were asked to name the biggest problem in Sino-Japanese relations, the issues mentioned in order of frequency were the territorial problem (38 percent), the problem over historical perceptions (30 percent), economic frictions (10 percent), food safety and the environment (10 percent), and finally increase in military power (7 percent). In other words, despite the conflict over the Senkaku/Diaoyu Islands, few Japanese view the rise of Chinese military power as the key problem in bilateral relations.⁴⁵

Views of the United States–Japan Alliance

Regarding Japan's alliance with the United States, a 2010 blue ribbon panel on Japanese security and defense capabilities noted "the decline of the overwhelming superiority of the United States" in the wake of the Afghanistan and Iraq wars, the 2008 American financial crisis after the bursting of the real estate financial bubble, and the rise of emerging powers such as China, India, and Russia. As a consequence, there has been "a global shift in the balance of power and a deterioration of international public goods." The panel drew the following conclusion: "U.S. presence as well as its policies in the Asia-Pacific region will continue to be a stabilizing factor in the region. But the superiority of U.S. power in the region is not unconditional. U.S. decisionmaking will increasingly be influenced by its relationships with states in the region and its own interests. In this regard, it is likely that the United States will increase its expectations of its allies and their contributions in the security field."⁴⁶

On the whole, most Japanese welcome the Obama administration's policy of "rebalancing" toward Asia and find it reassuring that the United States intends to maintain a robust military presence in the Asia-Pacific region. At the same time, however, Japanese observers recognize that the United States will inevitably have to make major cuts in its defense budget. Therefore, given the rise of Chinese military capabilities, Washington will seek to strengthen alliances and partnerships in the region and will expect allies to contribute more to common security interests. There will also be strong pressures on the United States to enhance military efficiency and effectiveness by adopting a new regional military strategy that is more consistent with economic and political realities.⁴⁷

Japanese defense policy analysts are therefore extremely interested in the current U.S. debate over several possible future operational military concepts for dealing with potential adversaries armed with "antiaccess/area denial" (A2/AD)-type capabilities, especially the Air-Sea Battle (ASB) concept—with respect to both the degree of support it has in the United States and the expectations this concept might have for Japanese defense policy.⁴⁸ Some believe that the integration of the JSDF into the ASB concept could generate positive synergies that would enhance Japan's ability to defend its offshore islands.⁴⁹ Others are concerned that the concept might be used to pull back U.S. forces from the region, or, conversely, to draw Japan into a conflict with China. As a result, Washington's apparent

failure to specify Japanese roles and missions under these new circumstances is increasingly problematic. Left to its own conclusions, Japan will be unable to judge U.S. intentions or plan for alliance actions.

At this point, Japanese defense planners place greater emphasis on intelligence, surveillance, and reconnaissance (ISR) activities to monitor Chinese maritime military activity rather than integrating Japan into a counteroffensive ASB plan to actively deny China's A2/AD objective in a time of war. (Whether or not these Japanese ISR capabilities and operations are developed and carried out independently or together with the United States will be a key determinant of alliance integrity.) Nevertheless, both Japan and the United States have been responding for some time—sometimes together, at least as often separately—to China's A2/AD capabilities. Although improvement of China-Taiwan relations may be reducing the prospect of war, Japanese defense analysts emphasize that the cross-strait military balance is shifting in favor of the People's Republic of China. Some are also concerned that a resolution of the Taiwan conflict in favor of China (that is, Taiwan acquiesces to China's notions of reconciliation and ultimately reunification) could yield a strategic situation unfavorable for Japan with respect to China.

Another Japanese concern is the strategic implications of the U.S. embrace (under the Obama administration) of the goal of nuclear disarmament in the context of China's nuclear weapons modernization. Even with the reduction of U.S. nuclear warheads as part of the U.S.-Russian strategic arms reduction process, the United States maintains and will likely maintain for the foreseeable future both numerical and technological superiority over China regarding nuclear weapons. Nevertheless, Japanese defense analysts find worrisome a probable long-term trend in which China narrows the strategic nuclear gap with the United States and significantly improves its medium-range missile capabilities that threaten both Japan and U.S. forces operating in the region. As China increases the survivability of its nuclear deterrent, strategic stability between China and the United States could be enhanced at high levels of escalation. Citing the so-called stability/instability paradox, however, Japanese analysts point out that instability could increase at lower rungs of the escalatory ladder.⁵⁰ For example, crisis stability at the strategic nuclear level might enable and even encourage China to be more assertive regarding territorial and maritime disputes with Japan. As a consequence, there will be growing pressure on Japan to cooperate with the United States to strengthen conventional "deterrence through denial" rather than simply rely on U.S. nuclear "deterrence through punishment."⁵¹

Strategy Toward China and the United States-Japan Alliance

Japan's strategy toward China has been shaped by two overarching calculations. First, Japanese see the expansion of Chinese military power and activities near Japan as, at the very least, cause for concern and possibly a challenge and threat to national security. But second, China is increasingly vital to Japanese economic interests in terms of trade, invest-

ment, and tourism. Anxiety about the political-military implications of China's rise and the economic attraction of China's growing market have the potential to pull Japan in opposite directions: either to balance against a possible Chinese political-military threat, or to embrace China as an economic partner. Nevertheless, there is general agreement that Japan should pursue a mixed and multilayered strategy of engagement and hedging.⁵² While embracing China as an economic partner and forging areas of international and regional cooperation where possible and desirable, Japanese policymakers support hedging against the rise of China as a political-military power by maintaining (and even strengthening) the defense alliance with the United States, by refocusing the country's defense posture to deal more with China, and by deepening relations with other nations in the Asia-Pacific region.

Divisions have emerged within Japan's foreign and security policy establishment regarding the pace and extent of change in the various dimensions of China policy, in particular how much cooperation should be emphasized relative to competition and how soft or hard the hedging component should be. The salient Japanese debate about strategy and policy toward China clusters around two schools of thought: those who support "cooperative engagement with a soft hedge" and those who advocate "competitive engagement with a hard hedge."⁵³ Proponents of both schools of thought can be found within Japan's national security policy establishment, but the competitive engagement viewpoint is in the ascendancy. Both views are also found within the Ministry of Defense and Ministry of Foreign Affairs, and therefore, policy divisions do not reflect cleavages along simple ministerial lines. Nevertheless, the economic agencies (Ministry of Economy, Trade, and Industry; and Ministry of Finance) tend to be more supportive of the "cooperative engagement" view.

The basic policy elements of each school of thought are delineated in the following lists:

Cooperative Engagement With a Soft Hedge

- Bring China into the international community as a constructive stakeholder by giving China a greater voice as its power rises.
- Promote a multilayered regional economic and security architecture that includes China.
- Promote regional free trade arrangements including a trilateral Japan–China–South Korea free trade arrangement.
- Promote a trilateral confidence-building mechanism between the United States, Japan, and China.
- Maintain and strengthen the United States–Japan alliance while being sensitive to Chinese security interests (especially regarding Taiwan).
- Enhance the capabilities of the Coast Guard to protect Japan's maritime jurisdiction.

- Modestly and incrementally modernize the Japanese Self-Defense Forces (JSDF) for UN-sanctioned peacekeeping and for the defense of Japanese territory, but keep defense spending to less than 1 percent of gross domestic product (GDP).

Competitive Engagement With a Hard Hedge

- Preserve and deepen the liberal international order while engaging China.
- Promote a multilayered regional economic and security architecture that constrains China—especially through security ties with other Asian states and a reinvigorated United States–led alliance system.
- Place priority on the Trans-Pacific Partnership over possible free trade arrangements that include China.
- Strengthen the United States–Japan alliance through greater joint planning and operations (with implications for a Taiwan contingency, the ASB concept, and Japanese capability and will to put at risk Chinese air and naval capabilities operating near Japan and the East China Sea during a military crisis) as well as enhance the capabilities of the Coast Guard to protect Japan's maritime jurisdiction.
- Revise or reinterpret the Constitution to exercise the right of collective self-defense; and modify the three non-nuclear principles to buttress U.S. extended deterrence.
- Increase defense budgets so that defense spending exceeds 1 percent of GDP and perhaps approximates 1.2 to 1.3 percent of GDP, and begin to acquire some weapons systems with offensive capabilities.

Japan's current policy trajectory toward China closely approximates "*cooperative engagement with a soft hedge*." This is in part because of Japanese calculations about their economic interests vis-à-vis China and assessments about the acuteness of China's military challenge to Japan's security interests. But the "cooperative engagement with a soft hedge" approach also tends to be sustained because of Japanese domestic factors such as fiscal constraints on defense budgets, constitutional and legal constraints on defense doctrine and operations, and the resilience of pacifist sentiments in the Japanese public. Therefore, over the next fifteen to twenty years, a Japanese strategic shift to "*competitive engagement with a hard hedge*" is likely to require two simultaneous external developments: (1) the emergence of a highly capable and blatantly hostile and aggressive Chinese military policy toward Japan and its alliance relationship with the United States; and (2) clear signaling of American expectations toward Japan for a more robust defense response to China's hostile military posture and behavior as the price of continued U.S. security commitment to Japan. Although the "containment" and "accommodation" schools (discussed below in the outlier futures, Trajectories 4 and 5) may not be influential within the national security policy establishment, these views

can affect the relative influence of the more centrist schools (“cooperative engagement” versus “competitive engagement”) in the concrete policy process.

Given the powerful domestic political and economic constraints that hold back bold strategic shifts, without a clear and alarming change in Chinese capabilities and behavior, changes in Japanese defense policy toward China over even the long term will tend to be reactive, limited, and incremental. In response to particular events or crises, however, Japan is likely to behave erratically; and this erratic tendency will be compounded by Japan’s basic strategic dilemma between countering China’s rise as a military power and embracing China as an economic opportunity. Moreover, despite an overall depolarization of the public debate about defense and China policy, ineffectual responses by the government to Chinese behavior could provoke strong nationalistic criticisms that could in turn worsen the government’s tendency to be erratic in the face of international stress. Recent examples of this erratic behavior include the handling of the Chinese fishing trawler incident near the Senkaku/Diaoyu Islands in September 2010 and Governor Shintarō Ishihara’s initiative in the spring and summer of 2012 to have the Tokyo metropolitan government purchase three of the Senkaku/Diaoyu Islands as a way to assert Japan’s territorial rights. In the latter case, the Japanese government was not strong enough to frontally oppose Ishihara’s initiative. Instead, the Noda Cabinet attempted to outflank Ishihara by having the national government purchase the islands, which then provoked a diplomatic crisis with China.

Theoretically, over the next fifteen to twenty years, Japan could opt for an independent strategy toward China in which the United States–Japan alliance would be hollowed out if not dismantled. For example, Japan could develop an independent nuclear weapons capability to deter China.⁵⁴ Or it could accommodate strategically with China by deferring to Chinese interests regarding Taiwan and maritime areas like the East China and South China seas. Given Japan’s current domestic political configuration as well as its security perceptions and interests, neither of these independent strategies is optimal for Japan and currently has little influence. These options would emerge as serious choices for Japan only if there were a dramatic U.S. strategic retreat from the Asia-Pacific region (see chapter 5). Whether Japan would acquire a nuclear arsenal or appease China would then depend on China’s behavior toward Japan. If China became overtly hostile, then proponents for nuclear weapons would gain traction in Japan. But if China pursued a nonhostile cooperative policy, then Japanese advocates of strategic accommodation with China would become more influential.

DEFENSE CAPABILITIES

Basic Characteristics of the Self-Defense Forces

For the time being, the JSDF can be described by four long-standing and mutually dependent sets of characteristics and by one more recent, independent set of characteristics

(see box below).⁵⁵ These characteristics are largely based on political and legal features of Japan's national security strategy. They each have rational and explicit technical and operational implications for Japan's national defense strategy, military posture, JSDF force levels, and operational capabilities in the seven military domains included in this study.

CHARACTERISTICS OF THE JSDF

The JSDF as a Constitutional Force: First, the JSDF are the military Japan wants, whatever the objective requirement might be. It is not a rhetorical flourish that Japan's Constitution renounces war as a sovereign right. The JSDF are organized and equipped based upon a strategy of defensive defense, enshrined in both national and alliance policies. As such, the JSDF will remain politically and operationally constrained, small, and relatively less capable than might be the case otherwise.

The JSDF as a Cadre Force: While national demographics and Japan's and the alliance's defense economies impose certain limitations, nevertheless the JSDF are essentially a cadre force, inherently built for expansion in terms of both capability and force structure. In this regard, Japanese policy has been twofold: to procure representative military capabilities and technologies—such as token aerial refueling and 767 airborne warning and control system (AWACS) aircraft—without building out the force to a logical, or even economical size; and to establish the legislative authority for operational and doctrinal expansion without necessarily exercising the right to do so. With regard to the latter, an unheralded accomplishment of the former Japan Defense Agency was the panoply of enabling legislation—some temporary and some permanent—written and enacted over the last fifteen years.

The JSDF as a Garrison Force: In accordance with the national preference for strictly territorial defense, until now the JSDF have been largely a garrison force. Obviously the JMSDF is somewhat of an exception to this, but even the JMSDF has had a large part of its force structure invested in its regional flotillas designed for relatively close defense of Japan's maritime approaches. Certainly the JGSDF has been almost exclusively a garrison force, and divisions and regiments have become closely identified with their fixed bases. Likewise, the role of the Japan Air Self-Defense Force (JASDF) is almost exclusively territorial air defense. A general exception to this rule has been the limited extent to which the JSDF have deployed on peacekeeping and humanitarian assistance or disaster relief operations, but that role has been constrained consciously by both policy and budget.

The JSDF as an Alliance Force: Because of the profound influence of the alliance with the United States, the role of the JSDF has been defined—not only figuratively but also literally—as a junior partner. In very practical terms of roles and missions, this has been both the cause and effect of severe doctrinal and experiential limitations upon the JSDF, as well as the implications for strategy, technology, and force structure. This has important limiting ramifications for JSDF capabilities, extending from its basic force structure design to how commanders are prepared to use the equipment they have.

The JSDF as a Transition Force: The foregoing four characteristics of the JSDF have been relatively constant for its entire history. Now, however, Japan is facing another round of domestic and alliance demands to “do more,” currently construed as a response to what are seen as worsening Chinese provocations. Present circumstances have put pressure on these traditional characteristics. Japan's political mood with regard to national security—always complex—appears to be changing based on concerns regarding China.

The following analysis first presents briefly the basic operational strengths and weaknesses of each of the five sets of characteristics, focusing on the general features of the fifth set of (transitional) characteristics.⁵⁶ It then describes the major present-day capabilities of Japan's military forces in each of the seven domains, both in absolute terms and in relation to U.S. and Chinese capabilities at present.

Although the political obstacles to constitutional revision remain formidable, Japan's basic defense capabilities appear to be improving as a practical matter if not necessarily at the level of strategy and doctrine, with the concomitant potential for relatively rapid changes in force posture, if not levels. The 2010 *NDPG* has set the stage for transitioning from a garrison force to one based upon operational mobility.⁵⁷ Alliance requirements are changing, with an emphasis on Japanese infrastructure and operational assistance for American forces, and an emerging JSDF operational role as a facilitator of U.S. forward presence is more than a remote possibility.

These fundamental interdependent JSDF characteristics are dependent upon a complex mix of domestic political and strategic military factors, against a variety of alternative futures. Whether they will change sufficiently to cast the JSDF in a new role as a transition force remains to be seen, but in the meantime relevant political, strategic, and military developments can be tracked, cataloged, and assessed on an ongoing basis.

Until the end of the Cold War—and with few notable exceptions—the JSDF were both willfully and inadvertently insular. They were willfully self-isolated by a culture that largely precluded any meaningful interservice cooperation, and inadvertently isolated by a general national reluctance to deploy forces not only internationally from Japan but even within Japan from garrison locations as the natural outcome of a Cold War–derived static defense doctrine. This syndrome repeated throughout each of the self-defense forces, with the JASDF maintaining air defense sectors, the JMSDF splitting its forces between district and blue water flotillas, and the JGSDF in garrison bases throughout Japan.

With the end of the Cold War, the JSDF began to deploy, at first by exception and then more-or-less routinely—but subject on each mission to considerable scrutiny by the national political leadership—on peacekeeping and eventually operational support missions.⁵⁸ Restrictions remained in place that precluded any hint of collective defense, in some cases making it virtually impossible for the JSDF in the field to defend even themselves, let alone another nation's forces or citizens.

At present, in a climate of renewed concern over North Korean provocations and Chinese and Russian operations, each of the forces that make up the JSDF has gained a surprising degree of experience in deployed operations, given the stultifying state of Japanese defense politics two decades ago.⁵⁹ Each force has strived to develop its capabilities through effective alliance cooperation with the United States to the maximum extent possible, and to garner experience with third parties as well. The general political trend is to encompass such cooperation—widely varied in intensity and complexity—as much as possible, but without removing the underlying constitutional and legal restrictions impeding more normal cooperation externally and more rational operations internally.

This is Japan's example (there are many others around the world) of national ideology impinging upon national security. Despite a growing multitude of security concerns involving North Korea, China, Russia, Iran, and other issues, Japan has so far declined to make the legal and doctrinal breakthroughs that would permit and facilitate a normal military. Nevertheless, with the problematic militarized rise of China, security alliance relations with the United States have arguably turned a corner in terms of political and programmatic defense cooperation, with each partner now recognizing the degree to which shared security concerns have apparently overtaken shared amorphous values.⁶⁰

Since the political debacle for Japan of the first Gulf War, Tokyo has been careful to define, permit, and establish precedents in key capability areas. This is a palpable attempt to walk a fine line domestically, where support for military operations and expenditures is tepid at best; with the United States, persistently demanding in alliance councils; and with Japan's regional neighbors, especially South Korea and China. These capabilities include, among others, the panoply of functions and equipment necessary for the above-mentioned peacekeeping and humanitarian assistance or disaster relief operations, for defense of Japan missions such as missile defense, for airborne early warning (and Japan's 767 AWACS), for aerial refueling tankers and refueling kits for JASDF tactical aircraft, and for Japan's constellation of surveillance satellites.⁶¹ Each case required significant (often protracted) political review and public debate, part of the vigorous civilian control over Japan's national security, and each simplified subsequent procurement decisions.

Political precedents are as important to Japanese security politics as are their physical analogues, and often they are part of a package deal. Administrative and legal changes set the basis and scope for the relationship between the self-defense forces and the nation, and they are taken with great care and seriousness in Japan's political process. These range from the *seemingly* simple establishing of the right of way of military convoys on public highways (and even the ability of a commander to pass his vehicles through traffic signals), to authorizing major JSDF peacekeeping deployments under scrupulously controlled rules of engagement designed to preserve Japan's fundamental premise of noninvolvement in any conflict other than in the strict defense of Japanese territory.

It is key to Japan's defense transformation that these precedents are relatively coherent with regard to future capabilities but do not necessarily lead directly to full implementation. They have established new parameters for what is possible, in response to fundamentally changed alliance and external circumstances. They do not, however, authorize systemic expenditures for full procurement programs. For instance, Japan purchased only four 767 AWACS aircraft, not nearly a large enough fleet for a national airborne early warning capability.⁶² Nevertheless, the JASDF has the capability in its force structure, and has been able to develop doctrines, operating procedures, training and logistics, and—most important—the precedent-setting authority to field an airborne early warning capability. Taken together, operational capabilities and political precedents amount to a Japanese “force-in-being” strategy, with the implicit implication that Tokyo can develop and deploy credible forces should it decide to do so. (table 3.1 for an overview of JSDF force structure from the 2010 *NDPG*.)

TABLE 3.1
Japanese Self-Defense Force Structure, 2010

GROUND SELF-DEFENSE FORCE	Personnel		154,000
	Regular personnel		147,000
	Ready reserve personnel		7,000
	Major units	Regionally deployed units	8 divisions 6 brigades
Mobile operation units		Central Readiness Force 1 armored division	
Surface-to-air guided missile units		7 antiaircraft artillery groups/regiments	
Major equipment	Tanks Howitzers & rockets	Approximately 400 Approximately 400	
MARITIME SELF-DEFENSE FORCE	Major units	Destroyer units	4 flotillas (8 divisions) + 4 divisions
		Submarine units Minesweeper unit Patrol aircraft units	6 divisions 1 flotilla 9 squadrons
Major equipment	Destroyers Submarines Combat aircraft	48 22 Approximately 150	
AIR SELF-DEFENSE FORCE	Major units	Air warning & control units	4 warning groups 24 warning squadrons 1 AEW group (2 squadrons) 12 squadrons
		Fighter aircraft units Air reconnaissance unit Air transport units Aerial refueling/transport unit Surface-to-air guided missile units	1 squadron 3 squadrons 1 squadron 6 groups
Major equipment	Combat aircraft Fighters	Approximately 340 Approximately 260	
ASSETS CAPABLE OF BALLISTIC MISSILE DEFENSE (BMD)*		Aegis-equipped destroyers	6
		Air warning and control units Surface-to-air guided missile units	11 warning groups/squadrons 6 groups

* The numbers of units and equipment in this row are already included in the Maritime and Air Self-Defense Forces' major units sections above.

† Additional acquisition of BMD-capable, Aegis-equipped destroyers, if to be provided separately, will be allowed within the number of destroyers set above after consideration of development of BMD-related technologies and fiscal conditions in the future, among other factors.

Source: Japan's National Defense Program Guidelines for FY 2011 and Beyond, approved by the Security Council and the Cabinet on December 17, 2010, 20, www.mod.go.jp/e/d_act/d_policy/national.html.

The Maritime Domain

THE JAPAN MARITIME SELF-DEFENSE FORCE

The JMSDF has engaged in a force modernization and expansion program for the last twenty-five years.⁶³ While force levels are lower, force structure and capabilities currently and soon to be part of the Self-Defense Fleet reflect a remarkably consistent acquisition program of a force determined to modernize.

The interservice spirit of cooperation and good feeling between the JMSDF and the U.S. Navy over the last sixty-five years runs deep. The two sea services are known for their exceptionally good working relationship, due largely to two factors: the way in which the U.S. Navy midwived the birth of the successor to the Imperial Japanese Navy, and their extensive operational coordination against the Soviet Navy during the Cold War.

Therefore, it is all the more remarkable that the two major gaps in JMSDF capabilities—nuclear-powered submarines and heavy aircraft carriers—are due to the U.S. Navy's reluctance to endorse those JMSDF developments.⁶⁴ Nevertheless, JMSDF ships are first rate, in many cases built around American sensors and weapon systems. Until now, the Fleet Escort Force had been divided into blue water and regional flotillas, with the latter somewhat less capable, and operationally less relevant to regional security. That organizational dichotomy is now being redressed, and the outcome should increase JMSDF combat power.

In the meantime, the progression of increasingly heavy and sophisticated JMSDF air-capable ships is notable, U.S. Navy concerns apparently having been allayed.⁶⁵ Each successive carrier class has been heavier and more capable than its predecessor, although no capacity for handling fixed wing aircraft or intentions to do so have been mentioned publicly. In this regard, so far the F-X fighter replacement program is designed to fulfill JASDF requirements, but the F-35—especially its vertical/short take-off and landing (VSTOL) B model—probably could embark in the next JMSDF light carrier if the decision was made to go ahead. Given fading U.S. Navy objections, and increasingly problematic PLA Navy (PLAN) operations in the vicinity of Japanese territory and within Japan's EEZ, the JMSDF might be operating fighters at sea in the foreseeable future.⁶⁶

Along with aircraft carriers, submarines—albeit not nuclear boats—are the JMSDF centerpiece of the new *NDPG*, with an increase in force levels of 6, for a total of 22 in the inventory.⁶⁷ In acquisition terms, this is not even a stretch goal, as Japan's shipbuilding industry routinely produces one new boat a year, and the older units are retired early, on a one-for-one swap. Simply delaying the decommissioning of submarines will facilitate the planned expansion in just a few years. Notably, however, the funds for these additional boats will come at the expense of JGSDF armor and artillery.

With few exceptions, JMSDF force structure and operational strengths and weaknesses parallel those of the U.S. Navy. For instance, with BMD a surging requirement, both navies are confounded by the inability to reload missile magazines at sea.⁶⁸ One important excep-

tion may be that the JMSDF appears to have retained more of its excellent antisubmarine warfare (ASW) capability, which is both a combined fleet enhancement and a strategic confidence builder.

The JMSDF stands out because the Self-Defense Fleet has been integrated into real-world operations to a far greater degree than the JGSDF or JASDF. For instance, as a fulcrum of planning and operational competence, the JMSDF's long-standing coalition replenishment operations in the Indian Ocean have compensated for the fall off of anti-submarine operations that were the focus of alliance naval operations during the Cold War. The new Japanese maritime air patrol facility just established in Djibouti is another example of sustained operational commitment.

This is significant for any assessment of Japanese security because the JMSDF offers the clearest example of the government of Japan's force-in-being strategy: significantly capable, operationally experienced, but carefully restrained by consistent civilian judgments prescribing a posture of clearly defensive defense. The obvious corollary is the alternative JMSDF potential for strategic and operational normalization.

Second, the transparency of JMSDF planning is notable. In national level strategic documents such as the annual "Defense of Japan" white papers, the recurring *NDPG*, and the five-year Mid-Term Defense Programs, JMSDF force structure and force posture are outlined clearly, and represent more than enough detail for informed judgments. While the same can be said of the coverage of the JGSDF and the JASDF, it is at sea where Japan's security interests largely will play out with regional competitors.

MILITARY BALANCE AND COMPETITION IN JAPAN'S MARITIME DOMAIN

That the JMSDF is the undisputed leading edge of the JSDF is largely irrelevant to this assessment. It is its objective capability, in combination with the other self-defense forces and the U.S. military—especially the U.S. Navy—that is important.

At the moment and for some time, the JMSDF—an ambitious institution—has been on the rise. Nevertheless, given the trajectories of the Chinese PLA, Second Artillery, the PLAN, and the PLA Air Force (PLAAF), the JMSDF has a considerable way to go in order to be confident of its capabilities, for it faces the double challenge of Chinese A2/AD-type capabilities with which it must cope on the one hand, and the technologically superior, doctrinally different, and operationally offensive U.S. Navy with which it must cooperate on the other. Furthermore, the chronic disintegration between and among the three self-defense forces means that, at the national level, the JMSDF is going to operate largely on its own until Japan comes to grips with the exigencies of jointness.

Even if Japan were not a front-line state within the arc of China's potential A2/AD battle space, the new U.S. ASB doctrine implies combined operations at sea within significant and worsening Chinese threat arcs. Therefore, the ability of the JMSDF to integrate into ASB routines and adopt ASB capabilities and operations will become a discriminating factor, if the ASB concept is adopted and employed in coming years. If the JMSDF either

chooses to or is forced to sit out ASB or any other proposed operational concept of the future (these concepts are discussed in chapter 6), then its operational relevance with regard to China will be greatly diminished.

For the present and into the foreseeable future, the JMSDF will be optimized for largely unilateral ASW and BMD operations, although bilateral cooperation with the U.S. Navy in these mission areas is growing.⁶⁹ In each case, however, truly significant integration is lagging, if not entirely lacking. Each will remain a barometer of JMSDF progress toward combined fleet readiness.

In the meantime, as is the case for its sister service, fleet magazine capacity remains severely limited as a matter of ship design, and fleet force levels are low, although new classes of aviation ships continue to set a standard for new capabilities if not for force levels to match. So far, except for fleet ASW aircraft such as the SH-60 and the P-3, there is no tactical aviation available for fleet defense or as a naval striking element. Given its force levels and public acquisition plans—not to mention its doctrinal and cultural propensities—it is unlikely that the JASDF will provide any solace on this account.

The integrity of Japanese SLOCs is vital to allies, but potentially at strategic risk due to China's growing sea denial or counterintervention capabilities. Although the JMSDF should ideally plan for some type of sea control or sea denial in response to those capabilities, its ability to do so is severely limited at present, not only politically and legally, but also militarily, by the lack of integrated air-sea-land operations; an insufficient level of effort hampered by reduced force levels; and the inability to achieve command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) integrity. Furthermore, the missile magazine capacities of every vertical launch system (VLS)-equipped Japanese and U.S. surface combatant are severely limited, and VLS tubes cannot be reloaded at sea.⁷⁰ This means that for every warship mission that depends upon VLS magazines—antisurface unit warfare (ASUW), ASW, fleet air defense, BMD of cities, and long-range strike—alliance naval capabilities are inadequate.

Japanese submarines are increasingly capable—sufficiently so for the Australian Navy to be considering purchasing Soryu-class boats—and submarine warfare will be a key factor in China's "maritime salient."⁷¹ However, because significant numbers of JMSDF and U.S. submarines will be required for battle group escort and other defensive missions, low allied submarine force levels even after the increase in JMSDF submarines announced in the 2010 *NDPG* would severely complicate potential alliance offensive engagements against the PLAN.⁷²

From a long-term, regional perspective, allied strategy depends upon the integrity of Pacific SLOCs and the en route infrastructure between the U.S. West Coast and Japan. The limited force levels inherent in the national emphasis of the JMSDF on territorial defense largely precludes any Japanese consideration of Pacific SLOC operations, beyond the defense of sea lines within 1,000 nautical miles of Japan. Furthermore, the JMSDF is currently precluded from considering or conducting offensive SLOC operations politically, doctrinally, and by insufficient force levels, weapons stocks, and logistical support. Over the

next fifteen to twenty years, Tokyo would most likely only shift toward acquiring such capabilities or authorizing such missions if the United States determines that Japan needs to perform this role in the context of the alliance, and even then, it would only be possible to a limited extent in the midrange “Hard Hedge” trajectory outlined below, and a somewhat greater extent under the high-range “Competition” trajectory.

The Air Domain

THE JAPAN AIR SELF-DEFENSE FORCE

Like its sister services, the JASDF came of age in the midst of the Cold War, its mission and operational culture reflecting its close—and essentially exclusive—ties with the U.S. Air Force. During the Cold War, its sole opponent was the Soviet Air Force, and virtually its only mission was the territorial air defense of Japan.

However, operational ties with the U.S. Air Force since the JASDF took over sole responsibility for the air defense of Japan in the 1960s have not been as close as might be expected. Although the JASDF flies American or U.S.-derived aircraft almost exclusively, competition between the United States and Japan in the 1980s and 1990s over research, design, and engineering of new JASDF aircraft caused considerable turmoil in the alliance. Structurally, truly effective operational integration has been made more difficult than it had to be as the design and specifications of successive generations of Japanese air defense networks precluded meaningful command-and-control connectivity between the two air forces.⁷³ Furthermore, national Japanese and U.S. Air Force headquarters were not even on the same base, let alone integrated. During Japan’s current initiative to select a next-generation fighter (the F-X program), the strategic dialogue between the two air forces was insufficient to generate any public iteration of a common strategic view for aerospace defense or procurement justification. The result of this planning failure was the inability to rationalize an alternative to the Obey Amendment, which precluded exporting to U.S. allies the Lockheed Martin F-22 Raptor—Japan’s putative first preference.

The F-X imbroglio is revealing for another reason: The JASDF’s current inventory of fighter aircraft is obsolescent, drastically so, and the next realistic opportunity for replacement aircraft (likely, but not assuredly, the Lockheed Martin F-35 Lightning II) is probably a decade away, and in very limited numbers at that.⁷⁴

Furthermore, the JASDF has been impeded even more than its sister services by constitutional and political restrictions. As a fact of military reality, air power is the public symbol in Japan of aggressive war, and an obvious way by which to project power, and both are anathema in modern Japanese culture. As a result, the JASDF has had virtually no attack capability, its combat role is largely limited to constrained defense of Japanese air space, and most technical capabilities that would increase the range (and thereby effectiveness) of JASDF aircraft were forgone for political reasons until recently. This undercuts realistic

training and operations for Japanese airmen, and equally limits their exposure to advanced concepts and capabilities along with curtailing their professional breadth.

MILITARY BALANCE AND COMPETITION IN JAPAN'S AIR DOMAIN

In the air domain, acquisitions of more advanced combat aircraft and continued high levels of training and logistics support in both Japan and the United States will likely ensure allied air superiority in air-to-air combat situations near Japan, and the ability to disrupt Chinese airborne and ISR operations in the area. It is also possible that the United States and Japan will be on the verge of deploying next-generation bombers or unmanned combat drones by about 2030, thus increasing by then the allied capability to penetrate Chinese air defenses.⁷⁵ At the same time, those air defenses will remain a potent threat against any aircraft operating within about 200 nautical miles of China's coastline. Finally, allied maritime strike and joint air/naval operations could also emerge to reinforce allied air and naval superiority in the area.

There are several mitigating factors, however. First, while there have been recent upgrades to the JASDF's F-2 fighter—which is derived from the U.S. F-16 Fighting Falcon, and to its indigenous AESA radar-equipped air-to-air missile—nevertheless the JASDF air order of battle is effectively obsolete. The F-X replacements (presumably the Lockheed Martin F-35 Lightning II) programmed for JASDF's F-4J aircraft will come very slowly and in limited numbers. Currently, there is no replacement in sight for JASDF's F-15Js, which are early block aircraft.⁷⁶

Second, the time to procure even a small number of replacement aircraft is measured in decades, and given present trends, rebuilding the JASDF would be a very long-term process.

A third mitigating factor is the continuing severe budget environment confronting the JASDF and its sister services. Procuring sufficient numbers of tactical aircraft at the prices imposed by Japan's procurement system simply will not be possible under current budgetary realities. Air defense operations also will be inherently limited by low munitions inventories. The additional possibility that initial air combat engagements might quickly deplete whatever alliance fifth-generation aircraft are available has serious implications for Japan's aerospace defense.

Fourth, independently and in combination with the United States, the JASDF has considered the reality of its force structure conundrum and the implications of the rise of China's aerospace power. Nevertheless, no effective Japanese or allied aerospace power strategy has emerged from the U.S. Air Force, the Pentagon, or Japan's Ministry of Defense. The lack of Japanese national or JASDF operational aerospace strategies precludes effective planning, training, integration, and acquisition of next-generation tactical aircraft. This is a very serious deficiency given Japan's lack of strategic depth, and obstructs alliance cooperation. In Japan's strategic circumstances, any reasonable national or alliance posture should reflect a concerted layered defense, enabled and defined by integration across service and national lines. Nevertheless, JSDF jointness lags seriously, not least in the JASDF.

BMD is a major Japanese national emphasis, and the JASDF has the operational lead for Japan in this area.⁷⁷ Missile defense will at the same time test the limits of integration and severely stress the low capabilities of Japan's air defense. Although missile defense passes for a positive forcing function within the JSDF, what otherwise might be enabling joint (for example, Japanese interservice) integration built around this mission area is lagging badly. The lack of an aerospace strategy, the weakness of the JASDF's force structure, its very low force levels, and minimal joint and combined integration are clear indications that Japan's aerospace defense has not adopted anything resembling a posture of effective, layered aerospace defense.⁷⁸

In China's most expansive maritime salient, the air domain is a vital flank for allied maritime operations (just as the maritime flank is vital for aerospace operations). Joint naval and air operations are inherently essential in any conflict scenario with China, the sine qua non of strategic success. For allied aerospace operations, the striking difference between JASDF and U.S. Air Force doctrines, concepts of operations, technology levels, and force postures is a high bar to overcome. This, along with existing political and legal barriers, will severely challenge effective JASDF and allied air operations throughout China's maritime salient.

Furthermore, the JASDF and U.S. Air Force are severely challenged by the likely vulnerability of bases in Japan in an increasingly hostile Chinese ballistic missile environment.⁷⁹ This vulnerability is compounded both by low aerospace force levels and a very limited ability to rearm and to replace combat losses.

The Ground Domain

THE JAPAN GROUND SELF-DEFENSE FORCE

History and precedent are very important to the JGSDF, not least because this is the perspective from which the JGSDF is judged by the Japanese people. Combined with its significant lack of international operational experience, this makes the JGSDF a particularly conservative organization.

The Imperial Japanese Army has been held to account for political and military excesses during World War II. As a result, its JGSDF successor—practically the manifestation of Article 9 of the Japanese Constitution—has been trying to make amends to the nation ever since. Therefore, the JGSDF is publicly described and is largely construed as a community-based army. This has both reinforced and been exacerbated by the general JSDF static defense doctrine, which has shaped the JGSDF more than its sister services. Japanese regiments literally are garrisons, and JGSDF personnel are recruited from, serve among, and retire back to their local communities. Obviously, this makes for very close and binding family and social ties.

With some exceptions, this static positioning has precluded effective JGSDF operational mobility, exacerbated by the very limited transport capacity of the JASDF. Generally,

the JGSDF has three missions.⁸⁰ From an external allied perspective, the JGSDF's first and abiding mission has been to defend Japan from "limited and small scale invasions"—anything more serious would require intervention by U.S. forces. The orientation of that mission has been generally northward, against the Soviet Union. In the context of Japanese defense politics, of Japan's overall security strategy, and of the internal dominance of the troop-centric JGSDF, it is notable that it took almost a quarter of a century after the demise of the Soviet threat to revise that static orientation in the 2010 *NDPG*.

Domestically, it is arguable that the JGSDF's first mission is actually community support. JGSDF troops are omnipresent during domestic natural disaster relief operations, and obviously take justifiable pride in internal humanitarian assistance operations. The results of this internal orientation were on public display when the JGSDF mobilized more than half its force in response to the dual disasters of the Great Eastern Japan Earthquake and devastating tsunami that followed.

The third JGSDF mission has been far more consequential than its low profile. International peacekeeping deployments have become a small-scale but large-impact staple of the JGSDF. These peacekeeping operation deployments have been carefully selected, scrupulously authorized, and tightly controlled—sometimes to the point of making them ineffective—so as to preclude any possibility of Japan becoming directly involved in combat operations overseas. Nevertheless, they have had the combined effect of raising the profile not only of the JGSDF but also of Japan as a whole. Especially useful has been the JGSDF's experience of operating even small-scale units under fairly realistic conditions not available in Japan. This operational experience exercises just about every military function short of actual war fighting, and is especially therapeutic for a static-defense garrison force.

Peacekeeping operation deployments have created a bifurcated JGSDF. The first element is the above-mentioned static-defense garrison force. Its counterpart is a smaller force structure with a fair amount of broadening operational experience. The most notable example of a "second" JGSDF is the Western Infantry Regiment, an independent force operating to a consistently higher standard of training and readiness. The Western Infantry Regiment may represent the future of the JGSDF—it has been involved over the course of a number of years in increasingly realistic amphibious warfare exercises with the U.S. Marine Corps in California.⁸¹ The prospect of a standing JGSDF amphibious force tantamount to a Marine Corps in doctrine if not size would not only perfectly suit Japan's new doctrine of dynamic defense and southwestern reorientation while having significant forcing implications for joint operations with the JMSDF and JASDF, but it would also have a riveting effect on the larger JGSDF.⁸²

Despite the northern homeland defense orientation of the JGSDF as a Cold War strategy, realistic Japanese territorial defense largely has been relegated to naval operations and air and missile defense. Ironically, the recent significant transition of the JGSDF to a new internally mobile "Dynamic Defense" doctrine is a significant opportunity cost for these air and naval operations. It remains to be seen what operational advantage accrues from the ability of the JGSDF to deploy rapidly along the Japanese archipelago or to offshore ter-

ritories. Achieving the sort of mobility apparently envisioned by JGSDF planners is certain to continue to cut into JMSDF and JASDF budgets.

MILITARY BALANCE AND COMPETITION IN THE GROUND DOMAIN

The ground domain is an essential allied air and maritime flank throughout the maritime salient. Naval and air operations depend upon bases, which must be established, defended, reinforced, and supplied. Nevertheless, the JGSDF can only defend bases and cities in Japan, and amphibious operations throughout the extensive remainder of the maritime salient's land area have not been addressed publicly by the U.S. Army or Marine Corps either doctrinally or in terms of budget and force structure.

As noted in chapter 2, PLA ballistic and cruise missiles pose a serious threat to Japanese territory and U.S. bases in Japan. However, the JGSDF does not appear to be doctrinally prepared for effective integrated domestic base and infrastructure protection, and may not be legally or politically capable of even its domestic missile defense and base security operations necessary in this regard, let alone operations outside Japan. Furthermore, these restrictions effectively preclude any JGSDF role in seizing or defending bases and chokepoints that are not Japanese territory, whether or not they are relevant to the defense of Japan, and JGSDF deployment outside Japan into the wider maritime salient is unlikely. This will constrain the sphere of the ground domain competition, although the looming necessity of defending the Senkaku/Diaoyu Islands may force the issue of wider-ranging JGSDF operations. As discussed further in chapter 5, over the next fifteen to twenty years, hardened bases, force dispersal, and improved or increased antiballistic missile systems could reduce, but not entirely eliminate, the likelihood of crippling saturation attacks on U.S. and Japanese bases in Japan.⁸³

JSDF planning intends to concentrate to a considerable degree on the defense of outlying islands.⁸⁴ Significantly, the JGSDF has invested over time in the gradual development of a nascent amphibious warfare capability, reflecting a major Japanese national emphasis on defeating territorial incursions. Substantial resources, however, will be necessary for Japan to develop the amphibious warfare capability to regain lost territory. The JGSDF remains postured for direct defense of main islands to counter major incursions. What the JGSDF "Dynamic Defense" doctrine does not take into account, however, is the necessity for land domain "defense in depth," given Japan's lack of strategic depth.

Very limited and minor peacekeeping operations will continue to provide marginal training and force development for the JGSDF, although such operations could be a significant opportunity for force integration and doctrinal and operational development if the JGSDF chose to pursue it.

The Space and Cyberspace Domains

As noted in chapter 1, space and cyberspace have become increasingly important in military competitions, as they serve, in many respects, as enablers for competition within all the

other domains. Despite the strategic significance of these domains, however, Japanese national and JSDF space and cyber efforts lag seriously behind U.S. institutions and programs.

In June 2012, Japanese efforts to establish a national space policy finally resulted in new legislation enabling Japanese military space development.⁸⁵ Before this legislation, space development had been strictly limited to peaceful purposes only (despite the obvious circumvention rationalizing military satellite communications and surveillance satellites), and space security as a political, institutional, and practical topic had been explicitly avoided. To facilitate the industrialization and commercialization of Japan's space industry on this trajectory, Tokyo passed a comprehensive new space law, based on the Diet's "Bill to Amend the Law of Establishment of the Cabinet Office."⁸⁶

Enabled by this new legislation and significant political and ministerial reforms, Japan ostensibly will be able to develop programs and systems that abide by the Outer Space Treaty of 1967, which allows for military space development but prohibits the on-orbit deployment of weapons of mass destruction. First priorities will be additional surveillance and new early warning satellites, and more military space communications capacity. Equally important are the space-related organizational initiatives, including a new Cabinet Space Security Office headed by the prime minister, and the removal of previous limitations on the Japan Aerospace and Exploration Agency that will enable it to develop specifically military space programs.

These recent developments notwithstanding, national security space policy has left Japan as a consumer of militarily relevant space capabilities, but not a defender of them. Given current endemic force and weapons system dependencies, there exists an intrinsic and vital relationship of space and cyber operations to effective C4ISR. Because effective space and cyberwarfare attacks may have an unhinging effect upon military operations, their consequences are likely to be strategic. Because these effects cut two ways, this presents both sides in the Sino-Japanese competition with unpalatable prospects for strategic vulnerability that can affect calculations regarding stability, deterrence, and preemption. The extreme vulnerability to cyberattack extends beyond military forces to national and civilian infrastructures. One significant implication is that national cyber infrastructures and the global cyber commons must be defended, and that the JSDF and U.S. military are among the likely candidates for this mission. Although Japanese cyber defense capabilities are purposefully opaque, working presumptions are of extreme national and JSDF vulnerability to cyberattack.⁸⁷

Command and Control

All things being equal, nations that can preserve C4ISR integrity will be able to mount effective military operations. Conversely, it is not new but remains significant that opponents will do everything possible to disrupt Japanese and U.S. command and control, and this should be taken as an article of faith. What is new is that modern warfare capabilities depend more than ever upon intact and robust C4ISR. Nevertheless, the centrality of C4ISR is perennially acknowledged operationally but never addressed politically, either in

Japan among and between the JSDF, or bilaterally between Japan and the United States. It would not be correct to attribute the lapse in Japanese C4ISR to constitutional or defense policy factors alone—the subject has been avoided for powerfully neuralgic political and cultural reasons regarding strong central control. This has formed a major impediment in the alliance, sometimes articulated as a strict Japanese limit on applying the right of collective self-defense. In fact, reluctance regarding integrated alliance C4ISR runs much more deeply and includes not only retarding factors such as individual service prerogatives, but also the politically preferred segregation of Japanese and American national command functions.

The alliance's history of attempting to integrate C4ISR capabilities is mixed. There have been some successes, especially at sea during the Cold War. Tactical information is exchanged to an increasing degree, and BMD fulfills a forcing function in this regard. However, when alliance managers attempted to establish integrated C4ISR facilities at Yokosuka Naval Base for ASW operations and improved alliance coordination through the Japan Defense Intelligence Headquarters, the results were disappointing and largely stillborn. The latest attempt is the move of the JASDF's Air Defense Headquarters to Yokota Air Base, but the facility, though directly next to the U.S. Fifth Air Force's command center, is physically separate. The earlier establishment of the Bilateral and Joint Operations Command Center (BJOCC) at Yokota should mitigate this separation.⁸⁸ If they expect to be competitive with China, alliance managers are going to have to exploit this momentum further in order to integrate in this most intimate area of command and control and shared intelligence.

In the meantime, there is no objective reason for the failure to build and defend robust, integrated, joint C4ISR structures over the long term. Just as one example, major new ISR capabilities, heretofore the exclusive purview of the United States, now are on offer with the advent of high-altitude, long-endurance (HALE) UAVs and sophisticated surveillance packages that provide U-2-like performance that rivals and in some cases exceeds the best on-orbit capabilities.⁸⁹

C4ISR *defense* is as important as offensive C4ISR (that is, attacking Chinese kill chains), because modern operations demand it. It is not an exaggeration to state that this is the age of C4ISR warfare—which will be a central determinant of Sino-Japanese competition—because precision-guided munitions can hit what they can see if the operational senses can be protected. The converse, that attacks against long-range kill chains will defeat China's interdiction strategy, is equally relevant.

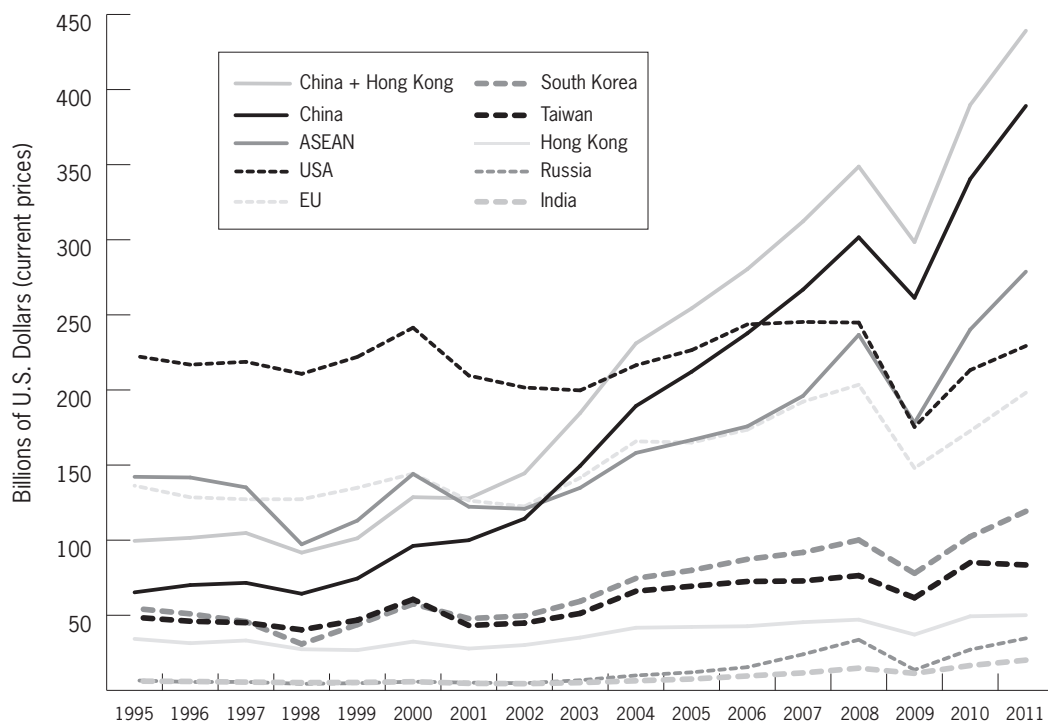
Designing, fielding, defending, and exploiting effective C4ISR is a challenge technically, but one that can be overcome. Doing so requires a systemic approach to C4ISR design in the first place, and establishing realistic technical parameters and standards. Failure to integrate effectively is far more likely than success—NATO is an illustrative example of such a failure compared with what could be achieved. Nevertheless, technical challenges are nothing compared with political reluctance and obstacles to C4ISR integration thrown up at every juncture. Historically, neither the JSDF nor U.S. Forces Japan have been able to overcome significant and intractable cultural and institutional stove piping in order to

achieve the real military-to-military and political-military capabilities required. Effective C4ISR will continue to be a major political and institutional stress for not only the JSDF but also for the Ministry of Defense and their American counterparts, along political-military, service-service, and Japan–United States lines.

ECONOMIC AND DEMOGRAPHIC TRENDS

In this era of Japanese economic stagnation, the expanding Chinese market has become the economic lifeline for Japan—especially in the wake of the U.S. recession. Virtually all long-term economic forecasts for Japan predict only modest growth figures (usually around 0.6 to 0.8 percent per year in real GDP growth). A significant portion of this growth would come from an expansion of exports (about one-third).⁹⁰ During the last decade, Japan's exports to China as well as two-way trade with China have grown substantially. China is now Japan's number one trading partner (figures 3.3 and 3.4). Unlike the United States, Japan has usually had a trade surplus with China/Hong Kong. Moreover, after the 2008 global fi-

FIGURE 3.3
Japanese Trade With Select Economies, 1995–2011



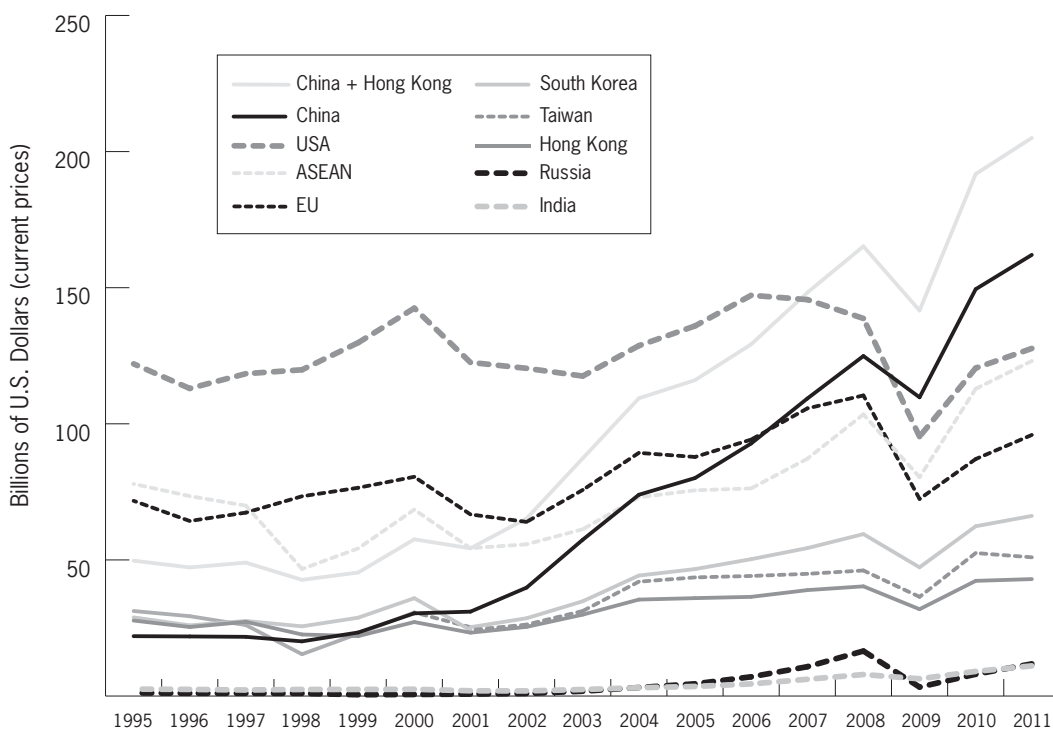
Source: UNCTAD, <http://unctadstat.unctad.org>. Accessed November 1, 2012.

nancial crisis, Japanese direct investment into China climbed sharply, indicating how critical China had become for the long-term strategies of Japanese companies (figure 3.5). While countries such as India and Vietnam have garnered the attention of the Japanese business community, these countries are still a long way from becoming an alternative to the Chinese market for Japan.

Japanese local communities have become increasingly reliant on Chinese tourism for commercial opportunities; and Japanese firms have turned to Chinese trainees to deal with labor shortages. According to the Japan Center for Economic Research (JCER), foreign visitors to Japan are likely to increase from 8.6 million in 2010 to 15.9 million in 2020. The number of Chinese tourists is predicted to increase even more steeply, from 1.4 million in 2010 to 3.9 million in 2020.⁹¹

Because of the above trends and forecasts, the political fallout from the fall 2012 Senkaku/Diaoyu Islands crisis has hit the Japanese economy especially hard. Japanese exports to China fell 15.8 percent in September 2012, 13.4 percent in October 2012, 17.2 percent in November 2012, and 20.7 percent in December 2012 compared to corresponding months in 2011.⁹² The impact on the flow of Chinese tourists was even greater. The

FIGURE 3.4
Japanese Exports to Select Economies, 1995–2011

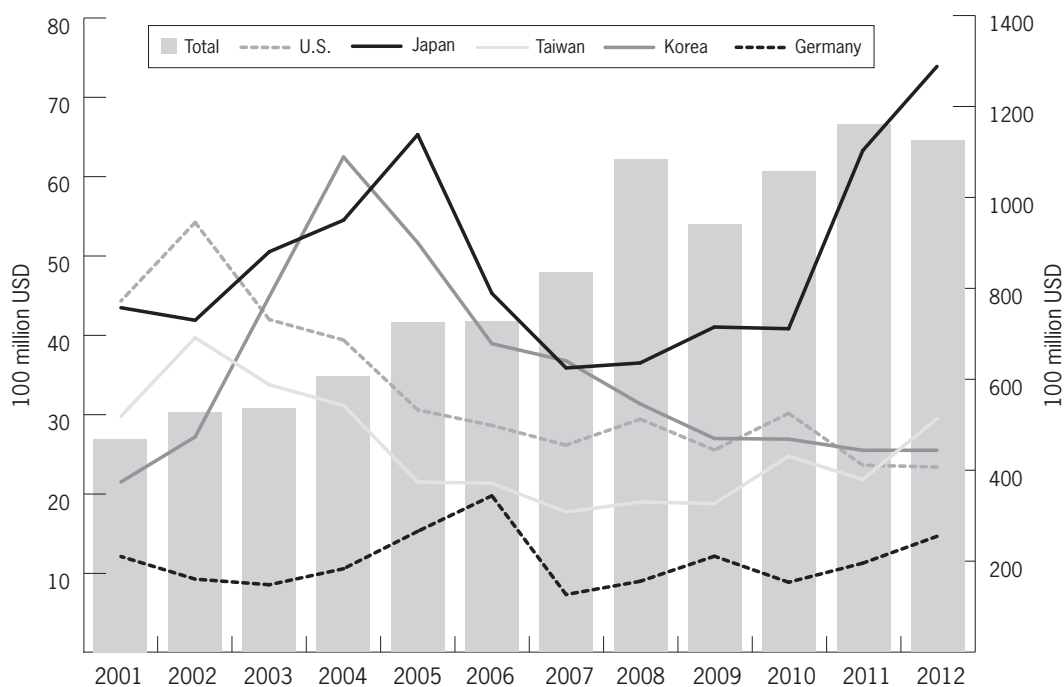


Source: UNCTAD, <http://unctadstat.unctad.org>. Accessed November 1, 2012.

number of Chinese visiting Japan declined 33.1 percent in October 2012 and 43.6 percent in November 2012 compared to corresponding months in 2011.⁹³ According to an October–November 2012 survey of Japanese-affiliated firms in Asia, the percentage of those planning to expand business operations in China during the next two years declined to 52.3 percent, a 14.5 percent drop from the previous year.⁹⁴ The Chinese economic slowdown and the inhospitable political environment are discouraging Japanese investments in China, and Japanese firms are actively pursuing opportunities elsewhere, such as Southeast and South Asia. Nevertheless, Japan continues to have a huge stake in the Chinese economy, and the business community will continue to press the political leadership to stabilize relations and avoid a costly military competition with China.

On the demographic front, the rapid aging of Japanese society suggests that Tokyo will not be able to revitalize its economy by relying simply on domestic demand.⁹⁵ The household savings rate has already declined from a peak of about 25 percent to 3 percent, and the JCER predicts that the household savings rate could turn negative during the 2010s. Moreover, the JCER expects the Japanese labor force to shrink at an annual rate of 0.6 percent from 2011 to 2020. So unless Japanese productivity improves astonishingly, Japanese

FIGURE 3.5
FDI to China From Select Economies, 2001–2012



Source: Graph from presentation by Kiyoyuki Seguchi, The Canon Institute for Global Studies, for roundtable at the Carnegie Endowment for International Peace, September 19, 2012. Data source: CEIC.

economic growth will depend upon exports to growing Asian markets, especially China. The JCER predicts that China's real GDP will grow by 8.6 percent during the 2011–2020 period, and although this estimate may be somewhat optimistic, the Chinese economy is likely to continue to be a growth engine for Japan and the Asia-Pacific region in any case.⁹⁶ In short, demographic trends will accentuate Japan's economic interest in stable relations with China and perhaps further tighten the fiscal constraints on increased defense spending.

Given the overarching economic and demographic trends in Japan, some Japanese leaders and commentators have advocated reframing the way their country's economic performance is assessed. Rather than focusing on GDP, which the government has used since 1993 as the key indicator for the size of the Japanese economy, they recommend using gross national income (GNI).⁹⁷ GNI encompasses both GDP and the "balance of income," which includes the net receipt of interest and dividend payments from overseas. Currently, Japan's balance of income is approximately 3 percent of GDP, making the nation's GNI 3 percent larger than its GDP. Reframing economic performance in this way might shift Japanese from fearing the hollowing out of their economy to embracing economic activities carried out by Japanese people and businesses globally.

By focusing on GNI rather than GDP maximization, Japan would take advantage of yen appreciation and promote promising investments overseas. Tax and other policies would be reoriented to encourage the return of wealth earned overseas to Japan. For example, the Japanese government in 2009 adopted a policy that made dividends from overseas subsidiaries tax-free in principle. This new approach, however, poses two sets of challenges. First, domestic policies will have to be developed so that this wealth generated abroad will flow back into the household sector and will stimulate job creation back in Japan. Second, Japan will have to forge agreements with key foreign economic partners like China that emphasize investment, intellectual property rights, and tax and social security policies rather than just traditional trade and services. If Japan can reach such agreements with China, economic interdependence between these two countries would deepen further and provide even greater incentive to restrain bilateral military competition.

There is also the possibility that Japan may not even be able to achieve 0.6 to 0.8 percent real GDP growth per year over the coming fifteen to twenty years. A global economic slowdown coupled with shrinking export markets might lower growth projections and provoke societal fissures that might reverberate into the political arena. How this will play out for foreign policy is uncertain, but there is a potential for political polarization that promotes extreme diplomatic and security policy options.

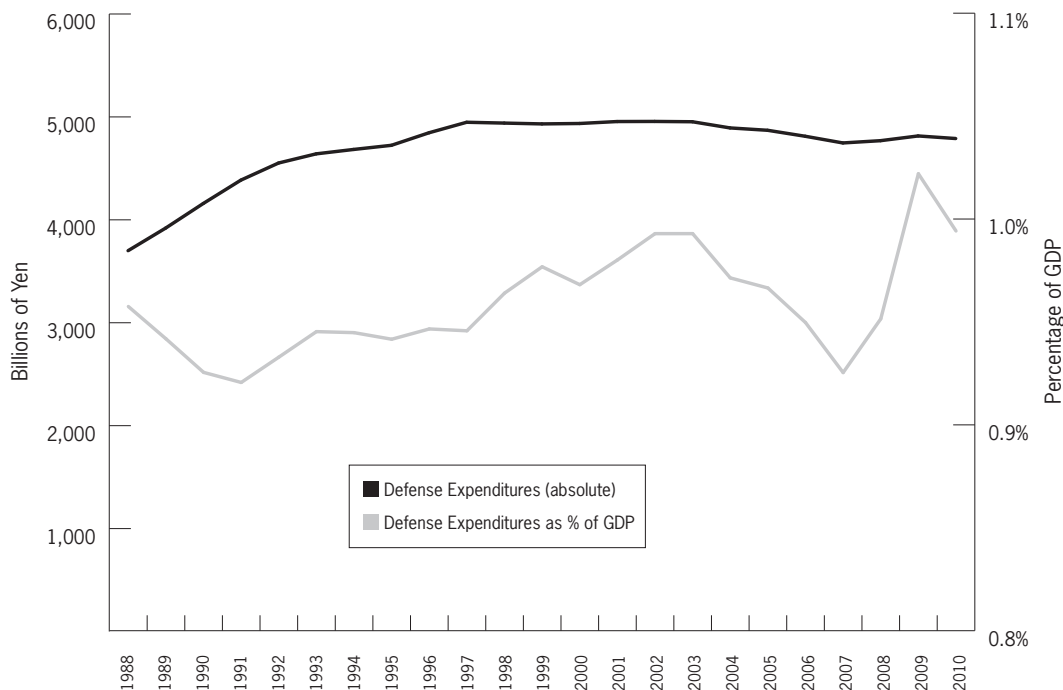
DEFENSE SPENDING

Despite movement toward the so-called normalization of Japan as a security actor and the increasing Japanese concerns about China's military modernization and activities, Japan's defense budget has been strikingly stagnant. Although the Nakasone Cabinet during

the mid-1980s formally rescinded the “1 percent of GNP” ceiling on defense expenditures, Japanese defense spending has generally remained below 1 percent of GDP. Moreover, the absolute size of the defense budget has steadily declined from the peak of ¥4.94 trillion in 2002 to ¥4.64 trillion in FY 2012 (figure 3.6). This shrinkage is not simply a result of growth constraints on the general national budget because of economic stagnation. Although the national budget has grown incrementally since Japan’s economic stagnation beginning in the 1990s, the proportion of annual defense expenditures in the general annual expenditures of the national budget declined sharply. In FY 1995, defense expenditures accounted for 11.2 percent of the general annual expenditures. In FY 2011, defense expenditures accounted for only 8.62 percent of the general annual expenditures. Clearly, in the face of severe fiscal constraints and growing social expenditures, defense spending remained a relatively low priority. In FY 2012, the proportion of defense spending in the general budget increased to 9.06 percent; but this change reflected mostly a 2.2 percent shrinkage of the overall national budget rather than a greater emphasis on defense expenditures.

In early 2013, amid increasing tensions with China regarding the Senkaku/Diaoyu Islands, the Abe government proposed a slight increase of the defense budget to about ¥4.77

FIGURE 3.6
Japanese Defense Expenditure, 1988–2010



Sources: Stockholm International Peace Research Institute, <http://milexdata.sipri.org>. Accessed October 31, 2012; IMF, www.imf.org/external/pubs/ft/weo/2012/02/weodata/weorept.aspx.

trillion, thereby reversing an eleven-year decline in absolute defense expenditures. This hike would bring the defense budget back up to its 2009 level. Tremendous Japanese political will in the context of a blatantly hostile China with highly capable military forces, however, would be required to raise defense expenditures substantially above 1 percent of GDP. Although Japan spending 1.2 to 1.3 percent of GDP on defense may seem modest relative to international standards, it would entail a sharp discontinuity in Japan's current trajectory. A further constraint on Japanese defense expenditures is the growing personnel cost relative to the rest of the defense budget, which severely limits the amount of money available for equipment acquisition, research and development (R&D), and operations.

DOMESTIC DEFENSE INDUSTRIES

Defense industrial base issues are a universal challenge for modern military establishments, even in times of sufficient budget resources. Japan, however, must contend with special circumstances, which include national policies such as the three arms export control principles. These and other principles, policy pronouncements, administrative requirements, shortfalls in basic areas such as the handling of classified material, and cultural approaches toward doing business with the Japanese government, in combination have had a cumulative and stultifying effect upon Japan's defense industry. Japanese companies supplying the JSDF are neither competitive technically nor efficient programmatically. One obvious result has been that, with no economy of scale in R&D, engineering, design, or manufacture, the Japanese government pays a tremendous premium for its home-built defense equipment.

The generalized effects are more far-reaching than that. Given the industrial foundation and increasingly high-technology-dependent nature of modern warfare—and this trend will increase with an accelerating rate of change—not only acquisition but logistics and sustainability are perennial weak links for the JSDF. Given ostensible expanding force structure and force level requirements due to concerns about the rise of China, and the additional complication of present economic circumstances, defense industry weaknesses combine to generate greatly enhanced national security risks for Japan and for the alliance over the medium to long term, the consequences of which start with the credibility of Japan's deterrent posture.

Neuralgic tensions over defense acquisition have challenged alliance managers since at least the 1960s. In each country, indigenous design and production are important to industrial competitiveness generally, given the spin-off effects of modern weapons systems. This is especially important in Japan, where because of the just-relaxed arms export control principles, the Japanese defense industry enjoyed neither depth nor economies of scale.

Given this backdrop, some of the worst alliance imbroglios came as a result of defense acquisition scandals or disagreements; prime examples are the Lockheed scandal of the 1970s, the Toshiba export to the Soviet Union of 9-axis advanced milling machines and numerical control equipment in the 1980s, and the furor over the FX program in the late 1980s and 1990s.

Furthermore, for apparently purely nationalistic reasons, Japan traditionally has preferred to build to its own technical specifications as a way to differentiate its programs from those of the United States, despite the obvious advantages of operating the same equipment. This has been especially controversial when specifications of successive generations of systems have repeatedly precluded interoperability, such as in Japan's Basic Air Defense Ground Environment (BADGE) air defense control system, or when Japanese indigenous systems are derived from American purchases. Further complicating the defense acquisition relationship, the acquisition and policy "tribes" in both countries are wary of one another, are jealous of prerogatives, and until recently have refused to integrate in defense councils.

The recent relaxation of Japan's arms export control principles may somewhat alter this dynamic, as there already are corporate proposals on the table for more direct, relatively unencumbered industrial cooperation on the development of military systems.⁹⁸ Likewise—although it is too early to tell if substantial progress will be made—U.S. and Japanese policy and acquisition officials soon may begin meeting together in formal bilateral meetings. Such breakthroughs will be important for both their presumed economies of scale and value-added technological combinations. Nevertheless, due to a plethora of constitutional, political, bureaucratic, and cultural impediments, bilateral alliance R&D and acquisition programs have never taken off, thereby negating the ostensible great combined technological and industrial prowess of Japan and the United States. Significantly greater capabilities and incentives than are present today in Japan will likely be required to overcome these fundamental obstacles and establish a more cooperative and integrated defense industrial base between Tokyo and Washington.

NATIONAL SECURITY POLICY INFRASTRUCTURE AND PROCESS

During the last decade, there have been significant improvements in Japan's national security policy infrastructure and process. They include:

- Upgrading of the Defense Agency to a full-fledged Ministry of Defense;
- Passage of crisis management legislation;
- Establishment of a Defense Intelligence Headquarters;
- Lessening of the "colonized" nature of the Ministry of Defense as more capable career Defense Agency/Ministry officials have been recruited and have assumed influential leadership positions; and
- Gradual move away from the notion that a primary mission of civilian defense officials is to control the JSDF, with an increasingly cooperative relationship emerging

between civilians and uniformed officers in analyzing the security environment and developing appropriate defense policies.⁹⁹

Despite these improvements, the rise of the DPJ to power in September 2009 exacerbated many of the preexisting shortcomings in the national security policy infrastructure. During the era of LDP governments, foreign and security policies emerged from an intricate and largely collaborative interaction among the professional bureaucracy, the ruling party, and the prime minister and his cabinet. Career bureaucrats of the Ministry of Foreign Affairs (MOFA) and the Japan Defense Agency (JDA; later Ministry of Defense, MOD), along with other relevant functional ministries, provided information, intelligence, and viable policy options to the top political leadership and drafted legislation and important policy statements if asked and when necessary. The ruling party through the Policy Affairs Research Council and its various specialized committees and the so-called policy tribes (*zoku*) related to foreign and defense policies forged an intraparty consensus and managed the interest groups that might be affected by a particular policy. For example, the defense policy *zoku* lobbied hard to increase defense budget allocations after budget officials in the Finance Ministry scaled back JDA/MOD requests. The chief Cabinet secretary usually coordinated the interministerial policy process so that the prime minister and the Cabinet could make the final decisions.

This policymaking structure was far from perfect. The prime minister's Secretariat lacked a robust staff independent of the bureaucratic ministries to facilitate initiatives and strong leadership by the prime minister. Bureaucratic rivalries (for example, between the MOFA and the MOD/JDA, and between the various economic ministries and MOFA/MOD) and conflicts within the ruling party/coalition (for example, between LDP factions or between various policy *zoku* that reflected different interest constituencies) impeded timely decisionmaking and the development of long-term strategic policies. To address this problem, in 2006 the Abe government proposed the creation of a National Security Council (akin to the one in the United States) that could promote policy analysis and coordination by a staff loyal to the prime minister, but this initiative failed to win National Diet approval.

Upon assuming power, the DPJ stressed the importance of political leadership in all aspects of policymaking. But the antagonistic posture that the new governing party assumed vis-à-vis professional bureaucrats worsened the problem of policy coordination and development. DPJ leaders in government were reluctant to consult with relevant administrative officials, and administrative officials in turn became less cooperative in formulating viable policy options and more hesitant about warning political leaders about potential pitfalls. By insisting on a sharp separation between the executive and the legislature, the DPJ also diminished the role of DPJ Diet members not in Cabinet and sub-Cabinet positions in policy deliberations. This not only provoked discontent in DPJ party ranks but also prevented the DPJ frontbench leadership from mobilizing strong party and public support for controversial policy initiatives. The DPJ government's handling of the Okinawa base issue and the Chinese fishing trawler incident near the Senkaku/Diaoyu Islands was symptomatic

of how amateurish and unstrategic Japanese foreign and security policy had become. The DPJ's track record, however, was not completely negative. For example, effective cooperation between the party and career bureaucrats enabled the DPJ government to adopt the new *NDPG* in December 2010.

In addition, over the next fifteen to twenty years, political realignment could eventually yield a party system that more clearly delineates major foreign and security policy choices and mobilizes a public mandate behind a particular national strategy. After the rebellion of various subgroups in the LDP in 1993, Japan has been experiencing a long political transition away from its one-party dominant system. Ironically, the revival of LDP power under Koizumi's leadership exposed the fundamental political-economic contradictions of conservative hegemony and made the LDP vulnerable to electoral defeat. The stunning victory of the DPJ in the August 2009 House of Representatives elections suggested the arrival of a two-party system akin to the so-called British Westminster model. However, the ineffectual leadership of the DPJ's Hatoyama government resulted in an equally stunning reversal in the summer 2010 House of Councilors election. The flip-flop of electoral fortunes in unsynchronized lower and upper house Diet elections produced the phenomenon of "twisted Diets" (*nejire Kokkai*) and paralyzed the legislative process regarding controversial issues.

In the December 2012 election, voters punished the DPJ again for its inept performance as a governing party. The LDP led by Shinzō Abe was restored to power with a large lower house majority of 294 out of 480 seats, a gain of 176 seats. The DPJ's seat count fell from 230 going into the election to just 57 seats. But this lopsided LDP victory hardly reflected an overwhelming public mandate for this party or for a robust defense policy to counter China. In many ways, the outcome was a result of a splintering of the party system with the formation of new parties just before the election and an electoral system that rewarded lavishly the party that could win the plurality of votes in single-member districts. In the proportional representation (PR) regional bloc constituencies in which citizens vote for a party list, the LDP collected only 27.8 percent of the vote. This result was only a slight increase from the 26.7 percent of the vote the LDP received in the PR constituencies in the August 2009 election when the LDP was ousted from power. Moreover, the voter turnout of 59.3 percent was the lowest since World War II, suggesting that the public had little confidence that the political system can truly address the problems ailing the Japanese economy and society.

For the time being, the "twisted Diet" problem may be solved because the LDP-Kōmeitō coalition now has a two-thirds majority in the more powerful House of Representatives, enough to override a recalcitrant House of Councilors on important bills. But Prime Minister Abe will have to tread carefully if he is to avoid the mistakes that brought him down in 2007. To win the summer 2013 House of Councilors election, his government will need to focus on reviving the economy, rather than pursuing a nationalistic agenda that worsens relations with Japan's neighbors. But at the same time, Abe will have to watch his right flank. Shintarō Ishihara, who was instrumental in provoking the 2012–2013 crisis with China over the Senkaku/Diaoyu Islands, stepped down as governor of Tokyo and joined forces with Osaka mayor Tōru Hashimoto to lead the Japan Restoration Party (JRP,

Ishin no Kai). Although this populist movement has lost some of its initial luster, the JRP did win 54 seats and 20.5 percent of the PR vote in the December 2012 election. The LDP may be tempted to turn to the JRP for help on constitutional revision, but insofar as Ishihara wields influence in this new party, the JRP could constrain Abe from pursuing such a pragmatic policy toward China as he did in fall 2006 by exercising restraint on Yasukuni Shrine visits and making his “ice-breaking” visit to Beijing.

TRAJECTORIES FOR JAPANESE STRATEGY TOWARD CHINA AND DEFENSE POLICY AND CAPABILITIES

Since the last decade of the Cold War, Japan has moved incrementally to relax political and legal constraints on the JSDF, enhance its security relationship with the United States, and expand its security horizons. In delineating possible Japanese future trajectories through 2030, it is instructive to note how much Japan has evolved since 1993. Over the last twenty years, Japan has assumed security roles that were largely unimaginable during the 1960s and 1970s. Japan has now dispatched the JSDF on overseas peacekeeping operations and postwar reconstruction missions. It has mandated rear-area support for U.S. forces in “situations in areas surrounding Japan” that do not entail a direct attack on Japan but have a significant bearing on Japanese security interests. It has collaborated with the United States on the development of BMD. After 9/11, Japan took the unprecedented step to refuel the naval vessels of the United States and other nations in the Indian Ocean and to deploy the JGSDF for the reconstruction of postwar Iraq. In December 2010, the Japan Cabinet finally jettisoned the “Basic Defense Force” concept articulated in 1976 and replaced it with the concept of a “Dynamic Defense Force.”

Despite these important steps, however, it is also worth noting how restrained Japan has been. Japan continues to adhere to a constitutional interpretation that prohibits exercising the right of collective self-defense. It still maintains an “exclusively defense-oriented policy” and eschews “becoming a military power.” It severely restricts support that might be construed as direct integration with the use of force in cases that do not involve a direct and immediate threat to Japanese security. Even as Japan was augmenting its international security role at the beginning of the twenty-first century, economic stagnation and fiscal constraints compelled the Japanese government to freeze and even reduce defense expenditures. With rising personnel costs, defense modernization has slowed to such an extent that Japan’s defense technological advantage relative to a rising China has been eroding.

Its economic stagnation and demographic trends notwithstanding, Japan as the third-largest economy and a top-tier technological power certainly has the capacity to develop a much more capable military. Moreover, Japan’s geographic proximity to China and its geostrategic significance for Chinese military calculations give Japanese policymakers a strong incentive to keep a watchful eye on the strategic implications of China’s rise. There is indeed growing support in Japan’s security policy community for dealing firmly with China’s

expanding military capabilities and ambitions. The increase in Chinese maritime patrols near the Senkaku/Diaoyu Islands and intrusions into the islands' contiguous and territorial waters since September 2012 has reinforced this trend.

Nevertheless, as clearly indicated above, numerous domestic factors (constitutional, normative, political, budget constraints, and economic interests vis-à-vis China) suggest that Japan's defense response to China is likely to be restrained. Despite the recent ascendancy of those who advocate a full-blown competitive strategy, Japan is more likely to pursue a policy of cooperative engagement that encompasses either a hard or soft hedge. This is not to say that Japan will not confront China on various political issues, as it did during the Koizumi era about the Yasukuni Shrine or in the fall of 2010 about the Senkaku/Diaoyu Islands. But this willingness to face off with China on some issues is unlikely to translate into a robust defense policy that would allow Japan to assume primary responsibility for countering China in its own neighborhood. Therefore, Japan is likely to continue to depend heavily on the United States to secure its political-military interests vis-à-vis China. But insofar as the Japanese security policy community anticipates a relative decline of U.S. military power in the region, the strategic challenge will be figuring out how and to what extent Japan in cooperation with other U.S. allies can supplement and complement U.S. capabilities and can sustain America's will to provide regional security in the face of a rising China.

Japan's national security community, therefore, must deal with two variables: its military competition with China and its military alliance with the United States. These two factors are not connected directly in Japan's calculus. Because the alliance between Japan and the United States can at times be conflicted and unpredictable—and amounts to less than meets the eye—Japanese responses to a worsening security environment in the Asia-Pacific region do not necessarily equate to a directly enhanced security alliance with the United States.¹⁰⁰ Likewise, American initiatives usually overlap and extend beyond, but often do not conform to, Japanese interests and priorities. Therefore, Chinese actions that cause concern in Tokyo do not necessarily move Japan closer to the United States, and certainly not in direct proportion to frictions with China.

The following sections delineate five possible trajectories for Japan through approximately 2030 (table 3.2). They are ordered according to their likelihood, with Trajectory 1 (cooperative engagement with a “hard hedge”) being deemed most likely, followed closely by Trajectory 2 (cooperative engagement with a “soft hedge”). Framed in terms of Japanese military capabilities, Trajectory 1 is described as a “midrange” trajectory, Trajectory 2 as a “low-range” trajectory, and Trajectory 3 as a “high-range” trajectory—while Trajectories 4 and 5 are more extreme outliers on the low and high ends. Given the domestic factors that constrain Japanese defense policy and steer Japan toward policy continuity and incremental change, the more dramatic changes represented by Trajectories 3, 4, and 5 will require significant shifts in the exogenous variables and are on balance less likely. The most important exogenous variables will be (1) the level of Chinese military capabilities and China's political and military behavior, (2) the relative attractiveness of the Chinese market for Japan, and (3) the robustness of the U.S. security commitment to Japan and the region as reflected

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

in U.S. military capabilities and presence. (See this chapter’s appendix for detailed lists containing estimates regarding the specific features of particular military domains in the first three, most likely trajectories posited below.)

TABLE 3.2
Possible Trajectories for Japan Through 2030

		1: HARD HEDGE	2: SOFT HEDGE	3: COMPETITION	4: ACCOMMODATION	5: INDEPENDENCE
CHARACTERISTICS	Probability	Most likely	Likely	Possible	Very unlikely	Most unlikely
	Military capabilities	Mid	Low	High	Low	High (Nuclear)
	Policy toward China	Cooperative engagement	Cooperative engagement	Competitive engagement	Strategic accommodation	Strategic independence
	Policy toward the alliance	Dependent; more integrated; active technical and planning consultations, but resource-constrained strategies and operations	Dependent; integration deferred; active but politically self-constrained consultations	Integration and rationalized efforts replace dependence	Dependent; integration deferred; placeholder consultations	Essentially independent; Japan self-reliant; alliance in name only; technical consultations might continue
DETERMINANTS	Average annual GDP growth, 2012–2030	0.6–0.8%	0.6–0.8%	0.6–0.8%	0.6–0.8% < 0.6%*	0.6–0.8% < 0.6%*
	Economic integration with China	High	High	Mid	High	Mid
	Defense spending as % of GDP	1%	< 1%	1.2–1.3%	< 1%	> 1.3%
	Political dynamics	More stable government, higher capacity for reform and defense effectiveness	Weak and unstable governments, incrementalism and erratic behavior	Political realignment and electoral mandate for constitutional revision and robust defense	Political realignment and electoral mandate for military restraint and regional cooperation	Political realignment and nationalist mandate for nuclear weapons
	Public opinion	Wary of China	Subdued	Concerned about China, nationalist	Strongly pacifist, friendly toward China, wary of alliance	Much less pacifist, highly nationalist

*If Japan’s economy were to face severe difficulties beyond what it has experienced in recent years, with GDP growth falling below 0.6 percent, the probability of the two unlikely trajectories (strategic accommodation and strategic independence) would increase somewhat.

Trajectory 1: Hard Hedge

Under Trajectory 1, Japan would continue its overall “cooperative engagement” approach to China, while simultaneously implementing some marginal changes intended to give Tokyo a stronger hedging and deterrent capacity against Beijing. The expansion of Chinese military capabilities and activities would still not be enough to motivate Japan to alter drastically its budget priorities toward defense or to revise or reinterpret the Constitution to enable Tokyo to exercise its right of collective self-defense in a full-fledged manner. Moreover, the United States would continue to provide enough security reassurance so that Japan would not feel an acute sense of urgency to substantially upgrade its defense capabilities. Nevertheless, increasing concerns about China’s military trajectory and persistent frictions with China about territorial and resource claims in the East China would prompt Japanese political leaders and defense officials to accelerate the implementation of the 2010 *NDPG* and develop a new *NDPG* with a greater focus on the security challenges that China poses for Japan.

Although defense spending would remain about 1 percent of GDP, the defense budget in absolute terms would increase incrementally. Japan would undertake substantial reform of the JSDF, defense policy infrastructure, defense budget allocations, and defense procurement practices in order to address strategic priorities in a cost-effective manner. The effects of relaxing the three arms export control principles, however, would be mixed. Although Japanese industry would be slow to evolve, defense industrial cooperation with the United States would improve somewhat, and bilateral R&D programs would proliferate to a limited extent. Japanese defense industry reform efforts, however, will be limited, and sales of defense hardware internationally will meet with mixed success. Despite the liberalization of acquisition and cross-servicing agreements, U.S. forces will not depend to any significant degree upon Japanese supply chains for services, equipment, or support.

Under this trajectory, the Japanese government would test the limits of Japan’s constitutional constraints in terms of the use of force and collective self-defense. For example, Japan could relax the existing restrictions on the “integration with the use of force” (*buryoku kōshi no ittaika*) so that Japan could provide greater operational support for U.S. forces. This could entail the passage of new legislation regarding “situations in areas surrounding Japan” that could facilitate JSDF integration with U.S. forces in response to military contingencies beyond those that involve the direct defense of Japanese territory. Japan will inch toward exercising its right of collective self-defense along the lines suggested by the 2008 Yanai report. Although Japan’s Joint Staff office would continue to mature, command-and-control integration between Japan and the United States would move slowly. There would be modest enhancements to the alliance institutional infrastructure.

Under this “midrange” hard hedge trajectory, the implications of the 2010 *NDPG* findings regarding “gray-zone” challenges would be considered across the JSDF, and the basis for new doctrines would be studied and dissected. Although China might be treated as a “first among equals” separate planning case, Japanese planning would not incorporate

China into all aspects of modern warfare. Joint training and exercises with U.S. forces would develop; and missile defense, ASW, and amphibious warfare development would be action-forcing missions for integration and jointness. The primary focus of operational planning would be for scenarios that deal with defense of the Japanese islands, humanitarian assistance or disaster relief, and possible peacekeeping missions because of constitutional restrictions that prohibit the exercise of the right of collective self-defense. JSDF and U.S. doctrines regarding the integration of warfare across areas of effort would remain unresolved, and the potential for operations in different geographic theaters could stress Japanese and allied joint and combined decisionmaking, planning, bureaucratic, and operational capacities.

MILITARY CAPABILITIES

The Maritime Domain

In this midrange trajectory, the JMSDF leadership would become relevant to a positive Japanese response to the U.S. ASB concept, assuming that concept is operationalized. Because the ASB doctrine implies continuous operations well within Chinese threat arcs, the U.S. Navy and JMSDF would collaborate to acquire, train, and operate so as to be able to fight together in order to get forward and to stay forward. The JMSDF would remain optimized for ASW, BMD, and mine warfare. Fleet missile and torpedo magazine capacity would continue to be very limited, a weakness exacerbated by the fact that neither VLS nor torpedo tubes can be reloaded at sea. Moreover, national weapons stocks would remain virtually bare, and defense industries would not be capable of any sort of meaningful expansion or accelerated pace of production. Nevertheless, under this midrange trajectory, the JMSDF would fully fund and man its expanded submarine force and would continue the development of an aspirational JMSDF aircraft carrier force. Although Pacific SLOCs and U.S. Navy escort could become an operational emphasis of the JMSDF, it is likely that Japanese operations beyond 1,000 nautical miles would be severely limited both for political reasons and by insufficient force levels. While alliance conventional warfare capabilities in the maritime domain could be insufficient to deter China, realistic JMSDF integration with U.S. forces that enables a concerted alliance response to military challenges in “situations in areas surrounding Japan” would be a major milestone and building block in reaching a convincing deterrent posture in the Asia-Pacific region.

The Air Domain

Even in this midrange trajectory, the JASDF air order of battle would remain virtually obsolete, given the only marginal increase in Japan’s defense budget. The basis for developing a realistic aerospace strategy, however, would now be in place because the JASDF and U.S. Air Force would be able to plan, train, organize, and acquire on a more rational alliance

basis. Nevertheless, FX replacements (presumably F-35) for F-4 and F-15 aircraft will come very slowly. It is possible on this trajectory that the JASDF could articulate a rationale for the accelerated acquisition of fourth-generation aircraft such as the F/A-18 Super Hornet as a gap filler and force builder while waiting for F-35 procurement. Also significant would be a rationalized plan for a force of Japanese HALE UAV ISR platforms, and for AWACS, tanker, and strategic lift aircraft at realistic levels. BMD would receive major Japanese national emphasis. Under this trajectory, JASDF leadership in this area would be a forcing function for significant joint and combined interoperability but will remain a work in progress. Nevertheless, Japanese defensive air operations along the Pacific SLOCs and Japanese defensive and offensive air operations in the Indian Ocean would remain infeasible.

The Ground Domain

In addition to establishing small garrisons to the southwest along the Ryukyu Island chain, Japan would exhibit the beginnings of an amphibious warfare doctrine and a new force structure to support it. This development would operate as a forcing function for JSDF joint operations. Nevertheless, the JGSDF would continue to be limited to a strictly defined territorial defense of Japan, and its ability to recover disputed territories would remain largely aspirational. The JGSDF would also be self-limited to point defense missions, rather than be included in modern maneuvers over relevant distances as part of a strategic defense in depth of Japan. It is possible that cooperation between the JGSDF and the U.S. Marine Corps would prompt some consideration of ground domain defense in depth of Japanese territory. JGSDF could also play an unexpectedly significant role in seizing or defending bases and nearby chokepoints. Externally deployed JGSDF operations, however, would remain limited to minor peacekeeping operations, albeit with considerable potential for significant training and force development opportunities.

The Space and Cyberspace Domains

In the space and cyberspace realms, new legislation could enable the prime minister's Cabinet Office to take control of the planning and budgeting of Japan's government space program, and the Japan Aerospace Exploration Agency could be authorized to pursue military space programs. However, tight budgetary restrictions would check much of the benefit of new legislation. As a result, organizational and force structure implications regarding cyber defense and space operations would be largely deferred. While the Japan Aerospace and Exploration Agency would be able to replace Japan's four aging surveillance satellites, it would not be able to add to the constellation.

Command and Control

It is likely on this trajectory that the allies would establish a partially integrated aerial, naval, land, and space system, enabling combined operational missions featuring multiple

services and militaries (for example, U.S. ships might use onboard missile defense systems to shield bases in Japan, collaborating with JASDF AWACS and U.S. on-orbit ISR platforms). Breakthroughs for the JGSDF and the alliance in a counter-C4ISR operating environment would include doctrines and capabilities that facilitate independent operations, defensible C4ISR, and C4ISR that can be reconstituted when high-demand, low-density C4ISR assets are damaged or destroyed.

Trajectory 2: Soft Hedge

Under this trajectory, Tokyo would pursue a “cooperative engagement with a soft hedge” approach. This would be marked by a continued stress on bilateral economic ties and avoidance of a “China threat” focus in Japanese foreign policy, relatively low levels of defense spending, an emphasis on the defense of the home islands, and moderate increases in capabilities to defend the southwest islands. Japanese defense planners would closely monitor Chinese military capabilities and behavior and signal Japan’s resolve to defend its territorial and maritime interests. At the same time, however, Japan would seek to avoid militarization of the Sino-Japanese territorial dispute while emphasizing the centrality of the United States–Japan alliance. Japan would also promote relations with South Korea, ASEAN, Australia, and India and support regional processes such as the East Asian Summit as well as APEC and the ASEAN plus Three. Although Japan’s regional diplomacy will not be framed as diplomatic containment of China, Tokyo will have a keen interest in checking Beijing’s influence and steering Chinese behavior in a direction more consistent with Japanese interests. In general, Tokyo would continue to pursue its existing two-pronged strategy of keeping the United States militarily engaged in the region and enmeshing China in a variety of bilateral and multilateral institutions and processes.

While expressing concerns about Chinese military modernization and activities near Japan (especially in the East China Sea), Japan would refrain from explicitly targeting its defense forces against a “Chinese threat” and would continue to stress the need for greater transparency. Japan would continue to support the realization of joint development of resources in the East China Sea based on the 2008 agreement between Japan and China. Efforts would be made to promote bilateral Japan–China security dialogues and trilateral Japan–United States–China security dialogues, to develop and improve mutual reassurance measures with China (including prior notification of maritime activities in the East China Sea, and so on), and to initiate cooperation with China on humanitarian assistance or disaster relief. Japan would continue to contain emotional issues related to history (for example, visits to the Yasukuni Shrine) and to stress the importance of economic interactions with China.

The basic logic of this “low-range” trajectory is that neither Japanese anxieties about Chinese behavior and capabilities nor concerns about the maintenance of U.S. security reassurance would be acute enough to overcome severe economic and fiscal constraints on defense spending and the resilience of antimilitarist or pacifist attitudes both in the Japa-

nese public and among political elites. In addition, the critical role that trade and investment with China plays in the Japanese economy would dampen political moves to develop a strong defense policy response to China's military modernization beyond the modest and incremental approaches being adopted by Japan today.

Although Japan would continue to emphasize its alliance with the United States as central to its security and national interests, Japanese contributions to the alliance may fall short of U.S. expectations because of depressed defense budgets, constrained military doctrines and operations, and ambivalence about a rationalized alliance relationship. Rhetorical pronouncements notwithstanding, the United States–Japan alliance would function only with hesitation and without meaningful political, operational, or planning integration. With the relaxation of the three arms export control principles, defense industrial cooperation with the United States will improve somewhat, and bilateral R&D programs will proliferate to a limited extent. Japanese defense industry reform efforts, however, would be limited, and sales of defense hardware internationally would meet with mixed success. Despite the liberalization of acquisition and cross servicing agreements, U.S. forces would not depend upon Japanese supply chains for services, equipment, or support. Japan and the United States would continue to explore ways to reduce the burden on Okinawa for hosting U.S. bases and forces without weakening bilateral defense cooperation and deterrence, but frictions especially at the local level would persist about U.S. bases in Japan.

Defense spending would remain below 1 percent of GDP. Given the slow rate of economic growth and a substantial increase in social policy expenditures, there would be little increase in the absolute amount of defense spending, and there is a strong possibility that defense spending might even decrease in absolute terms as well as in terms of its proportion relative to the national budget. Rising personnel costs for the JSDF could also force a scaling back of spending for the procurement of new defense equipment. Incremental implementation of the 2010 *NDPG* would continue, with only modest structural reform of the JSDF or defense policy infrastructure and defense budget.

Under this trajectory, there would be no revision or reinterpretation of Japan's Constitution to explicitly permit the exercise of the right of collective self-defense. Japan's trenchant restrictions on collective self-defense would remain in place, each of which would be a considerable brake on bilateral cooperation and effective integration with U.S. forces. Japan, however, would continue to work with the United States to enhance bilateral defense cooperation within the parameters of the 1997 legislation regarding "situations in areas surrounding Japan." The JMSDF would pursue further development of joint training and exercises with U.S. forces, but operational planning would be focused on defense of the Japanese islands, humanitarian assistance or disaster relief, and possible peacekeeping missions.

MILITARY CAPABILITIES

The Maritime Domain

Under this low-range trajectory, the JMSDF would be unlikely to receive significant additional ships or naval weapon systems in its force structure beyond routine fleet modernization. Even *NDPG* plans announced in December 2010 would be in some doubt, as apparently there would be no additional operations or manning funding for the 6 submarines (for a total of 22) added to the JMSDF force structure. These boats would not be new construction per se, but would be added to the fleet by delaying the retirement of older boats, which normally are decommissioned far short of the end of their service lives.

The JMSDF also would not be an exception to the general rule for the JSDF of stalled “jointness” and alliance integration, thereby negating the ostensible great technological and industrial advantage of the alliance partners. As a result, Japan’s larger strategic position could be at significant risk over the long term under this trajectory, depending on developments in both Chinese and American policies and capabilities, as discussed in chapter 5.

In this low-range capability trajectory, the JMSDF would play a minimum role in defending its maritime lifelines, and in particular limit itself to operations in reduced areas narrowly defined by Japanese national and political proclivities. This approach and set of minimal capabilities not well integrated with the U.S. Navy would likely prove insufficient in competition against an expansive and emergent naval power, thereby making Japan’s maritime security dependent upon not only the U.S. Navy but also the actions and strategies of the PLA. United States–Japan allied sea control could be precluded under this trajectory because of the lack of integrated air–sea–land operations, an insufficient level of effort hampered by reduced force levels, and the inability to achieve and protect C4ISR integrity. Although the ASB concept explicitly seeks to defeat Chinese A2/AD capabilities, JMSDF operational and political limitations would undercut that mission.

The Air Domain

For the JASDF, the FX replacements (presumably the Lockheed Martin F-35 Lightning II) programmed for the JASDF’s F-4J aircraft would come very slowly and in limited numbers, and there would be no replacement in sight for the JASDF’s F-15Js, which are early-block aircraft. As a consequence, the JASDF air order of battle would be effectively obsolete. Moreover, Japan’s aerospace defense would not be adopting a posture of layered defense because of the continuing lack of an aerospace strategy, the weakness of JASDF’s force structure and very low force levels, and minimal integration. Despite the importance of Pacific and Indian SLOCs for Japan’s economic and military security, Japan would be unable to conduct defensive or offensive air operations along these SLOCs, should a war develop with China or any other major power.

The Ground Domain

To defend the outlying islands, Japan would establish small garrisons to the southwest along the Ryukyu Island chain. Under this low-range trajectory, however, a robust development of a “Japanese Marine Corps” and the new force structure necessary for real amphibious warfare capabilities would stagnate. The JGSDF would be limited to a strictly defined territorial defense of Japan, and the ability to recover disputed territories would remain largely aspirational. The JGSDF would be self-limited to point defense missions, rather than be included in modern maneuver warfare over relevant distances as part of a strategic defense in depth of Japan. Much of the explicit focus would be on ISR, an augmented tempo of JMSDF activity, air defense, humanitarian assistance or disaster relief operations, and BMD. Japan would continue to maintain a “firewall” between the Coast Guard and the JSDF regarding the protection of the sovereignty of the southwest islands (including the Senkaku/Diaoyu Islands) in order to prevent a militarization of the territorial dispute with China.

The Space and Cyberspace Domains and Command and Control

Despite their vital strategic consequence for an industrial economy like Japan’s and their implications for extended deterrence, in this low-end trajectory, Japan would defer addressing critical issues related to space and cyber defense. Similarly, despite the centrality of effective national and alliance C4ISR to the defense of Japan, its low state of development under this low-range trajectory raises to high levels the risk of operational failure and strategic defeat.

Trajectory 3: Competition

The basic logic and dynamic of this “high-range” trajectory is that increasing Chinese assertiveness as well as Chinese acquisition of high-end military capabilities would provoke enough anxiety among Japanese political elites and the public at large so that antimilitarist/pacifist attitudes would weaken considerably. Political moves to spend much more on defense (despite persistent fiscal constraints or because of Japanese economic revitalization) and to reinterpret or revise the constitution to enable the exercise of the collective self-defense right would gain traction and ultimately succeed.

An intervening or facilitating variable in this trajectory could be a political realignment in which pro-defense political elites would coalesce in one political party with an extraordinary majority or in which pro-defense political elites would become dominant in the major competing political parties and they would cooperate on behalf of a pro-defense agenda. In addition, uncertainties (political, economic and societal) in China would reduce the appeal of the Chinese market for Japanese commercial interests, and attractive alternative Asian markets (for example, Vietnam and India) would emerge for Japan over the fifteen-to-twenty-year time frame. A resulting shift in Japanese economic calculations would reduce

the dampening effect of business interests on a pro-defense agenda to counter a Chinese military threat.

In its relations with China, Japan would shift away from an emphasis on military transparency and various types of hedging to a more explicit military competition with China. Efforts to implement the 2008 East China Sea agreement will be abandoned, and Japan will become much more assertive about territorial sovereignty and its EEZ claims. Given the shift in Japanese politics, Japan will be less accommodating toward Chinese sensitivities regarding history-related issues (for example, visits to the Yasukuni Shrine and treatment of historical issues in Japanese textbooks).

Both Japan and the United States, fearing deterioration in the regional military balance vis-à-vis China, would respond not only by enhancing their own military capabilities but also by promoting bilateral defense cooperation. Japan would therefore push to transform the security relationship with the United States into a true military alliance whereby Japan would be willing to use force or actively support the use of force on behalf of collective defense goals beyond the defense of Japan proper. These two allies would also seek to create a maritime defense coalition with other Asia-Pacific countries that harbor similar concerns about China to constrain or even contain Chinese military behavior. Japan, together with the United States, would also promote regional institutions and processes that might exclude China or that might enhance diplomatic leverage over China.

Under this trajectory, Japanese defense spending would rise to about 1.2 or 1.3 percent of GDP. This would entail an absolute increase of the annual defense budget by 25 percent or more depending on the growth rate of Japan's economy. Japan's National Security Council would become a practical reality, providing explicit authority for the constrained but realistic normalization of the JSDF. There would be robust modernization of the JSDF with some acquisition of offensive systems. With the removal of existing constitutional impediments, joint planning on operations with the United States and possibly other U.S. allies would be authorized for the use of force beyond strictly territorial defense, with significant implications for strategic and operational integrity. Collective self-defense would become part of Japan's national and JSDF operational doctrines. Japanese command and control would improve significantly with rapid and robust defense institutional integration, rationalized United States–Japan alliance C4ISR, robust JSDF joint operations, and the Joint Staff Office serving in practice as a Joint Operational Command. All this would have cascading effects to enhance combined operations between the JSDF and U.S. forces. Long-range strike (maritime and air) would be doctrinally authorized and exercised but would not be fielded in terms of viable Japanese capabilities.

MILITARY CAPABILITIES

Japan would counter a Chinese military threat by emphasizing joint planning and operations with the United States. Aspirations of Japanese defense roles and missions include the ability to threaten Chinese naval ships traversing the Ryukyu Island chain,

ASW and BMD operations during a Taiwan scenario, and significant support for United States-led operations to counter Chinese A2/AD strategies (including at least integrated Japanese support for some version of the ASB concept or other possible operational concepts). Japan may also weaken the “firewall” between the Coast Guard and the JSDF for protecting the sovereignty of the southwest islands (including the Senkaku/Diaoyu Islands) by developing special ground/amphibious units (possible Japanese marine-type units) to defend these islands and by involving the JMSDF in patrols near the Senkaku/Diaoyu Islands.

Accelerated procurement of next-generation equipment (for example, fighter planes and ASW aircraft) would be under way, combined with increases in the number of submarines, Aegis-equipped destroyers, attack and transportation helicopters, and ground-based anti-ship missile launchers. The expansion of the defense budget would also increase support for C4ISR enhancements and JSDF operational mobility in the context of homeland defense, cyber defense, command integration with USFJ, missile defense, two additional Aegis BMD destroyers, six additional submarines, and more rapid acquisition of F-X aircraft. Both the JASDF and JMSDF would field versions of Global Hawk-class HALE UAV ISR platforms to complement four additional surveillance satellites.

The three arms-export-control principles would be eliminated, and third-party transfer issues would be largely resolved with the United States. Bilateral R&D programs with the United States would meet with increasing success. Defense industry reform efforts in Japan would start to pay off, and civilian industry best practices of competition and efficiency would migrate into defense acquisition. The Japanese government would commit to full establishment of defense industrial security procedures compatible with U.S. practices and expectations, removing a major impediment to defense industry cooperation. U.S. and Japanese defense logistics would also become increasingly integrated.

The Maritime Domain

Under this high-range trajectory, Japan would embrace competition with China for sea control over nearby areas within at least the first island chain and recognize the vital necessity in that competition for sea denial. The JMSDF and the U.S. Navy would for the first time plan and operate strategically, at some depth, for the defense of Japan. While ASW and missile defense would remain core JMSDF maritime functions, the outcomes of ASB-based missions, or those of other operational concepts, would be seen as major determinants of operational success or failure. The JMSDF leadership would assume a relevant role in the ASB concept in particular. The U.S. Navy and JMSDF would collaborate to acquire, train, and operate so as to be able to operate together in order to get forward and to stay forward. Pacific SLOC defense and escorting U.S. Navy strike groups to distances beyond 1,000 nautical miles could become a major operational emphasis of the JMSDF, but Japanese operations in the Indian Ocean would remain severely limited because of both political reasons and insufficient force levels within the next fifteen to twenty years.

The JMSDF would emphasize C4ISR and kill chain integrity, operational sustainability, strategic maneuverability, nearby SLOC defense, at least effective defensive and perhaps offensive ASW, strike warfare, mine warfare, and battle group survival. The JMSDF's expanded submarine force would be fully funded and manned. While the JMSDF would remain optimized for ASW, BMD, and mine warfare, U.S. Pacific Fleet and Self-Defense Fleet missile and torpedo stocks would continue to be limited, and neither VLS nor torpedo tubes could be reloaded at sea. JMSDF introduction of carrier air wings would be likely in this trajectory, but carriers would remain at risk tactically, and their future in operational plans is uncertain.

The Air Domain

In the air domain it may be possible for Japan to plan and operate strategically and in depth, at least in a defensive aerospace campaign. In order to do so, the JASDF would have to derive a more coherent aerospace strategy and doctrine. As a major technical and operational breakthrough, the ASB concept, if operationalized, could provide the basis for JASDF's strategic and doctrinal development, and certainly would establish the basis for force planning. The JASDF would recognize that effective joint and combined integration is essential, and the pressing reality that the aerospace campaign is the strategic flank for both maritime and ground operations.

At the onset of this high-range trajectory, the JASDF air order of battle would remain virtually obsolete; however, the basis for developing a realistic aerospace strategy would now be in place because the JASDF and U.S. Air Force could plan, train, organize, and acquire on a more rational alliance basis. Nevertheless, F-X replacements (presumably F-35) for F-4 and F-15 aircraft would still come slowly. It might be possible that the JASDF could articulate a rationale for the accelerated acquisition of fourth-generation aircraft such as the F/A-18 Super Hornet or advanced F-15s as a gap filler and force builder while waiting for F-35 procurement. Also significant would be a rationalized plan for a force of Japanese HALE UAV ISR platforms, and for AWACS, tanker, and strategic lift aircraft at realistic levels. JASDF leadership in BMD would be a forcing function for significant joint and combined interoperability but would remain a work in progress.

The Ground Domain

As in the maritime and air domains, this high-range trajectory would present for the first time the opportunity for the defense in depth of Japanese territory as a major doctrinal and operational factor. This would be a development with significant strategic ramifications, marking the end to the JGSDF doctrinal assumption regarding "limited and small scale invasions" of Japanese territory. Nevertheless, Japanese national territorial defense largely would be confined to air and missile defense, notwithstanding the significant transition of the JGSDF to a new "Dynamic Defense" doctrine emphasizing the JGSDF's operational mobility within Japan (and rejection of the "static defense" concept). The JGSDF would

place major emphasis on defeating territorial incursions, but in the most limited way and in its literal interpretation.

Defense of outlying islands would be a major JGSDF planning factor. Japan would continue to develop amphibious capability (a “Japanese Marine Corps”) to regain lost territory, but this capability would not develop far beyond a relatively small cadre capable of amphibious assault, and the combined arms operations required would stretch the limits of Japanese jointness and alliance combined operations. The JGSDF posture for direct defense of Japan’s main islands against major Chinese incursions, combined with JGSDF ambitions for amphibious operations, would present a direct opportunity cost for air and missile defense. JGSDF deployment outside Japan into China’s maritime salient would be unlikely under this trajectory. Nevertheless, the JGSDF could play an unexpectedly significant role in seizing or defending bases and chokepoints.

As discussed in chapter 5, it would remain unclear whether China would have the capability to reach Japanese territory for the purposes of invasion and occupation under this trajectory, with the possible exception of a few extremely isolated islands. In this regard, disputed island territories would be more likely to provoke maritime and air interactions. Ironically, the potential would exist for significant JGSDF island garrisons to be located along Japan’s southwestern islands. The strategic and operational mobility of the JGSDF would facilitate effective jointness across the board because the JMSDF and the JASDF would provide the platforms to transport the JGSDF when rail and road networks are insufficient or irrelevant. However, insufficient capability for the offshore operational and strategic mobility of allied ground forces could mean that externally deployed JGSDF operations would remain limited to minor peacekeeping operations, albeit with considerable potential for significant training and force development opportunities. Militarily meaningful JGSDF deployment outside Japan, however, would remain unlikely, especially to distant locations in the region.

The Space and Cyberspace Domains

Under the high-range trajectory, Japan, through its Space Strategy Office and Space Policy Commission, is likely to draft and implement legislation and policies that give substance and capability to Japan’s space security requirements. For example, a Space Command could be established as a new defense organization, and a Space Joint Task Force could be created under the Joint Staff Office. The incorporation of HALE UAV atmospheric alternatives into future force structures and C4ISR architectures could mitigate the extreme operational dependence upon space assets. Similarly, JSDF and national cyber organizations would be established to rationalize and coordinate cyber policies, strategies, and capabilities within Japan and between Japan and the United States. For example, the Ministry of Defense could form a new Cyber Command and a Cyber Joint Task Force.

Command and Control

Significant command and control developments would be possible, and would be a reasonable expectation and outcome, given the alliance political breakthroughs that the high-range trajectory stipulates. This operational integration would facilitate a key competitive advantage for the alliance. Breakthroughs on this trajectory for the JSDF and the alliance in a counter-C4ISR operating environment would include doctrines and capabilities that facilitate independent operations; defensible C4ISR; and C4ISR that can be reconstituted when high-demand, low-density C4ISR assets are damaged or destroyed. Japanese international humanitarian assistance or disaster relief and peacekeeping missions would become laboratories for advanced C4ISR, and emulate the exercise of the right of collective self-defense.

Trajectory 4: Accommodation

The basic logic of this trajectory is that Chinese behavior and strategic intentions, despite some increase in its military capabilities, are perceived by the Japanese to be essentially benign. Moreover, China would continue to be an attractive, if not critical, market for Japan's long-term commercial interests. There would therefore be little incentive to substantially increase defense spending (especially given the persistence of severe fiscal constraints), and antimilitarist or pacifist attitudes both in the public and among political elites would continue to be resilient. Constitutional constraints on Japanese defense policies and forces would remain largely intact. A moderate or even severe reduction in U.S. forward military deployments (discussed in chapters 4 and 5), either because of American domestic economic stagnation or because of generally benign American views of a rising China, would further motivate Japan to accommodate to Chinese security interests and to explore ways to develop a regional cooperative security regime as the salience of the U.S. alliance network declines.

The demilitarization of cross-Taiwan Strait relations and prospects of reconciliation between China and Taiwan would also encourage Japanese strategic accommodation with China. In this positive climate, Japan and China would jointly develop resources in the East China Sea, thereby making EEZ and territorial disputes less politically salient. The two countries would promote and implement an effective confidence-building regime in the East China Sea and push toward greater reconciliation on historical issues. Although the U.S.-Japan Security Treaty would remain in force, the bilateral alliance would decline in importance for Japanese diplomacy. U.S. military presence in Japan would be reduced significantly, and there would be no further development in joint training, exercises, and planning.

Under this trajectory, Japan would reconfirm its strictly defensive defense doctrine, exhibit clear reluctance to participate in military contingencies related to Taiwan, and participate primarily in nonlethal overseas peacekeeping activities. Defense spending would remain less than 1 percent of GDP, and there may be a relative decline of defense expendi-

tures in terms of the national budget, causing a slowdown in the pace of defense force modernization. JSDF joint training and exercises will become more multilateral with a focus on humanitarian assistance or disaster relief.

Trajectory 5: Independence

In this trajectory, there would be a dynamic similar to the one in Trajectory 3 (“Competition”). Increasing Chinese assertiveness as well as Chinese acquisition of high-end military capabilities would provoke enough anxiety among Japanese political elites and the public at large so that antimilitarist/pacifist attitudes would weaken considerably. As a result, Japan would revise its Constitution so that it can possess a full-fledged military and exercise the right of both individual and collective self-defense like any normal great power. The country would also dramatically alter its budget priorities in order to fund an accelerated program of defense modernization, including the acquisition of some offensive and power projection capabilities.

This trajectory, however, would differ from Trajectory 3 regarding the role of the United States. Rather than Japan and the United States working to enhance its alliance, the United States for domestic political and economic reasons would be reducing its military presence in the Asia-Pacific region and acquiescing to China’s growing military capabilities and assertiveness. Although, as in Trajectory 3, Japan would seek to maintain a robust U.S. security commitment in the region by providing greater Japanese support for U.S. military presence and operations, these efforts would ultimately fail. Japan could also have difficulty forging strong alliances with other Asian countries to offset a hollowing out of the United States–Japan alliance. Japan would then realize that its costly investments in conventional military capabilities are inadequate to deter China. As a consequence, Japan would revoke its three non-nuclear principles and develop a nuclear deterrent (perhaps a limited nuclear-armed submarine—that is, strategic ballistic nuclear submarine—capability). Although it is unclear how rapidly Japan could acquire a nuclear arsenal, it certainly has the technological capacity to do so.

CHAPTER 3 APPENDIX¹

TRAJECTORY 1: HARD HEDGE

Outlines of the specific features of Trajectory 1 in particular military domains are as follows:

MARITIME DOMAIN

- JMSDF operational sustainability is seriously constrained by very low levels of missiles and other munitions.
- JMSDF pursues additional C4ISR modernization, including the acquisition of small numbers of Global Hawk-class HALE UAV Broad Area Maritime Surveillance (BAMS) ISR platforms.
- JMSDF operations are constrained by available satellite bandwidth.
- Development begins of advanced long-range shipborne and maritime air patrol antiship missiles.
- There is no accompanying increase in JMSDF personnel.
- Two additional Aegis BMD destroyers are authorized.
- The first ship of the follow-on class of larger displacement, straight-deck air capable ships is commissioned. A total of two units are authorized.
- JMSDF shipborne self-defense systems are not capable against advanced cruise missiles.
- Deliberate slow-rate production of the new P-1 maritime patrol aircraft continues.
- JMSDF provides one-regimental sealift capability for JGSDF operations.
- JMSDF antipiracy level of effort in the Horn of Africa and the Strait of Malacca expands.

AIR DOMAIN

- Additional JASDF ISR modernization commences.
- Additional Patriot PAC-3 missile batteries are authorized.
- Low-rate production of JASDF's C-2 cargo aircraft continues.

1. Specific numeral projections regarding likely future weapons acquisitions in these various trajectories are estimates subject to possible variation.

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- Patriot PAC-3 deployability improves modestly.
- JASDF's fighter force modernization is limited to the replacement of two F-4 squadrons with two F-35 squadrons.

GROUND DOMAIN

- JGSDF deploys additional surface-to-surface antiship missile batteries.
- JGSDF continues its program of gradual development of amphibious warfare capabilities.
- JGSDF deploys additional attack helicopters.
- JGSDF's personnel strength continues to decline gradually.
- JGSDF stands up one additional regiment identical in capability and readiness to the Western Area Infantry Regiment.
- JASDF provides one-regiment airlift capability for JGSDF operations, and JMSDF provides one-regiment sealift capability for JGSDF operations, but insufficient mobility assets continue to be a brake on Japan's dynamic defense strategy.
- JGSDF slowly expands its peacekeeping operation level of effort.

SPACE AND CYBERSPACE DOMAINS

- New legislation enables the prime minister's Cabinet Office to take control of the planning and budgeting of Japan's government space program. The Japan Aerospace Exploration Agency (JAXA) is authorized to pursue military space programs.
- The Cabinet Office is authorized to set up a Space Strategy Office, headed by the prime minister, which will be supported by a consultative Space Policy Commission.
- Nevertheless, tight budgetary restrictions check much of the benefit of new legislation. JAXA is able to replace Japan's four aging surveillance satellites, but cannot add to the constellation.
- Organizational and force structure enhancements regarding cyber defense operations are largely deferred.

COMMAND AND CONTROL

- Slow alliance command-and-control integration continues, but the failure to implement universal and effective procedures for the exchange and safeguard of sensitive and classified information continues to retard meaningful progress.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

- Modest enhancements to alliance institutional infrastructure are proposed, but progress is slow.
- JSDF joint operations meet with some success.
- The Joint Staff Office continues to mature.
- Additional JMSDF C4ISR modernization continues, including the acquisition of small numbers of Global Hawk-class HALE UAV BAMS ISR platforms.
- Deliberate integration of JMSDF operational headquarters with U.S. Forces Japan and Commander, U.S. Naval Forces Japan at Yokosuka Naval base continues, with partial success.
- Deliberate continuing slow integration of Air Defense Headquarters with U.S. Forces Japan/Fifth Air Force meets with partial success.
- Additional JGSDF C4ISR modernization continues.
- Continuing slow integration of JGSDF operational headquarters with U.S. Forces Japan/I Corps at Camp Zama meets with partial success.

TRAJECTORY 2: SOFT HEDGE

Outlines of the specific features of Trajectory 2 in particular military domains are as follows:

MARITIME DOMAIN

- JMSDF C4ISR modernization is in “placeholder” status. JMSDF does not acquire advanced Maritime ISR platforms. JMSDF continues “manual” ISR based upon manned submarine, ship, and recce aircraft reporting.
- JMSDF does not procure Global Hawk-class HALE UAV BAMS ISR platforms.
- JMSDF operations are increasingly constrained by the lack of sufficient national security communications satellite bandwidth.
- Advanced shipborne and maritime air patrol antiship missiles remain unfunded, and development is stuck in an extended domestic R&D process.
- Advanced shipborne self-defense systems remain unfunded.
- Six additional conventional submarines are authorized, without increasing building capacity.
- Two additional Aegis BMD destroyers for national missile defense come at the expense of JMSDF war-at-sea capabilities.
- Commissioning of the follow-on class of larger displacement, straight-deck heavy air-capable ship is deferred. No additional units of previous air-capable ship classes are built.

CHINA'S MILITARY AND THE U.S.-JAPAN ALLIANCE IN 2030

- JMSDF rationale disappears for purchase of the F-35 B VSTOL fighter.
- Deliberate slow-rate production of the new P-1 maritime patrol aircraft continues. An improved sensor suite is deferred.
- JMSDF personnel strength is not increased to support additional submarines authorized in the 2010 *NDPG*, resulting in an effective personnel cut across the rest of the JMSDF. Higher-tempo submarine operations cannot be sustained.
- JMSDF provides limited sealift capability for the JGSDF.
- JMSDF antipiracy operations in the Horn of Africa and the Strait of Malacca continue, but at low levels. Opportunities for international cooperation are given low priority.
- JMSDF flotillas revert to local defense operations.
- JGSDF attack helicopters do not go to sea.

AIR DOMAIN

- JASDF is unable to formulate or develop a national aerospace strategy.
- JASDF coordination with U.S. Air Force (USAF) diminishes.
- JASDF's four 767 AWACS aircraft are not modernized.
- JASDF does not procure additional 767 AWACS aircraft.
- JASDF has no plans to transition to the advanced E-2D Early Warning aircraft.
- JASDF has no plans to procure additional E-2C early warning aircraft.
- No upgrades to the E-2Cs in JASDF's inventory are programmed.
- No Japanese national organization for cyber defense is established.
- A JSDF cyber command is deferred. Cyber defense capabilities are funded at low levels.
- JASDF cyber defense capabilities remain marginal. Establishment of a JASDF cyber command is deferred.
- Early model Patriot missiles are not replaced with new Patriot PAC-3 missile batteries.
- Patriot PAC-3 batteries are fixed in place due to no deployment capabilities.
- Two additional JMSDF Aegis BMD destroyers are introduced for national BMD, but integration with JASDF's air defense network lags badly.
- Modernization of the JASDF fighter force languishes. Small numbers of F-35s are introduced.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

JASDF F-4s are finally retired, but obsolescent F-15s continue in service. Some retired F-4s are not replaced.

- Japan's indigenous F-XX fighter replacement remains on the Technical Research and Development Institute drawing board.
- With no additional JASDF transport aircraft made available, the new JGSDF maneuver doctrine remains a paper plan.
- No additional JASDF airborne tanker aircraft are built. This delays the development of a credible defensive counterair capability for the defense of Japan, and precludes JASDF aerial tankers dedicated to support of U.S. Navy strike groups and JMSDF operations.

GROUND DOMAIN

- JGSDF deploys additional surface-to-surface antiship missile batteries
- JGSDF continues its program of gradual development of amphibious warfare capabilities.
- JGSDF deploys additional attack helicopters.
- JGSDF's personnel strength continues to decline gradually.
- JGSDF stand up one additional regiment identical in capability and readiness to the Western Area Infantry Regiment.
- JASDF provides one-regiment airlift capability for JGSDF operations, and JMSDF provides one-regiment sealift capability for JGSDF operations, but insufficient mobility assets continue to be a brake on Japan's dynamic defense strategy.
- JGSDF slowly expands its peacekeeping operation level of effort.

SPACE AND CYBERSPACE DOMAINS

- Despite enabling legislation, successive Japanese governments table national security space policy and organizational initiatives.
- Very few Japanese national security satellites are developed or launched.
- Japanese industry has little incentive to develop capable space-based technologies and hardware.
- Japan's national space surveillance capability remains fragmented and marginally effective.
- JAXA is hard pressed to replace Japan's four aging surveillance satellites, and significant gaps result due to aging out or satellite failure.

CHINA'S MILITARY AND THE U.S.-JAPAN ALLIANCE IN 2030

- Cyber defense initiatives are relegated to last priority in the government of Japan's planning.
- New national cybersecurity organizations are rejected as both unnecessary and escalatory.

COMMAND AND CONTROL

- JSDF C4ISR modernization never gets beyond “placeholder” status.
- Neither the Joint Staff Office nor the Ministry of Defense are able to implement effective alliance command-and-control integration.
- The Ministry of Defense is unable to formulate universal and effective national and alliance procedures for the exchange and safeguard of sensitive and classified information.
- JMSDF does not acquire advanced maritime ISR platforms. Manpower intensive “manual” ISR based upon submarine, ship, and recce aircraft reporting remains the JMSDF operational standard.
- Except for exercises, JSDF and U.S. Forces Japan operate independently.
- There exists in Japan essentially no effective aerospace national or Joint ISR command and control.
- Deliberate integration of JMSDF operational headquarters with U.S. Forces Japan and with the commander, U.S. Naval Forces Japan, at Yokosuka Naval Base slows markedly.
- JASDF programs very little ISR modernization.
- Appearances notwithstanding, doctrinal, technical, operational, and command-and-control integration of Air Defense Headquarters with U.S. Forces Japan/Fifth Air Force does not proceed.
- JASDF does not transition to the advanced E-2D early warning aircraft. There are no plans for additional E-2C early warning aircraft, and no upgrades to the E-2Cs in JASDF's inventory are programmed.
- Deferred JGSDF C4ISR modernization precludes integration with U.S. Forces Japan command and control.
- Integration of JGSDF operational headquarters with U.S. Forces Japan / I Corps at Camp Zama remains a low priority.

TRAJECTORY 3: COMPETITION

Outlines of the specific features of Trajectory 3 in particular military domains are as follows:

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

MARITIME DOMAIN

- Operational sustainability becomes a bilateral planning issue, as part of a broad review of Japanese and U.S. defense industrial base capacity.
- Robust JMSDF C4ISR modernization continues, including the acquisition of moderate numbers of Global Hawk-class HALE UAV BAMS ISR platforms.
- JMSDF and the U.S. Navy agree to share satellite communications bandwidth, and cooperate to plan the future Pacific region naval communications satellite architecture.
- Japan and the United States agree to bilateral codevelopment of advanced ship and maritime air patrol antiship missiles.
- Japan and the United States agree to bilateral codevelopment of advanced shipborne self-defense systems.
- JMSDF flotillas step up to blue water ops.
- Six additional conventional submarines are authorized, and building capacity is increased.
- Six additional JMSDF Aegis BMD destroyers are authorized.
- Four units of the follow-on class of larger displacement, straight-deck heavy air-capable ships are commissioned. They are similar in capability and capacity to the U.S. Navy's LHA-6 class expeditionary strike group light CV-type vessel.
- The decision is announced to purchase four squadrons of the F-35 B VSTOL fighter for embarkation in JMSDF's heavy air-capable ship.
- Production of the new P-1 maritime patrol aircraft with an improved sensor suite accelerates.
- JMSDF personnel strength is increased by 15 percent to man additional ships, submarines, and squadrons.
- JMSDF provides two-regimental sealift capability for JGSDF operations.
- Integration of JMSDF operational headquarters with U.S. Forces Japan and Commander, U.S. Naval Forces Japan at Yokosuka Naval Base accelerates, with significant success.
- JMSDF's antipiracy level of effort in the Horn of Africa and the Strait of Malacca increases, with significant international cooperation.
- JMSDF deployments to command approaches to key Japanese straits become routine, from Hokkaido to the tip of the Ryukyu Island chain.
- JMSDF embarks JGSDF attack helicopters in its larger displacement, straight-deck heavy air-capable ship.

AIR DOMAIN

- JASDF and the USAF formulate an effective alliance aerospace strategy.
- JASDF implements a thorough ISR modernization, including effective national and Joint ISR command and control. JASDF ISR is integrated with U.S. Forces Japan.
- JASDF's four 767 AWACS aircraft are modernized.
- JASDF procures four new 767 AWACS aircraft.
- JASDF E-2C early warning aircraft are modernized.
- JASDF procures new E-2D early warning aircraft.
- JASDF enhances its cyber defense capabilities, and establishes a JASDF cyber command.
- JASDF is integrated into Japan's new national cyber defense organization.
- JASDF is integrated into the new JSDF cyber command.
- JASDF is funded for rapid replacement of early model Patriot missiles with new Patriot PAC-3 missile batteries.
- JASDF begins development of the land-based component of national missile defense to complement JMSDF's Aegis BMD capability. Initial candidate programs are terminal high-altitude area defense (THAAD) and advanced shore-based SM-3 missile batteries.
- Sufficient JASDF air mobility aircraft enables universal Patriot PAC-3 deployability.
- Six additional JMSDF Aegis BMD destroyers are an action-forcing procurement for JASDF-JMSDF air defense network integration.
- JASDF fighter force modernization continues, to include accelerated fielding of F-35 replacements for obsolete F-4s, and fourth-generation gap-filler aircraft replacements for JASDF's obsolescent F-15s.
- Developing advanced beyond-visual-range air-to-air missiles is a high JASDF priority.
- JASDF Air Defense Headquarters is fully integrated with U.S. Forces Japan/Fifth Air Force.
- JASDF procures significant numbers of additional transport aircraft to support JGSDF maneuver.
- JASDF commits fighter aircraft to JMSDF combat air patrol/fleet air defense.
- JASDF procures additional airborne tanker aircraft to support a credible bilateral defensive counterair capability for the defense of Japan, and additional JASDF tankers dedicated to support of U.S. Navy strike groups.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

GROUND DOMAIN

- JGSDF implements a robust C4ISR modernization program.
- JGSDF integrates with U.S. Forces Japan command-and-control systems and organizations.
- JGSDF completes integration of its operational headquarters with U.S. Forces Japan/I Corps at Camp Zama.
- JGSDF deploys two regiments fully trained and equipped for amphibious warfare.
- JGSDF professional and doctrinal relations with the U.S. Marine Corps become very close.
- JGSDF's amphibious warfare capability becomes a central factor in enhanced integration with the JMSDF and JASDF.
- JGSDF acquires and deploys sufficient advanced surface-to-surface antiship missile batteries to command approaches to key Japanese straits, from Hokkaido to the tip of the Ryukyu Island chain.
- JGSDF surveys the Senkaku/Diaoyu Islands in advance of the possible deployment of surface-to-surface antiship missile batteries.
- JGSDF begins development of a land-mobile, maneuverable-reentry-vehicle antiship ballistic missile.
- JGSDF rounds out its full complement of attack helicopters, including sufficient numbers to deploy squadrons aboard JMSDF's larger displacement, straight-deck heavy air-capable ships.
- JGSDF continues to reduce its infantry and armor units in favor of more mobile formations.
- Overall, JGSDF continues to reduce its troop strength.
- JGSDF converts two additional regiments to first line capability and readiness equal to that of the Western Area Infantry Regiment.
- JASDF provides two-regiment airlift capability for JGSDF operations.
- JMSDF provides two-regiment sealift capability for JGSDF operations.
- JGSDF further expands its peacekeeping operation level of effort as part of a program of force development and doctrinal evolution.

SPACE AND CYBERSPACE DOMAINS

- The government of Japan effectively rationalizes national security space policy at the Cabinet level.
- The Japanese MOD establishes a Space Command as a new defense organization.

CHINA'S MILITARY AND THE U.S.-JAPAN ALLIANCE IN 2030

- A Space Joint Task Force is established under the Joint Staff Office.
- National security space civil-military integration becomes a Cabinet priority.
- Japan draws up a comprehensive space law, a “Space Activities Act,” which provides a legal framework for privately funded space initiatives, and a series of five-year space plans.
- Technical and operational civil and military space cooperation between the United States and Japan is extensive.
- American and Japanese industry collaboration on major civilian and military space programs begins to develop rapidly. Spin-offs enhance national security space capabilities in both countries.
- Japan programs and develops a full constellation of national security communications satellites, surveillance satellites, early warning satellites, and Global Positioning System satellites designed to military specifications.
- Japan complements its on-orbit constellation with near-space, very-high-altitude airships with a variety of sensor and communications suites.
- The Japanese MOD forms a new Cyber Command and a Cyber Joint Task Force. Civilian defense aspects of cyberwarfare are acknowledged, and MOD begins to coordinate infrastructure protection with other ministries and civilian institutions.
- The Joint Staff Office establishes a Cyber Command Headquarters, and begins to coordinate its cyberwarfare C4ISR and programmatic development with American counterparts.
- Cybersecurity cooperation with the United States is legitimized and becomes reasonably effective.

COMMAND AND CONTROL

- The Japanese MOD begins rapid and robust domestic and bilateral defense institution integration.
- Japan establishes national military and defense industrial security procedures that enable the effective exchange and safeguard of sensitive and classified information.
- The JSDF services are increasingly integrated. Joint operations are increasingly well developed.
- The Joint Staff Office becomes a practical Joint operational command.
- JSDF operations are reorganized on the basis of Joint Task Forces (JTFs).
- The alliance enjoys cascading positive benefits from well-established combined operations between the JSDF and U.S. Forces Japan.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

- Operationally, JSDF units join U.S. JTFs, and U.S. forces join JSDF JTFs.
- The MOD and the Joint Staff Office rationalize alliance C4ISR with U.S. Forces Japan and with the U.S. Pacific Command.
- U.S. personnel are integrated into the Japan Defense Intelligence Headquarters.
- Japanese personnel are integrated into U.S. Forces Japan and U.S. Pacific Command intelligence centers and operations.
- JMSDF acquires moderate numbers of Broad Area Maritime Surveillance ISR platforms.
- JMSDF and the U.S. Navy agree to share satellite communications bandwidth, and cooperate to plan the future Pacific region naval communications satellite architecture.
- U.S. Navy personnel are integrated into the JMSDF Fleet Headquarters and ASW Control Center at Yokosuka Naval Base.
- JMSDF personnel are integrated into the U.S. Navy intelligence and operational centers at Yokosuka Naval Base and at U.S. Pacific Fleet Headquarters at Pearl Harbor.
- JASDF upgrades its E-2C early warning aircraft. JASDF procures 14 new advanced E-2D aircraft, and four additional 767 AWACS aircraft.
- U.S. Air Force personnel are integrated into the JASDF Air Defense Headquarters.
- JASDF personnel are integrated into Fifth Air Force's headquarters and command center.
- U.S. Army and Marine Corps personnel are integrated into JGSDF headquarters.
- JGSDF personnel are integrated into U.S. Army Japan Headquarters at Camp Zama and U.S. Marine Corps III Marine Expeditionary Force headquarters on Okinawa.

4

THE UNITED STATES

STRATEGY AND DOCTRINE¹

National Security Strategy

At the broadest level, the most fundamental national security objective of the U.S. government is to protect the American people by preventing terrorist attacks and other more conventional threats against the homeland, while also advancing or protecting U.S. security interests in critical regions of the world. In order to attain these objectives, the 2010 National Security Strategy (NSS) identifies three tasks for the current era: (1) rebuild the foundation, competitive advantage, and resilience of the American economy; (2) pursue comprehensive engagement with nations, institutions, and peoples around the world on the basis of mutual interests and mutual respect; and (3) promote a just and sustainable international system that recognizes the roles of all nations.²

The last two of these three objectives derive from a long-standing commitment to the protection and advancement of a United States–led and inspired global order via a variety of political, economic, diplomatic, military, and societal-cultural means. This global order consists of six key elements:

- The UN- and Bretton Woods-based systems, rules, institutions, and procedures to regulate the international monetary system;

- A closely related set of bilateral and multilateral institutions, forums, and agreements designed to promote capitalist market systems and global free trade;
- A general commitment to a post-World War II norm against the unilateral use of force to alter national borders, and also against a national government committing acts of genocide against its own populace;
- A set of nonproliferation and arms control regimes for weapons of mass destruction (WMD) embodied in a range of formal institutions and informal practices, from the Nuclear Non-Proliferation Treaty to the Nuclear Suppliers Group;
- Domestic governance norms (in the form of international treaties, statements, and bodies) designed to address basic humanitarian concerns and political or social issues related to corruption, the rule of law, and basic human rights; and
- A range of institutions, agreements, and activities designed to counter nontraditional security threats to all nations, ranging from global terrorism to pandemics, illegal drug trafficking, environmental degradation, climate change, and financial/energy crises.³

From the perspective of most, if not all, American policymakers, since the end of the Cold War, the preservation of this order and the protection of U.S. assets have relied on the maintenance of a global power structure in which the United States has enjoyed a preponderance of military power in certain key strategic regions, as well as significant (if not dominant) levels of political, diplomatic, moral, and economic presence and influence on critical issues, within key institutions, markets, and other related areas.⁴

More concretely, in the security realm, such capabilities and structures are viewed as essential to carrying out a range of U.S. objectives worldwide, including homeland defense, success in the war on terrorism, the prevention of conflicts in vital regions and localities, the maintenance of deterrence against aggression, and the preservation of the ability to prevail in any conflict waged by U.S. forces. The attainment of these security goals requires five strategies: (1) shaping the security calculations of both allies and potential adversaries through a combination of political, diplomatic, economic, and military means; (2) preventing WMD proliferation; (3) strengthening and expanding key alliances and partnerships (in part by supporting and equipping partner security forces); (4) securing strategic access and retaining freedom of action for U.S. forces in all vital regions; and (5) creating a new “jointness” in integrating and unifying U.S. forces.⁵

Security Strategy in Asia

The Asia-Pacific region has long been regarded by U.S. policymakers as a vital component of the global power structure outlined above, given the region's oceanic links to the U.S. homeland, economic dynamism, political diversity, geostrategic relationship to other

key regions, and role as home to several major military and/or economic powers, notably China, Russia, India, and Japan.⁶

Throughout the post–World War II era, the United States has sought to employ its capabilities and influence to protect or advance six key interests in the Asia-Pacific region:

- To prevent the emergence of a hostile power that could limit or exclude U.S. access to the region;
- To prevent the emergence or intensification of regional disputes or rivalries that could disrupt overall peace and economic development;⁷
- To ensure freedom of commerce, market access, and security of sea lines of communication (SLOCs) throughout the region;⁸
- To defend and encourage democratic states and humanitarian processes and to discourage the expansion of nondemocratic movements or regimes hostile to the United States;
- To prevent the proliferation of WMD and WMD-related technologies and know-how across littoral Asia; and
- To cope with nontraditional security threats, in particular global and regional terrorism, pandemics, and environmental degradation.⁹

The defense of these key interests has required a general strategy consisting of two fundamental elements. First and foremost, in the security arena, are the creation and maintenance of dominant American political and military influence across the vast reaches of maritime East Asia, extending from the West Coast of the United States to the Indian Ocean and including areas of the Asian littoral.¹⁰ The United States has pursued this objective by maintaining the ability to project superior naval, air, and (to a lesser extent) land power into or near any areas within this region.¹¹ This has been facilitated by the maintenance of formal bilateral political and security alliances and military-basing arrangements with several key states in the region—including, notably, Japan (discussed below), followed by South Korea, Australia, Thailand, and the Philippines—along with the maintenance of political and security relations with other significant Asian powers, such as India and Indonesia.¹²

The second core element of U.S. strategy in Asia has focused on the advancement and protection of those global and regional norms and institutions that support these interests, largely via close political, diplomatic, economic, and social interactions with a wide range of state actors and multilateral regional and international organizations, ranging from the United Nations to the Association of Southeast Asian Nations Regional Forum.¹³

During the Cold War, this overall strategic posture was largely oriented toward defending against the expansion of communist influence originating from the former Soviet Union

and Maoist China, North Korea, and North Vietnam further into Asia, and, secondarily, toward protecting or enlarging U.S. political and economic interests across the region. Since the collapse of the Soviet Union and the emergence of a more open, pragmatic, market-oriented economic and social system in China, America's grand strategy in Asia has primarily focused on strengthening its cooperative political, economic, and security relations with all the region's major powers while sustaining its political and military dominance in the maritime realm. The Vietnam War and Korean War experiences, combined with the size and strength of the People's Republic of China, led the United States to eschew seeking dominance on continental Asia. Moreover, such dominance was not deemed requisite to protect U.S. economic and security interests in this vital region.

Strategy Toward Japan and the Alliance

Since the end of World War II, the U.S. alliance relationship with Japan has been a critical cornerstone of the above-outlined American security policies in the Asia-Pacific region, especially in Northeast Asia. During the height of the Cold War, Japan served primarily as a critical forward base area for U.S. forces and a bulwark against Soviet and Chinese expansion on such fronts as Vietnam, the Korean Peninsula, and Taiwan. Although Washington increasingly desired for Tokyo to build a substantial military capability, Japan successfully resisted much of this pressure, focusing instead on assisting the United States in the defense of the home islands and, over time, agreeing to a limited "rear-area-support" role for U.S. forces operating in nearby regional contingencies. The details of this evolution are discussed in chapter 3.

Over the last ten to fifteen years, partly in response to China's rise, U.S. security policy toward Japan has again emphasized strengthening and to some degree extending the bilateral alliance through the improvement of a wide range of political and security relations with Tokyo. This undertaking has involved support for greater levels of Japanese military modernization, a higher (albeit still in many ways very limited) degree of interoperability between U.S. and Japanese air and naval forces, the expansion of Japanese security interests and responsibilities beyond a mere defense of the home islands,¹⁴ and a larger Japanese role in regional security-related multilateral mechanisms and forums¹⁵—with the intention of ultimately moving the relationship from one of limited "burden sharing" to limited "power sharing." Similarly, the Japanese and U.S. military forces have participated in increasingly more sophisticated joint exercises. In recent times, this has included exercises such as the Iron Fist amphibious capabilities training and the Japan Ground Self-Defense Force–U.S. Marines training held in Guam and Tinian from August to September 2012.¹⁶

Although Japan's capabilities and role in the alliance have not changed radically, Tokyo has made limited progress in many areas, as described in greater detail in chapter 3. Nonetheless, China's continued rise as a military power in East Asia—and especially its deployment of larger numbers of increasingly sophisticated conventional power projection platforms and antiaccess and area denial (A2/AD)-related capabilities near Japan—are causing

growing levels of concern in Washington about the future ability of Japan-based U.S. forces to operate freely and maintain sufficient levels of deterrence in the Western Pacific. The diminishment of such capabilities could eventually raise doubts in Tokyo about the credibility of U.S. security assurances and thus strain the United States–Japan alliance. Perhaps equally worrisome, the modernization and expansion of China’s nuclear forces is arguably eroding the United States’ extended deterrent by increasing doubts in some Japanese defense circles regarding the future willingness of the United States to risk its cities to defend Japanese territory under threat or attack from China. That development is also increasing concerns in Washington and Tokyo that China’s more capable and survivable nuclear force will make Beijing more willing to employ its conventional forces in disputes over maritime territorial and resource issues such as the Senkaku/Diaoyu Islands.

The Obama administration has attempted to address several of these issues. Both before and during President Obama’s visit to Japan in November 2009, and as part of its overall “rebalancing” toward Asia (discussed below), Washington undertook actions designed to show the new administration’s firm commitment to the alliance and U.S. security pledges in particular, even as it has also sought to strengthen the Sino-U.S. relationship in political-military and other areas. Such actions have included substantive improvements in the U.S. military presence in the Asia-Pacific region, including forward deployment of advanced stealth aircraft and submarines, as well as repeated assurances, conveyed in person and via public and private statements, that the United States remains fully committed to nuclear deterrence and extended deterrence toward Japan and its other Asian allies.¹⁷

In addition, regarding key regional security issues, the Obama administration has sought to reassure Tokyo that it will not accept a nuclear North Korea, despite the lack of progress on denuclearization, and it has reiterated George W. Bush’s statements of support for continued improvements in Sino-Japanese relations while also expressing qualified support for Tokyo in its intensifying dispute with Beijing over the Senkaku/Diaoyu Islands.¹⁸ With regard to the highly sensitive issue of the relocation of U.S. forces in Japan, after some initial friction, Washington and Tokyo forged a compromise on various near-term and longer-term base relocation components, including a five-year Host Nation Support agreement in 2011. In 2012, they modified previous plans for facilities and Marines based in Okinawa to delink certain challenging political and logistical dynamics that they hoped would speed up implementation.¹⁹

In looking toward the future, U.S. leaders realize that Japan faces some potentially conflicting pressures in addressing China’s growing military capabilities. Those capabilities, along with arguably increasing levels of Chinese assertiveness toward disputed territories in the East China Sea, are compelling Tokyo to try to strengthen its deterrence capacity. Yet an array of domestic political, economic, and social constraints, along with Japan’s growing dependence on trade and investment with China, also argue for the maintenance of cooperative relations with Beijing and continued significant limits on defense spending.

As indicated in chapter 3, the resulting ambivalence in Japanese policy toward China is reinforced by more long-standing, crosscutting fears in Japan over the future evolution of

U.S. policy toward China. On one hand, Tokyo is concerned that Washington might downplay the importance of the alliance to improve economic and political relations with Beijing; on the other hand, it fears becoming entrapped, as a key security ally, in a deepening U.S. policy of hostility toward China.

In the security arena, such Japanese ambivalence and restraint, along with both China's growing economic and military influence in Northeast Asia and Washington's current economic malaise, combine to challenge the ability of the United States to craft an effective, long-range policy toward Japan and the alliance. Such a policy must simultaneously meet three basic goals:

- Reduce fears that future U.S. political-security policies toward China might either expose Tokyo to unwanted pressures and threats from Beijing or, alternatively, reduce the credibility of U.S. security assurances to Japan;
- Facilitate the peaceful handling of possibly intensifying Sino-Japanese territorial disputes and encourage the development of a more cooperative overall Sino-Japanese relationship; and
- Maximize the likelihood that Tokyo will acquire the kinds of capabilities and policies that are deemed necessary by Washington to defend U.S. and allied interests in the face of a more assertive, rising China.

Achieving such goals will almost certainly involve significant trade-offs. For example, the more Washington reassures Japan about its security commitment, the less inclined Tokyo might be to strengthen its own defense. Conversely, if the United States is less reassuring in order to get Japan to strengthen its own defense, Tokyo might be tempted to accommodate Beijing at the expense of Washington, or alternatively, could become more nationalistic and militaristic than the United States and others in the region might like. Also, pushing harder on Japan to strengthen its military capabilities might induce Tokyo to become much more assertive about its territorial and resource claims in the East China Sea, thereby provoking tensions with China and possibly entrapping the United States in a confrontation it would rather avoid. However, encouraging Japan to cooperate more with China for the sake of regional stability might reduce Japanese incentives to enhance defense cooperation with the United States to counter China's growing military power, for example, as part of a future U.S. Air-Sea Battle (ASB) concept-based force enhancement.

Such complexities place a premium on developing both a clear and common understanding with Tokyo of the long-term responsibilities of both sides in the alliance and, equally important, establishing a high level of confidence in the ability of the other party to meet its future obligations. This, in turn, requires the development of a clear and realistic understanding of the future structure and purpose of the alliance with regard to China and security in Northeast Asia.

As indicated in chapter 1, many factors will influence U.S. efforts to achieve these goals and objectives over the next fifteen to twenty years, including the future of Washington's political and diplomatic relations with both Tokyo and Beijing, the state of the U.S. economy and technological base and their capacity to sustain sufficient levels of defense spending and deployments, and both Japanese and Chinese domestic political and economic developments. All these areas are to varying degrees under debate within U.S. (and Japanese) policy circles and are subject to larger political and economic forces within Asia and beyond. As a result, many could evolve in very different directions over the next fifteen to twenty years, thus resulting in different types and levels of U.S. policies and capabilities toward China, Japan, and the alliance. The main features of these determining variables, their possible evolution over time, and their consequences for future U.S. capabilities, actions, and beliefs, are discussed in the following subsections.

Strategy Toward China

Since the 1970s, Washington has pursued two broad sets of strategic objectives toward China. On one hand, it has sought to sustain the Chinese leadership's emphasis on maintaining stability and prosperity within China, in Asia, and beyond, by vesting Beijing in the maintenance and to some extent the protection of the existing global and Asian order and by augmenting its willingness and capacity to work with the United States and other Western powers in addressing a variety of bilateral, regional, and global issues and problems. On the other hand, Washington has increasingly sought to dissuade or deter Beijing from using its growing capabilities to undertake actions or acquire the level and type of power and intentions that could undermine global or regional stability, peace, and prosperity or directly threaten vital U.S. capabilities and interests, both globally and in the Asia-Pacific region.

U.S. policies toward China thus combine efforts to engage and invest Beijing in stability-inducing and problem-solving norms, structures, and processes with efforts at counterbalancing, deterrence, and hedging.²⁰ In the security realm, U.S. military power serves several crucial purposes:

- To facilitate Beijing's integration into cooperative security-oriented processes and behaviors that are compatible with overall American interests (for example, via military deployments, diplomacy, and dialogues);
- To reassure other Asian powers (and in particular Japan and America's other Asian allies and partners) that the United States has the capability and will to protect and advance its political, economic, and security interests and commitments to them in the face of a rising China with growing power projection capabilities;
- To deter Beijing from attempting to use coercive military force to shape or resolve specific disputes with neighboring territories and states, such as Taiwan and Japan; and

- To ensure that Beijing remains unable to establish an exclusionary sphere of influence in the Western Pacific that would limit U.S. economic, political, and military access and the open transit of U.S. and allied civilian and military ships and aircraft across the region.

In the military realm, Washington has striven to attain these ends by augmenting its air, naval, and space capabilities and enhancing its military-to-military relationships with Beijing and other major Asian powers. This undertaking, along with other defense-related and many nonmilitary initiatives toward regional states, is now part of a new policy approach that seeks to emphasize Asia in U.S. global foreign and defense policy (discussed in greater detail below).

DIFFERING U.S. STRATEGIC APPROACHES

The cooperative engagement side of America's two-sided security approach toward China, along with its strong commitment to strengthening close political and diplomatic relations between Beijing, Tokyo, and other allies and friends, have been most often emphasized in the public statements of U.S. officials since the normalization of U.S.-China relations.²¹ At the same time, American political and military deterrence and dissuasion efforts, and the important role played by key security allies such as Japan and South Korea in undertaking these efforts, have arguably played an increasingly important role in the United States' Asia strategy since at least the early 1990s, especially as China's economic and military capabilities have grown. Indeed, they especially come to the fore in U.S. statements and policy actions during times of tension over Taiwan or when addressing the larger deterrence role of U.S. forces in Asia.

These differing emphases on cooperation versus deterrence-oriented hedging within Washington's policy toward China and its bilateral alliance relationships in Asia to some extent reflect a larger difference among U.S. defense analysts, officials, and political leaders between two basic strategic approaches toward China and the region as a whole: a hardline realist approach, and a more moderate approach. The hardline realist approach is found among some analysts and decisionmakers in the U.S. military, in the intelligence community, and in private (usually conservative) research institutes and defense industry corporations. They hold that the deterrence side of U.S. security policy should constitute the core of a basic military approach that treats China as an actual or likely future adversary.²²

These individuals point to China's ambitious military modernization program, along with its purported efforts to reduce U.S. influence in various regional multilateral forums and organizations, as providing prima facie evidence of Beijing's intent to return to supposedly historic levels of military and political dominance in the Asia-Pacific region, at the expense of the United States. For these observers, China is thus fully engaged in an intense zero-sum strategic competition that directly challenges American interests.²³ Advocates in this camp argue that it is naive and dangerous for the U.S. government to think that it can persuade or entice Beijing to give up its supposed pursuit of strategic dominance in the

Asia-Pacific region, because China is a rising power that will settle for nothing less than military and political preeminence in Asia and perhaps globally as well. Proponents of this viewpoint argue that the most effective means of addressing China's military buildup are to maintain a clearly superior U.S. military, to exert great efforts to strengthen and rally regional allies (in particular Japan) as close U.S. partners in countering Beijing, and to undertake economic measures to weaken China, at the very least in areas relating directly or indirectly to its security capabilities.²⁴

A less extreme variant of this hardline approach would not treat Beijing as a Cold War-style opponent but rather as a potential adversary who must be approached from a position of unchallengeable strength and given clear red lines with regard to any potential trouble spots, from the Korean Peninsula and Taiwan to Southeast Asia and perhaps beyond. At the same time, Washington would also regard Beijing as a growing regional power with which it could cooperate on some issues but probably not on those involving military activities across the Western Pacific. In each instance, U.S. policy would focus greatly on strengthening security relations with key allies and others while treating Beijing as an occasional collaborator in addressing regional and global problems, especially in the economic sphere.

A more extreme variant of this approach would assume that the forces driving competition and confrontation between China and the United States will increasingly predominate over those forces driving cooperation. It would thus call for a major increase in the capacity of the United States and its allies to deter China from using its growing military power to fundamentally alter the existing distribution of military power globally, and especially in the Asia-Pacific region. In other words, this more extremist approach would treat China as an unambiguous, present-day adversary and threat to vital U.S. interests, requiring even clearer and more vigorous efforts to contain its power and influence. One key element of such an undertaking might involve the creation of a grand regional coalition of democracies explicitly designed to counter China's growing challenge to the region.

Many elements of this hardline perspective are certainly present in some quarters of the U.S. government. However, they have not yet won support among senior civilian decision-makers. Most U.S. leaders espouse a version of the moderate alternative to the hardline approach. They reject the notion that Beijing and Washington are already deeply engaged in a largely zero-sum strategic rivalry centered on political-military moves and countermoves in the Asia-Pacific region and beyond. They do not assume that Beijing is determined to eject the United States from the region, and they appear to recognize that both nations—not just China—could create a self-fulfilling hostile relationship through their own actions. To the contrary, they believe that the Chinese leadership recognizes the huge cost to China's national goals that would result from efforts to confront the United States militarily (and otherwise), and thus continues to hold strong incentives to resolve problems through negotiation and to cooperate when at all possible. Hence, advocates of this moderate and balanced approach recognize the need to maximize incentives on both sides to cooperate while retaining the ability to counter possible aggressive military and political actions by Beijing.²⁵ This essentially amounts to a variant of the long-standing U.S. policy approach to

China. Equally important, many if not most supporters of this largely status quo approach also to some extent remain confident that the United States can maintain a sufficient level of military and political dominance in maritime Asia to preserve the regional order.²⁶

One somewhat extreme variant of this perspective almost entirely rejects the supposedly obsolete great power politics of the past in favor of more inclusive, positive-sum, cooperative undertakings that build on the forces driving globalization and seek to address the emergence of an increasing range of nontraditional security threats to all powers. Proponents of this approach tend to view America's current economic and political problems as the initial indicators of a long-term decline in the relative economic and military power of the United States. In the view of many of these individuals, such a major shift in the balance of power will likely necessitate the repudiation of many elements of the post-World War II status quo in favor of a new, pared down U.S. diplomatic, military, and economic approach, perhaps involving some variant of a parity-oriented balancing strategy in the security realm, combined with efforts to increase cooperation with and among China, Japan, and other Asian powers. Such a strategic approach would place considerable emphasis on allies and partners to provide regional security, in part as a substitute for declining relative U.S. power.

However, proponents of this view would also place greater stress on working directly with Beijing to reduce misperceptions and expand the overall boundaries of cooperation, while also working with allies and friends across the region to build a more inclusive multilateral political, economic, and (perhaps eventually) security mechanism in Asia. The relative emphasis placed on working through bilateral alliance relationships versus broadly inclusive multilateral mechanisms to strengthen regional security would depend in part on the capacity and willingness of the allies, and Japan in particular, to play a more active role in regional security affairs.²⁷

“REBALANCING TOWARD ASIA”

Since as early as 2009, the Obama administration has attempted to direct increased resources, attention, and energies to the Asia-Pacific region. This undertaking, labeled by some officials as the “Pacific Pivot” but more commonly as “rebalancing,” is seen as an important response to the growing overall significance of the region to American political, economic, and security interests, and in particular to the challenges and opportunities presented by an increasingly powerful and influential China. But it is also intended to signal Washington's continued commitment to a vital region during a period of global uncertainty and national distress brought on in large part by the worldwide financial crisis.

U.S. officials have stressed three policy features as central pillars of rebalancing: first and foremost, the strengthening of U.S. bilateral alliances and security partnerships in the region, especially the alliance with Japan; second, more intensive engagement with the emerging power centers in the region, most notably China, India, and Indonesia; and third, more active and direct participation in the development of regional multilateral institutions, especially in the realms of economics, diplomacy, and security.²⁸ Each of these major

features emphasizes the positive, cooperative dimensions of the new U.S. emphasis on the Asia-Pacific region, including China and Japan. Indeed, Obama officials have repeatedly stressed that the new policy shift is not intended to contain, encircle, or counterbalance China; to the contrary, it supposedly places an emphasis on deepening military activities with the Chinese military.²⁹

Nonetheless, in the military realm, rebalancing also contains efforts to strengthen U.S. deterrence capabilities toward Beijing (the hedging side of U.S. strategy) in a rapidly changing security environment. During the past ten to fifteen years, Washington has encountered what many defense analysts regard as a growing threat from Beijing to the United States' ability to defend and advance many of the above-noted strategic interests through the preservation of its freedom of access and primacy across the Western Pacific. This threat derives primarily from China's increasing ability to militarily challenge the capacity of the United States and its allies to deploy air and naval forces, in a crisis or combat situation, into areas within approximately 1,200 to 1,500 nautical miles of Beijing's territorial borders. As noted in chapters 1, 2, and 3, this is becoming possible through the People's Liberation Army's acquisition of A2/AD types of capabilities, which are designed to prevent an opposing force from entering an operational territory and to limit the freedom of action of that force within that territory.³⁰ In its fully developed version, this system consists of sensors; trackers; medium-range, conventionally armed, offensive cruise and ballistic missiles systems with terminal precision-guidance capabilities; large numbers of conventional submarines; mines; fast boats; and an accompanying array of highly potent offshore air defense systems. If successfully deployed as an integrated network, in sufficient numbers, and protected by capable air defenses, such an A2/AD-type system could credibly threaten to damage or disable U.S. carrier battle groups and destroy U.S. aircraft as they approach the Chinese Mainland.³¹

In response to these emerging capabilities, Washington is not only increasing its forces in many areas but also examining several possible new operational military concepts.³² The most notable at this point is the ASB concept associated with the officially endorsed Joint Operational Access Concept (JOAC) unveiled by Pentagon officials in early 2012, soon after the public enunciation of the new emphasis on the Asia-Pacific region.³³ Other concepts under discussion either within the U.S. military or by outside defense analysts include Offshore Control and Mutual Denial. All these approaches are described and evaluated in some detail in chapter 6. To varying degrees, they reflect an effort to retain U.S. military primacy in the Western Pacific or at the very least a sufficient level of capability to attain those strategic objectives outlined above.

MILITARY CAPABILITIES

As the U.S. Defense Department and security establishment look beyond the wars in Iraq and Afghanistan, they have identified a number of new threats and potential missions.

As noted in chapter 1 and above, foremost among assessments of emerging threats are a range of A2/AD types of capabilities that would asymmetrically challenge U.S. operational access in key areas of the globe, including the Asia-Pacific region. Such A2/AD-type capabilities would seek to cripple or undermine U.S. freedom of action by exploiting vulnerabilities to advanced precision-guided munitions, weaknesses in network systems, and the use of other technologies to limit U.S. naval and air power projection capabilities.

Despite such emerging threats, the U.S. military still enjoys significant advantages in command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR); operational experience; training quality; and numbers and technical sophistication of weaponry across a wide variety of areas. Nonetheless, in looking toward the future, and in particular with regard to China's advancing military capabilities in A2/AD-related and other areas, one cannot assume that Washington will retain its current level of military superiority in the Western Pacific over the next fifteen to twenty years. The following analysis of the current state of United States military capabilities and assessments of possible trends through 2030 focuses on those military domains identified in chapter 1, including maritime, air, ground, space, cyberspace, nuclear, and command and control (C2), as well as various issues surrounding U.S. bases and deployments in the Asia-Pacific region.

The Maritime Domain

The U.S. Navy—comprising 286 ships and submarines, 3,700 aircraft, and more than 320,000 active duty personnel—is the primary arm of U.S. maritime dominance, serving roles in power projection, amphibious and littoral operations, and humanitarian and counterpiracy missions. Given their high-visibility nature, forward-deployed naval assets have also been critical in conveying the physical presence necessary to reassure allies, deter adversaries, and signal U.S. resolve in crises. Yet the emergence of layered and precise A2/AD-type capabilities is likely to challenge the survival, and potentially the relevance, of large-deck surface combatants and other key maritime capabilities in the Western Pacific. Over the next two decades, the U.S. military could face difficult trade-offs in balancing improvements to traditional power projection systems and programs to develop new, experimental capabilities tailored to A2/AD threats.

Although relatively vulnerable to challenges such as antiship ballistic missiles (ASBMs), antiship cruise missiles (ASCMs), torpedoes, and sea mines, U.S. surface combatants are capable of dominating force-on-force engagements against enemy ships and aircraft. Supported by an unparalleled array of targeting systems and battle networks, U.S. warships generally outstrip their peers in range and to some extent survivability.³⁴ With the introduction of new Gerald R. Ford-class carriers, the United States will gain improved sortie generation systems to sustain intense air campaigns across multiple domains.

But relative to other elements of the U.S. force structure, surface combatants are disproportionately vulnerable to asymmetric antiaccess threats in China's "near seas." Faced with the threat of long-range, road-mobile ASBMs and long-range ASCMs, the U.S. Navy is

fielding larger numbers of upgraded Aegis destroyers as well as onboard countermeasures to give carriers and other large-deck ships additional layers of protection.³⁵ However, naval analysts widely acknowledge that active and passive defenses may not be enough to offset an increasingly uncertain operating environment within the first island chain, and particularly in China's littoral waters.³⁶ These risks are exacerbated by the fact that the incapacitation, much less destruction, of any single large-deck ship could have significant operational and symbolic consequences for the United States and its allies.

Due in large part to investments made during the Cold War, the United States possesses a clear margin of superiority over its competitors in undersea warfare. Decades of U.S.-Soviet competition in subsurface warfare have allowed the U.S. Navy to refine passive acoustics and quieting technologies for its nuclear-powered fast-attack submarines, known as SSNs, to an extent that many U.S. nuclear submarines may be stealthier than their diesel-electric counterparts in the People's Liberation Army Navy (PLAN).³⁷ And, in contrast to conventional diesel submarines, U.S. nuclear submarines can operate for virtually indefinite periods of time without surfacing, permitting longer deployments and increasing the likelihood that they would slip past enemy antisubmarine warfare (ASW) networks. Although large arrays of underwater mines could prove highly dangerous, the Navy's Virginia-class SSNs seem likely to maintain an advantage in their ability to hold enemy ships at risk, launch standoff attacks against land-based targets, perform surveillance within the first island chain, and conduct operations in Pacific SLOCs.³⁸

Although U.S. forces are relatively proficient at ASW, the scarcity of ASW assets could prove problematic. ASW-equipped platforms, such as the Arleigh Burke-class destroyer, also serve vital roles in air or missile defense, and could be diverted from key missions in the event of an intensive ASW campaign. Similarly, ASW aircraft are dependent on expendable sonobuoys that could be exhausted in a protracted conflict.³⁹ Due in part to this dilemma, the Navy is experimenting with networks of unattended sensors and large, potentially armed unmanned undersea vehicles (UUVs). If fully realized, these capabilities could potentially provide a "common operational picture" of the undersea environment, although bringing these embryonic technologies to maturity could prove costly and difficult.⁴⁰

More broadly speaking, U.S. forces across the maritime domain continue to benefit from developments in sensors, networks, and precision-guided munitions. New land-attack and joint surface standoff missiles (missiles that are launched from a distance) will enhance the ability of ships and submarines to launch standoff strikes to neutralize anti-air batteries. To some degree, larger volumes of increasingly deadly and accurate payloads could blunt the impact of growing operational restrictions on dispatching manned, short-range tactical aircraft (TACAIR) into contested airspace.⁴¹

Yet U.S. naval forces will also face expanding obligations in an era of stagnating budgets and limited capacity. The simultaneous rise of rogue states, transnational actors, and peer competitors such as China has dramatically increased the complexity and diversity of missions that U.S. naval forces are expected to fulfill.⁴² At the same time, the overall fleet has shrunk from an all-time high of nearly 600 ships to well under 300 (more advanced) vessels,

and is unlikely to grow significantly over the next two decades.⁴³ The number of ships on deployment has held steady even as the Navy itself has shrunk by nearly 20 percent, forcing vessels to operate for significantly longer durations than originally planned.⁴⁴ Indeed, a number of major surface combatants and submarines will reach the end of their service lives during the 2020s and early 2030s, posing a formidable test for an acquisition process that to date has been characterized by cost overruns and delays.⁴⁵ Though a smaller fleet is by no means indicative of deteriorating capabilities, some argue that the Navy could be increasingly constrained in its ability to execute a wide variety of missions across dispersed geographic regions, to surge forces into a theater in the event of a high-intensity conflict, or to sustain local sea control as a means of defending SLOCs.⁴⁶

The Air Domain

The U.S. Air Force is a key element of U.S. power projection capabilities and integral to the United States' military posture in the Western Pacific. The Air Force enjoys significant advantages technologically and numerically against all other competitors, particularly in technology that supports stealth aircraft, such as jet engine materials and design, precision-guided munitions, and electronics and avionics capabilities. The nature of challenges to U.S. power is shifting, however, with emerging symmetric and asymmetric challenges, such as the development of China's J-20 and Russia's T-50 fifth-generation tactical fighter jet capabilities; the proliferation of smaller, cheaper satellites; and the expansion of precision-guided munitions. These developments may in the coming fifteen to twenty years facilitate the emergence of capabilities that challenge the United States' technological superiority in a broader way than previously experienced.⁴⁷

In the last ten years, the requirements of combat in Iraq and Afghanistan have led the Air Force to focus on strategic lift, deployment and sustainment, air support for ground based operations, and ISR capabilities in noncontested airspace. The focus on ISR support has contributed to a 40-fold numerical expansion of unmanned aerial vehicle (UAV) assets in the Defense Department's arsenal

As the conflicts in Iraq and Afghanistan wind down, the future role and tasks of the Air Force are gradually shifting to a focus on operating from a longer range with greater numbers of survivable, highly sophisticated stealth capabilities in order to respond to the emerging challenges of antiaccess or counterintervention strategies, principally by state actors such as Iran and China.⁴⁸ As part of an ongoing effort to retool the doctrine governing more effective joint operations and integration between the Air Force and Navy, the Air Force is looking to enhance coordination and efforts across domains to respond to developing A2/AD-type capabilities.

Specifically, advanced A2/AD-type systems heavily reliant on asymmetric precision-guided munitions could hold at risk American bases or sanctuary zones that enable long-range power projection. This threat is increasing demand in the United States for long-range strike capacity and the ability to blind or eliminate foundational adversary C4ISR systems.⁴⁹

At present, the United States' global strike capabilities include long-range assets such as the Air Force's 180 bombers (65 B-1, 20 B-2, and 94 B-52 aircraft), 1,700 combat aircraft in its active-duty inventory, about 60 KC-10 and around 200 KC-135 tanker aircraft that support other platforms, as well as myriad transport planes, tactical aircraft, and support aircraft for purposes such as intelligence.⁵⁰ Tactical and bomber platforms allow the United States to project bombing power at sustained distances with the support of tankers and airborne refueling. Combined with a network of dispersed bases, tankers allow the United States to quickly deploy and reposition air forces.

The great transit distances and dispersal of airbases in the Western Pacific, however, place a burden on aerial refueling and long-distance support and transport, a burden that will be increased in the event of overt actions to challenge U.S. power projection or in the event of sustained conflict. Challenges to or attacks on forward-operating air bases would add additional stress, which would have an impact not only on fighter and bomber aircraft but also on maritime patrol aircraft tasked with surveillance and ASW missions over very large operating areas. Sustaining operations logistically past the second island chain (that is, north and west of Guam) will present a particularly difficult challenge for the Air Force and Navy, primarily because of the vulnerability of the few U.S. bases in the theater and the small size of the naval logistics force relative to the area it serves. In addition, there will be increased demands on the aerial tanker fleet if U.S. forces are denied access to forward bases.⁵¹

Thus, in order to sustain air superiority and long-range strike capability in the face of advancing Chinese air defense and related A2/AD-type capabilities, the Air Force has pushed for the development of a number of next-generation systems, including the F-35 Joint Strike Fighter, a new long-range stealth bomber, and stealth UAV systems.

The F-35 Joint Strike fighter program has been developed as an advanced fifth-generation stealth strike fighter aircraft with the ability to go supersonic for short periods. The F-35 will be built in three different models for the Air Force, Navy, and Marine Corps. These three services plan to buy nearly 2,500 F-35 combat jets at a total acquisition price of more than \$300 billion. In addition, hundreds of F-35s are expected to be purchased by U.S. allies, eight of which are cost-sharing partners in the program.⁵² Production of initial test planes has begun at low rates, with the big ramp-up expected in the next few years after development progresses. The Pentagon plans to spend about \$15 billion annually on the F-35 beginning around 2015.

Complicating these plans, however, are the numerous budget overruns that may force the F-35 program to accept cuts to the total number of planes produced. The Pentagon's independent cost assessment office believes that the average unit procurement price could be 15 to 20 percent higher than official estimates, surpassing \$110 million per plane. Moreover, the F-35 is projected to cost a third more to operate than the legacy planes it is due to replace, such as the F-16 and F-18, though it may cost less to operate than the F-22.⁵³ These shortcomings in the F-35 program are seriously concerning in light of the urgent demand for a new fighter; F-22 production has ended, and even though older existing planes such as the F-16 and F-18 can be refurbished, they nonetheless still face limited life spans.

Moreover, although the F-35's advanced stealth and avionics are intended to guarantee air superiority in A2/AD-type environments, concerns have been raised about the F-35's speed and range, especially for operations in the Western Pacific. Maneuverability is also a concern; the F-35 lacks the F-22's thrust-vectoring technology, has issues with the ratio of wing load to thrust, lacks canards for "point and shoot" maneuvers, and cannot perform loaded supersonic cruise like the F-22.⁵⁴ Furthermore, reports of Chinese cyber theft of some parts of the F-35 designs from British codeveloper BAE Systems have raised concerns that the PLA may be able to copy some elements of the F-35 in its own next-generation aircraft, thereby eroding its superiority.⁵⁵ Acknowledged technology thefts only exacerbate concerns that advancing Russian and Chinese radar, stealth, flanker aircraft, and missile countermeasure technologies will undermine the F-35's capabilities both to enter the fight and prevail therein.

On the bomber front, the Air Force currently has a fleet consisting of 94 B-52H, 66 B-1B, and 20 B-2 bombers. The B-2 is both a conventional and a nuclear bomber, and the only bomber with stealth characteristics, and its radar-absorbing skin makes it expensive to operate. The B-1B focuses on conventional weapons, and the B-52 carries both conventional and nuclear weapons. The Air Force has begun conducting research-and-development work aimed at fielding a next-generation bomber by 2018 to replace the aging B-2, B-52, and B1-B fleets. The need for and affordability of this program have been debated, however, and funding is subject to future budget cuts and deliberations.

Moreover, observers have noted that the compressed 2018 implementation timetable for this new bomber will limit the extent to which next-generation technology can be adopted into the aircraft's design. Before the 2006 Quadrennial Defense Review (QDR), the Air Force had not called for a new bomber until around 2037, indicating that advanced technologies, such as hypersonic cruise vehicles, could potentially reach sufficient maturity by that time to be incorporated into the platform.⁵⁶ However, given the much earlier target set in the 2006 QDR, the new bomber currently under development, though still classified, will likely be stealthy but subsonic. Estimates suggest that it will have an unrefueled range of 2,000 to 3,000 miles and may carry 28,000 to 40,000 pounds of armaments. While a decision on manned versus unmanned versions of the bomber has not been reached, the 2018 target may limit the aircraft to manned versions.⁵⁷

In addition to manned platforms, the Air Force has been developing and implementing a variety of UAV platforms. As noted above, the Air Force presently makes extensive use in Afghanistan of UAVs and other mobile assets to contribute to U.S. intelligence through the collection, processing, and distribution of globally networked ISR via its Distributed Common Ground System (DCGS). This sophisticated collection system produces intelligence information gathered by air platforms such as the U-2, RQ-4 Global Hawk, MQ-9 Reaper, and MQ-1 Predator and is composed of at least 45 geographically separated, networked sites that provide critical processing, analysis, and dissemination of ISR data collected from the Air Force's area of responsibility, and make them available to other services and agencies.⁵⁸ However, present Air Force ISR capabilities are geared toward the requirements of

combat in Afghanistan and will face additional constraints and challenges when implemented more fully in the Western Pacific in potentially contested airspace. With basing limitations and increased transit distance, long transit and loiter times to perform surveillance and reconnaissance missions will place a premium on space-based and cyber assets alongside UAVs and other platforms.

The Ground Domain

U.S. forward presence and power projection in the Western Pacific is presently dependent on the roughly 38,000 U.S. troops stationed in fixed land bases across Japan, with the majority of them located in Okinawa.⁵⁹ In particular, with its strategic location, specialized infrastructure, and large-scale deployments, Kadena Air Base is vital to conducting any regional campaigns with TACAIR.⁶⁰ Yet its runways, aircraft, and supporting infrastructure and fuel storage could be incapacitated, if not destroyed, by saturation attacks from medium-range ballistic missiles or even air-to-ground cruise missiles.⁶¹ Though facilities in Guam would be far less susceptible to theater missiles, operating at such extended distances would degrade sortie rates, delay the arrival of reinforcements, and reduce the intensity and flexibility of air, and to some extent, naval operations.

In addressing the vulnerability of its forward bases, the U.S. military has focused primarily on strengthening active rather than passive defenses. Most notably, the United States has attempted to knit together land- and sea-based ballistic missile defense (BMD) to create an integrated but flexible network that can be moved and concentrated as needed. Patriot batteries and terminal high-altitude area defense (THAAD) systems would target ballistic missiles from land, while growing numbers of Aegis ships equipped with SM-3 interceptors would extend a protective umbrella over ports and bases.⁶² Yet missile defense would be *at best* a partial solution, given that enemies could enjoy anywhere from a threefold to tenfold cost advantage in any engagement, and most likely a numerical edge as well. Some U.S. observers have advocated direct-energy weapons that could conceivably overcome the unfavorable cost equation associated with BMD, but such capabilities remain experimental.⁶³

Although it has not yet committed significant resources to passive countermeasures, the United States could also invest in some mixture of aircraft and fuel storage hardening, flexible basing, and force dispersal. Given that the majority of aircraft on Kadena remain unshielded, hardened shelters could force enemies to expend more warheads to destroy a single target. Hardened fuel storage, though expensive to bury deep, requires standard industry engineering involving underground reinforced concrete tanks, networks of fuel transfer pipelines, manifolds, supporting pumps, and filtering equipment.⁶⁴ “Flexbasing” would segment a single forward base into a network of intermediate facilities, with rear areas such as Guam hosting large amounts of support material, and more vulnerable front-line locations in Japan providing runways, fuel, and other bare necessities. Dispersing forces and pre-positioning assets could also reduce the vulnerability of U.S. forces to a single crippling strike.

However, passive defenses may prove prohibitively expensive or run counter to the basic operational demands of power projection. Building costs for hardened shelters remain a serious obstacle, particularly given the sheer volume of aircraft present in U.S. bases such as Kadena.⁶⁵ Conversely, both flexbasing and force dispersal would require more redundancy in personnel and supporting infrastructure across multiple bases, while increasing the risk of political access complications.⁶⁶ And, without the benefit of centralized infrastructure and densely concentrated supporting systems, U.S. forces could be unable to mount sorties of a similar scale or intensity as seen in past conflicts. Overall, therefore, the potential ballistic missile, cruise missile, and air attack threats posed by Beijing to U.S. forward bases in Japan and elsewhere are considerable and will prove highly difficult to counter.

The Space Domain

The United States has by far the most costly and capable network of satellites of any country. America's dominance in space provides significant economic and commercial benefits and an edge over other potential military adversaries. Today the U.S. military and intelligence community manage a wide array of space activities, including launch vehicle development, communications satellites, navigation satellites (the Global Positioning System, GPS), early warning satellites to alert the United States to foreign missile launches, weather satellites, reconnaissance satellites, and developing capabilities to protect U.S. satellite systems and to deny the use of space to adversaries.

U.S. military dependence on relatively unimpeded access to the global commons in both space and cyberspace expanded enormously after Operation Desert Storm in 1991.⁶⁷ In particular, during the past twenty years, the U.S. military has invested heavily in developing battle networks to detect, identify, and track targets with precision and timeliness that rely significantly on space-based systems. In addition, during the wars in Iraq and Afghanistan, the U.S. military expanded its operation of UAV systems that require high-bandwidth secure connections from military communications satellites, as well as GPS data for navigation, precision geolocation, and targeting. As a result, the United States currently depends heavily on geostationary-Earth-orbit (GEO) communications satellites for battle management and operating UAVs from distant locations, on the medium-Earth-orbit GPS constellation for precision location and timing information, on the Defense Support Program (DSP) satellites for early warning, and on low-Earth-orbit (LEO) reconnaissance satellites for target identification and battle space awareness.⁶⁸ Beyond DSP and GPS, there have also been proposals for the development of space-based radar that would track mobile targets on the ground and for an update to the DSP involving infrared and other sensor-laden satellites, but both programs have encountered budgetary concerns.⁶⁹

The United States' dependence upon its space capabilities and networks for key elements of its war-fighting systems, C2, and ISR generates obvious concerns over possible vulnerabilities and efforts by potential adversaries that could hamper or undermine U.S. advantages in space.⁷⁰ As indicated in chapter 2, the Chinese are investing in numerous capabilities that

could counter U.S. space supremacy in the event of a conflict, including technology for jamming and counternetwork attack (an offensive form of cyber warfare), antisatellite (ASAT) systems, and directed-energy weapons.⁷¹ In addition, Beijing is also developing small, lightweight satellites that could lower the enormous costs involved in developing space capabilities while performing many of the military-related functions of existing satellites, avoiding detection by U.S. space surveillance systems, and potentially serving as co-orbital ASATs or space mines.⁷²

That said, many U.S. satellites are hardened against nuclear radiation and are equipped with on-orbit spares. Even if several GPS satellites were to be disabled, the system would probably remain fairly robust and only suffer from periodic loss of signal. For these reasons, GPS is much less vulnerable to ASAT-type attacks than are LEO satellites.⁷³

Still, as reliance on space-based assets for critical military functions becomes more problematic, the United States may increasingly shift ISR and communications functions to high-altitude long-endurance (HALE) UAVs and other airborne platforms in an effort to reduce its dependence on satellites in fixed orbit. The viability of such an option, however, would hinge upon the ability of U.S. forces to maintain air superiority or at least to prevent the detection of such assets across large swaths of the Western Pacific. The proliferation of ASAT weapons capable of threatening satellites beyond LEO could also motivate the United States to explore alternatives to GPS and to build autonomous systems within precision-guided munitions that could function with minimal satellite guidance. Indeed, the U.S. military is actively considering such options.

Whether the United States would attempt to weaponize space is a more contentious question. There have been recurring debates, both during the Cold War and in more recent years, about the utility and vulnerabilities of developing dedicated space-based ASAT weapons. However, most proposals are deemed to yield little in terms of military advantage, may involve significant cost and budgetary problems, and could raise worries of spurring and then accelerating an arms race in space.⁷⁴ Proponents of space-based weapons argue that such platforms could protect against threats from small satellites and space-based mines, ground-based directed energy ASAT, ground-based kinetic energy ASAT, and nuclear explosions in space, any of which could potentially destroy many of the satellites in LEO. However, space-based weapons would not be able to counter threats involving the jamming of GPS signals, jamming of satellite links, and orbital debris.⁷⁵ And the cost of launching and protecting such weapons could prove prohibitive over the next fifteen to twenty years, barring an unlikely breakthrough in launch technologies and defensive systems for satellites.

More broadly, as the space domain becomes increasingly competitive with the proliferation of space and counterspace capabilities, incentives for the United States to seek greater opportunities for international space cooperation in the coming years will likely increase, further constraining the impetus for space weaponization.

The Cyberspace Domain

As a domain characterized by anonymity, low barriers to entry, and asymmetric gains for attackers, cyberspace presents a vexing challenge for a network-dependent U.S. military. In response to growing threats from persistent network intrusions and prospective cyberattacks, the United States has developed more sophisticated offensive capabilities, enhanced C2 over cyber operations, and increased efforts to establish mutual deterrence. Although the United States could make significant progress in developing capabilities and refining doctrines to give pause to would-be attackers, there is little guarantee that such measures will be sufficient to ensure the stability of future interactions in this domain.

Given its reliance on cyberspace to transmit enormous volumes of data for logistics, C4ISR, and battle networks, the U.S. military is disproportionately vulnerable to cyberattacks executed as part of an antiaccess-type campaign. To provide war-fighting and support applications, the Pentagon alone has more than 15,000 different computer networks across 4,000 military installations, providing numerous points of entry for sophisticated hackers. In that vein, U.S. government and industry networks have been frequent targets of Chinese cyberespionage (whether officially or unofficially endorsed) aimed at extracting sensitive data on the operations and deployments of U.S. military forces, major projects by defense contractors, and high-level U.S. policy toward China.⁷⁶ During peacetime, intelligence gathered through these operations could aid in China's efforts to modernize its defense industrial base and accelerate the developments of next-generation capabilities, such as a stealth fighter. Over an extended period of time, such cyber operations could also be used to pinpoint vulnerabilities within U.S. government or civilian contractor networks and to establish "digital beachheads" from which to launch cyber operations in the event of a crisis or conflict. At the outset of a conflict, the PLA would be well positioned to attack or corrupt the flow of logistical information on vital transportation and U.S. Pacific Command (PACOM) networks, delaying the entry of U.S. forces into the theater and preparing the battlefield for kinetic strikes.⁷⁷

In response, the U.S. government has undertaken a three-pronged effort to develop capabilities, institutions, and partnerships to enhance security in the cyber domain. Having given up on the possibility of creating a sealed perimeter around its vast array of networks, the U.S. military has instead opted to conduct "active defense" to thwart attackers while improving the long-term resilience of its networks. In particular, a growing contingent of U.S. cyberwarfare groups have been tasked with containing and neutralizing emergent threats to key networks, tracing and identifying attackers, and probing enemy methods and vulnerabilities in preparation for potential retaliatory missions.⁷⁸ At the same time, the U.S. military has explored the use of multilayered networks of manned aircraft and high-endurance UAVs with transmission relays to ensure connectivity in the event of attacks on satellites or computer networks.⁷⁹ In addition, the military services have taken steps to encrypt data in maintenance and logistics systems on next-generation platforms such as the F-35, denying enemies access to valuable information about the numbers, positioning, and operational readiness of U.S. forces.

Although official discussions of U.S. activities in cyberspace have largely focused on defensive countermeasures, the United States has developed highly precise offensive capabilities to degrade and otherwise disrupt enemy networks. The Stuxnet worm, for instance, allowed the United States (and Israel) to alter the operating parameters of Iranian centrifuges with limited impact on civilian infrastructure, all the while generating a chain of false signals that allowed it to remain largely undetected.⁸⁰ Additional U.S. capabilities include a full spectrum of computer network attacks and computer network exploitation, and may involve aspects of influence operations that are highly dependent on ISR, fused all-source intelligence, sophisticated attribution activities, situational awareness, and responsive C2.⁸¹ Going forward, the U.S. military will likely work through the Defense Advanced Research Projects Agency to enhance collaboration with academia and industry to further develop and operationalize cutting-edge technologies in cyberwarfare.⁸²

U.S. leaders may encounter somewhat greater difficulty in managing competing bureaucracies and interests to create an effective C2 system for conducting network defense and cyber operations. The recently established Cyber Command has been tasked with defending Pentagon networks and developing doctrine, tactics, and procedures that would enable combatant commanders to integrate cyber capabilities into their theater campaigns. Yet even comparatively modest defensive countermeasures could require White House approval, extensive coordination with agencies such as the Department of Homeland Security with authority over domestic security, and discussions with intelligence agencies that could have an interest in maintaining a continuous flow of information from enemy networks. While the Pentagon would be responsible for responding to the cyber operations of foreign adversaries, other agencies would play instrumental roles in related missions such as counterintelligence and the defense of critical industries.⁸³ Given the rapid pace at which an exchange in cyberspace would likely unfold, there is some possibility that the task of coordinating bureaucracies, jurisdictions, and interests could reduce the tempo of U.S. decisionmaking and limit operational flexibility in this unfamiliar domain of warfare.

From a broader standpoint, the U.S. government has sought to refine cyber doctrine and policies to establish basic rules of engagement to govern interactions in the domain.⁸⁴ In particular, the United States has attempted to leverage both new capabilities and existing legal frameworks to address what have often been considered intractable obstacles to managing escalation and deterrence in cyberspace. To some extent, improved forensics, aggregation, and espionage have enabled the U.S. military to chip away at the long-standing problem of attribution for cyberattacks.⁸⁵ Drawing upon international law, U.S. policymakers have expressed support for declaratory policies that could potentially hold states responsible for cyberattacks originating from or transmitted through physical infrastructure under their sovereign control, including those perpetuated by proxies and third parties. In gauging the proportionality of a response to enemy cyber operations, U.S. policymakers have given particular weight to the human casualties and physical destruction directly resulting from an attack.⁸⁶ Under these possible rules of engagement, operations against critical civilian

infrastructure such as power plants or air traffic control would likely merit both cyber and kinetic responses. Given the widely acknowledged sophistication and lethality of U.S. cyber capabilities, setting clear thresholds and responses could play some role in deterring attacks on U.S. civilian infrastructure in a conflict.⁸⁷

Whether the United States' evolving capabilities in cyberspace will outweigh the destabilizing characteristics inherent to the domain, however, remains unclear. Because a significant body of information about U.S. capabilities remains classified, it is difficult to gauge the ability of the United States to overcome deeply entrenched problems of offense dominance, attribution, and rapid escalation in cyberconflict. Still, the promise of asymmetric gains will continue to provide a strong incentive for nations such as China to target U.S. military networks for espionage and attack. And, although the actual risk of a "cyber Pearl Harbor" against U.S. civilian or military networks may be overstated, making deterrence credible in a virtual and highly unfamiliar domain of warfare will likely prove challenging even if the United States manages to retain superior offensive capabilities.⁸⁸

In that regard, cyberattacks seem likely to become an increasingly worrisome source of interference with important U.S. military support systems, though not necessarily one that will single-handedly alter the correlation of forces in the Western Pacific. Nevertheless, the absence of any bilateral or internationally shared consensus regarding the rules of engagement in this domain could make future interactions between the United States and China unpredictable.

The Nuclear Domain

At present, U.S. nuclear forces possess enormous doctrinal, numerical, and operational advantages relative to most competitors, including their Chinese counterparts. Selective reductions in the numbers of U.S. warheads seem unlikely to erode the operational value of the country's strategic forces, although modernization programs for the three legs of the nuclear triad could stall. And though the credibility of U.S. extended deterrence in the Western Pacific is likely to persist, U.S. efforts to acquire and integrate capabilities to counter conventional antiaccess threats could have destabilizing spillover effects for the nuclear balance. Moreover, as noted in chapter 3, a significantly more survivable Chinese nuclear force could lower the threshold at which Beijing might contemplate applying coercive conventional capabilities against Japan and other U.S. allies.

U.S. strategic forces currently consist of roughly 1,700 warheads deployed across a triad of strategic bombers, ballistic missile submarines, and land-based intercontinental ballistic missiles (ICBMs), with thousands of additional warheads in reserve.⁸⁹ Under the New Strategic Arms Reduction Treaty (New START), the United States is expected to reduce the number of deployed strategic warheads to 1,550 by 2018. Policymakers have reportedly weighed additional cuts that would take the United States below the New START threshold, although the more ambitious of such proposals would likely require a significantly more favorable strategic environment as a precondition.⁹⁰ In most instances, it appears that the

United States will be well positioned to absorb additional reductions in its nuclear forces without compromising the basic integrity of its deterrent.

Still, the United States may face budgetary difficulties in modernizing the aging systems associated with its nuclear triad. Over the coming decades, the United States plans to field upgraded variants of the Minutemen ICBM and the Trident II submarine-launched ballistic missile (SLBM); a new air-launched, standoff cruise missile; a replacement for the Ohio-class nuclear-powered ballistic missile submarine, or SSBN; and a new long-range bomber capable of penetrating antiaccess defenses.⁹¹ Budget shortfalls and acquisition delays could potentially reduce the numbers of SSBNs on station in the Western Pacific in 2030, while cost overruns and technical challenges could limit the numbers and specifications of any long-range bombers the U.S. military manages to build. But given the relatively low level of nuclear capabilities needed to maintain a credible deterrence posture against China, such setbacks would seem unlikely to have a major impact on the larger nuclear balance in the Western Pacific.⁹²

As such, the fundamental credibility of U.S. extended deterrence in the Western Pacific will likely hold over the coming decades. Several of the nation's dozen or so SSBNs will be on station in the Pacific at any given time, providing an assured second strike capability, while new long-range bombers based in the continental United States will likely provide policymakers with a range of signaling and delivery options in a crisis. Due to the United States' relatively permissive nuclear doctrine, U.S. strategic forces will retain the ability to launch precise, counterforce strikes to neutralize military targets.⁹³ This is not to say that allied confidence in extended deterrence will remain absolute, but that any changes in such perceptions will be rooted more in complex psychological and political factors than in tangible calculations of material power.

In that regard, U.S. efforts to dominate the conventional military balance could potentially have unintended strategic implications. At present, the United States is experimenting with hypersonic glide delivery vehicles as part of an effort to secure a Conventional Prompt Global Strike system that would enable its forces to strike any target in the world within an hour.⁹⁴ Though highly notional, the successful development of such a system, in conjunction with improved C4ISR networks and increased regional deployments of ballistic missile defenses, could provoke Chinese fears of a disarming first strike and hence lead to destabilizing countermeasures. Yet in practice, these capabilities would be unlikely to guarantee the destruction of even a small nuclear force, or to render U.S. forces impervious to nuclear counterattack, thus provoking Chinese alarm without providing significant security benefits. As a result, the United States may confront unexpected trade-offs in countering antiaccess challenges and upholding strategic stability in the region.

Command and Control

At the broadest level, U.S. military C2 encompasses the exercise of direction and authority by commanders over relevant forces to accomplish various missions.⁹⁵ Typically, C2 is

spoken about in various contexts, including the combination of C2 with computers, communications, intelligence, surveillance, and reconnaissance, which is commonly abbreviated as C4ISR. The specific implementation of C4ISR through military systems combining command with communications and intelligence is described in the above-noted military domains, and its networked nature is noted as a potential weakness against asymmetric threats. This subsection focuses on the other aspect of C2 essential to effective operations and critical to operational concepts like JOAC and tactical concepts like ASB, namely, joint interoperability and training between the services to leverage U.S. capabilities in various domains.

In contrast to their combat-deprived competitors in the PLA, the U.S. military and its component services have refined and deepened their integration through an iterative and sometimes painful process spanning multiple decades. During Desert Storm, for instance, the services leveraged emerging battle networks to project power rapidly across land, sea, and air. More recently, Operation Odyssey Dawn in Libya saw the U.S. military coordinate across geographic commands, service bureaucracies, and coalition forces to rapidly dismantle Libyan air defenses and generate TACAIR sorties.⁹⁶ Though the momentum for these ad hoc initiatives has often evaporated after the close of hostilities, the level of integration among U.S. forces remains a powerful force multiplier that few competitors seem likely to attain in the near future.

Nonetheless, the U.S. military may face difficulties in reaching the levels of integration and interoperability necessary to execute its more ambitious goals over the coming decades. Implementing the JOAC and ASB concept will require the Navy and Air Force to establish highly resilient, interconnected C4ISR networks while coordinating operations across real and virtual domains.⁹⁷ Yet many of the military services' existing C4ISR networks are incompatible, the result of differing missions, customized specifications, and organizational stovepipes.⁹⁸ Organizationally, differing tactics and procedures between the Navy and Air Force may inhibit real-time operations that would require sensors and platforms from different services to work seamlessly to neutralize targets across domains.

Achieving significantly greater levels of interoperability with the Japan Self-Defense Forces (JSDF) could entail an even thornier set of challenges. On balance, the U.S. military and the JSDF are significantly interoperable in many areas, with relations between the Navy and the Japan Maritime Self-Defense Force (JMSDF) particularly strong due to allied collaboration in ASW missions during the Cold War, as well as more recent efforts to establish Aegis-based BMD networks in response to North Korean provocation. Indeed, the JMSDF has been the primary force behind major Japanese support to U.S. operations since 2001, facilitating coalition efforts in Afghanistan, assisting disaster relief following the Indian Ocean tsunami, and deploying vessels for counterpiracy missions off the coast of Somalia.⁹⁹

Yet constitutional and political restrictions on the territorial scope and nature of the JSDF's operations may hamper coordination across a range of contingencies, while limiting Japan's ability to contribute to logistical operations and rear area support. As discussed in chapter 3, serious doubts remain about whether Japanese forces will be permitted to defend U.S. ships or other assets from enemy attack, potentially limiting the extent of allied BMD

integration.¹⁰⁰ Moreover, the two militaries still lack many of the secure communications and data links necessary to coordinate operations in real time, a crucial prerequisite to creating integrated ASW barriers and responsive, cross-domain BMD networks.¹⁰¹ As a result, the JSDF's participation in developing and implementing offensively oriented operational doctrines may be sharply limited.

Finally, any contingency with China will likely subject allied forces to more sophisticated and coordinated capabilities than those encountered in Libya, Afghanistan, or even Iraq. The density, accuracy, and speed of antiaccess threats will likely compress the window of decisionmaking and margin of error available to U.S. policymakers. Any mistakes encountered through the regular "learning curve" could have greater operational or human costs in a confrontation against a near-peer competitor.

Basing and Deployments

A linchpin for the United States' ability to be involved and play an influential role in the Asia-Pacific region is through its access to bases and deployments in that part of the world, particularly in Japan, Guam, and Hawaii—and to some degree, in South Korea and Australia. On the basis of the 1960 Treaty of Mutual Cooperation and Security and the high number of U.S. troops stationed in Japan, many observers, including the authors of this report, have described the United States–Japan alliance as the cornerstone of security in the Asia-Pacific region.¹⁰²

Japan has hosted U.S. troops since World War II and currently hosts roughly 40,000 U.S. troops, with about two-thirds stationed in Okinawa, despite the fact that Okinawa accounts for less than 1 percent of Japan's total land space.¹⁰³ More specifically, the III Marine Expeditionary Force is based in Okinawa, while other major contingents include the U.S. 7th Fleet stationed in the city of Yokosuka and the U.S. Air Force stationed at Misawa Air Base and Kadena Air Base.¹⁰⁴ Such U.S. forces stationed in Japan would play a critical role in extending U.S. force projection if a crisis situation were to emerge in the Western Pacific.

Despite the importance of U.S. bases in Japan to the U.S. force posture, however, local opposition and political concerns pose real challenges to their long-term management and viability. For one, Okinawans have strongly voiced their opposition to the continued presence and operation of U.S. bases. Crimes and acts of violence committed against local civilians by U.S. military personnel over the years and the 2004 crash of a U.S. Army helicopter on the campus of Okinawa International University have provoked public anger against the presence of U.S. troops.

Meanwhile, unpredictable political leadership in Japan further calls into question the success of relocation and long-term management plans.¹⁰⁵ For example, the implementation of the 2006 bilateral agreement regarding realignment of U.S. basing in Japan has stalled. The Department of Defense initially estimated the realignment cost to be around \$10.3 billion, but various complications, including environmental impact concerns, led the U.S. Government Accountability Office to offer a revised cost estimate of \$23.9 billion.¹⁰⁶ In

2012, the two allies did make some progress on realignment when they officially “delinked” the establishment of the Futenma Replacement Facility with the transfer of some Marines to Guam and also renegotiated the amount and structure of Japanese financial support for the relocation project.¹⁰⁷

Beyond Japan, U.S. forces are actively deployed in Guam, an unincorporated organized territory of the United States. Both the U.S. Navy and the Air Force operate from the island, with the major U.S. naval arsenal consisting of three attack submarines and the Air Force hosting B-52 bombers and an ISR squadron of remotely piloted aircraft. In addition to serving as a key forward base for U.S. forces, Guam is also an important location for training and joint exercises with other nations. Japan is looking to expand its participation in exercises on Guam and other islands such as Tinian.¹⁰⁸

The United States currently headquarters PACOM and its subordinate components in Hawaii. Two infantry brigades as well as various logistical elements of PACOM are based at Fort Shafter and Schofield Barracks and also at Hickam Air Force Base, housing fighter, bomber, and lift capability. Pearl Harbor also headquarters the Pacific Fleet, and the Marine Corps Base Hawaii Kaneohe Bay stations the Third Marine Regiment.¹⁰⁹

U.S. forces are also present in South Korea, with 28,500 troops currently deployed across the peninsula. The Army is the primary service deployed in South Korea, while the Air Force also maintains a significant presence through the 51st Fighter Wing and the 8th Fighter Wing and the Navy/Marines are present through Naval Forces Korea. Collectively, the U.S. force posture in South Korea represents a highly capable amalgamation of assets that nonetheless may not be as flexible as other forces in the region, since such personnel cannot be used for PACOM missions elsewhere in the theater—in contrast to U.S. forces in Japan.¹¹⁰

Finally, a 2011 bilateral agreement stipulated a rotational presence of 2,500 U.S. Marines in Darwin, Australia. Sydney has been a long-term strategic partner of Washington and has recently expressed some concern regarding the A2/AD potential of China. As a result, Australia is making progress toward modernizing its military bases and capabilities, including facilities to support bombers and other aircraft and air warfare destroyers equipped with Standard Missile-3 (SM-3), as well as strategic lift, ISR, and ASW.¹¹¹

The dynamics of U.S. basing arrangements in the Western Pacific will remain an important force constraining and shaping the possible policy paths taken by Washington in the future. Whether forward deployments will be increased or decreased and whether or not the security of U.S. bases will be strengthened appreciably will depend in large part on the shifting security environment and the perceptions of such security by both China and the key allies of the United States.

ECONOMIC CAPACITY

Before the global financial crisis of 2008–2009, the United States enjoyed average annual growth of nearly 3 percent for almost two decades.¹¹² Though growth in the 1990s was un-

derpinned by productivity gains that created an extraordinary combination of low unemployment and low inflation,¹¹³ the policies that fueled an early-twenty-first-century boom arguably sowed the seeds of both the subprime mortgage bubble and the global financial crisis.¹¹⁴

The United States suffered its longest and most severe recession since World War II as a result of the global financial crisis and the liquidity bubble that fueled it.¹¹⁵ Though the U.S. government was able to stave off a second Great Depression through timely intervention and coordinated help from the members of the Group of Twenty, especially China, the momentum of the recovery began to stall as early as 2011.¹¹⁶ Anemic growth and persistently weak demand appear to be at least partly driven by a long, extended process of deleveraging within the larger economy, consistent with the aftermath of a debt-driven banking crisis.¹¹⁷ Indeed, several longitudinal studies of past financial crises suggest that the U.S. economy is unlikely to resume its precrisis growth trajectory until the latter part of the decade. Yet mounting debts and spiraling entitlement costs have also prompted fears that unchecked spending could eventually raise borrowing costs and dampen future growth.

Over the next two decades, the course of the U.S. economy will largely hinge upon the ability of policymakers to manage the dual challenges of reviving short-term growth while instituting politically fraught reforms to preserve the nation's fiscal health and economic vitality over the long term. Though external shocks from the eurozone or elsewhere could dampen U.S. growth, paralysis of the country's domestic political institutions could inflict equally severe injuries on the U.S. economy by sabotaging a recovery and hampering basic functions of governance. The extent to which political decisionmaking reinforces or undermines the existing advantages of the U.S. economy will determine whether the United States witnesses a recovery to healthy growth, policy stasis, or, potentially, permanent decline.

Economic Growth Trends

In an optimistic scenario, some experts estimate that the U.S. economy could emerge relatively quickly from its current weak spell and return to pre-financial crisis growth rates well before 2030. Although it does not explicitly extend its forecasts into 2030, the Congressional Budget Office (CBO) has predicted that the U.S. economy could grow at an average rate of 2.5 percent per year in the event of a quick, uninterrupted recovery from the ongoing recession. Uri Dadush of the Carnegie Endowment notes that an optimistic scenario would see annual growth of 2.7 percent until 2030, relatively close to the U.S. economy's potential output of 3 percent per year.¹¹⁸

In the short term, several factors could converge to reduce the length and cost of the U.S. recovery. If conditions in the eurozone do not deteriorate significantly beyond their current state, the larger global economy could avert a replay of the deep recession seen after the financial crisis. At home, corporate and household sectors could deleverage relatively quickly, eventually permitting a strong revival of consumption and demand. Though

unlikely to occur in light of extant political trends, further rounds of monetary or fiscal stimulus could potentially accelerate the recovery. To realize this trajectory, at a minimum, U.S. leaders over the near term would need to do more to avert a “fiscal cliff” by enacting more comprehensive tax reform and brokering a minimally acceptable budget compromise to stave off \$1.2 trillion in federal budget cuts under sequestration.¹¹⁹

In this instance, U.S. leaders could enact fiscal and entitlement reforms while undertaking select investments to bolster competitiveness. Left unchecked, the costs of Medicare, Medicaid, and Social Security could constitute between 16 to 17 percent of gross domestic product (GDP) by 2030, while federal revenue could stagnate at below 20 percent of GDP.¹²⁰ Simplifying the tax code and reining in expected increases in the costs of health-care may prevent such a scenario. A key precondition to this scenario is the gradual return to bipartisanship within Congress, as polarization and zero-sum contests along existing lines would make politically risky tax or entitlement reforms virtually impossible.

In a midrange scenario, the continual paralysis of key U.S. policymaking institutions could prolong the near-term recovery of the U.S. economy and dampen its long-term growth. In this instance, some analysts predict that the U.S. economy could grow at an average rate of roughly 2 percent over the next two decades, in what would represent a midpoint between high and low trajectories. Other forecasts peg a midrange scenario to a 2.3 percent rate of growth.¹²¹ These estimates are largely influenced by calculations of the negative feedback loop that rising debt levels would impose on U.S. fiscal policies, as increased debt servicing costs could prompt contractionary policies that weaken overall growth.

A combination of factors could produce these median outcomes. In the near term, the United States could continue to struggle with the lingering symptoms of the post-financial crisis recession, reflecting both structural and political constraints. The eurozone crisis could continue to fester, while not deteriorating to the extent that it single-handedly defines the economic trajectory of the United States. Per existing trends, the momentum of the U.S. recovery could stall or slow, with weak job growth and consumption depressed by a feeble housing market. Continued polarization and brinksmanship could erode the U.S. government's ability to pursue coordinated or farsighted economic policy, thwart ambitious tax or entitlement reforms, and heighten uncertainty for the private sector.¹²²

Over the long term, entitlement costs and rising debt could potentially reduce growth and impair the government's ability to fulfill important spending priorities. While the economy as a whole could recover by the end of the decade, the persistence of reactive, crisis-driven governance could preclude early reforms to restrain spiraling healthcare costs. As a result, Medicare and healthcare subsidies would devour an increasing proportion of the federal budget and inflate the U.S. debt-to-GDP ratio over the next fifteen to twenty years.¹²³ As revenue is likely to stagnate without politically risky tax reforms, mounting debts and interest payments could reduce national savings, squeeze productive investment, and force cuts in the public sector. In this midrange scenario, the U.S. economy will most likely fall somewhat short of its potential output, while a fiscally embattled government could be constrained in its ability to support nonentitlement spending.

These problems would not necessarily entail a seismic shift in the alignment of the global economic order. Though erratic policymaking and rising debt would take a toll on U.S. competitiveness, more enduring assets, such as world-class universities and high-technology innovation hubs, would continue to make the country an attractive destination for immigrants and businesses alike. Despite its many dysfunctions, the political economy of the United States could nevertheless be perceived as more resilient, in the long term, than that of most industrialized and developing nations.

On the more pessimistic end, experts warn that a mixture of domestic and external shocks could trigger a second recession that, if accompanied by worsening political paralysis, could usher in a period of sustained economic decline lasting until at least 2025–2030. The U.S. economy could see average growth fall to as low as 1.5 percent during this period, suppressing living standards and gradually diminishing the U.S. share of the world economy.

Given the halting and uncertain nature of the present recovery, experts note that external or domestic shocks of sufficient magnitude could quite easily push the U.S. economy into another recession. Mounting sovereign debt, harsh austerity programs, and contracting credit in the eurozone could spill over into the U.S. economy, cutting annual growth by more than 1 percent in a particularly catastrophic downturn.¹²⁴ Expiring tax cuts and sequestration could produce a similar contraction, sending the U.S. economy into another recession by mid-2013.¹²⁵ The impact of any economic shocks would be particularly severe if congressional leaders proved unable to overcome partisan paralysis to mobilize a response to such a crisis, given that the Federal Reserve's recent interventions may have exhausted the limited capacity of its policy instruments. Of course, economic shocks would reinforce the underlying weaknesses in the U.S. economy, such as an anemic housing market, widespread job insecurity, and limited consumer spending.

Some analysts of the U.S. budget predict that, under such conditions, public debt could run well over 100 percent of GDP by 2030.¹²⁶ Though the United States is unlikely to suffer a sudden currency crisis of the sort previously seen in Latin America and East Asia, unchecked deficits could eventually lead to a loss of confidence among foreign investors.¹²⁷ The resultant declines in capital inflows and the dollar's value could force the United States to raise interest rates or institute painful austerity measures that would increase unemployment and depress incomes.¹²⁸ Budget-constrained public and private institutions could cut back on investments that have traditionally fueled productivity gains and overall growth, creating a negative feedback loop that the U.S. economy would be hard pressed to escape. Indeed, Carmen Reinhart and Kenneth Rogoff have found that nations with public debt levels exceeding 90 percent of GDP have suffered, on average, a 1 percent reduction in annual growth.¹²⁹

Long-term economic decay and political gridlock could have profound effects on the United States' position and privileges in the international system. If U.S. political and economic institutions were to prove fundamentally incapable of reversing the country's worsening growth and fiscal outlook, investors and businesses would likely seek out new

destinations, depriving the United States of critical engines of growth and hastening its relative economic decline. Although any shift away from the dollar as a global reserve currency would hinge on the availability of stable, viable alternatives, the dire state of the U.S. economy under this scenario could increase the demand for such a transition. Regardless, the United States would likely see its status as a safe haven for foreign capital evaporate, its share of the global economy plummet, and its influence in global institutions such as the International Monetary Fund, World Bank, and World Trade Organization diminish correspondingly.¹³⁰ Such developments would almost certainly place enormous downward pressures on U.S. defense spending and U.S. military deployments in Asia, and undermine American political, diplomatic, and economic authority and influence around the globe.

DEFENSE SPENDING

Since the end of the Cold War, U.S. defense spending has remained within 3 to 5 percent of national output, fluctuating with geopolitical shocks and periodic reassessments of national security strategy (figure 4.1). Following the collapse of the Soviet Union, defense spending declined in both absolute and proportional terms as the Clinton administration sought to extract a “peace dividend” to reduce the national debt. After the September 11, 2001, terrorist attacks on America, however, the prosecution of a global war on terrorism and decade-long engagements in Afghanistan and Iraq led defense spending to increase markedly for the better part of a decade.

When measured as the sum of the 2012 “base budget” and the cost of ongoing wars,¹³¹ projected military spending in 2012 was roughly \$650 billion, or about 4.7 percent of GDP.¹³² That the military budget fell in that year for the first time in more than a decade reflected a convergence of shifting economic realities, efforts to conclude engagements in the Middle East, and the increasing political salience of the national debt. Assuming that the Obama administration’s ten-year, \$487 billion cuts in projected increases take effect, growth in military spending will likely level off to keep pace with inflation in the immediate future. The onset of sequestration could add another \$600 billion in automatic cuts over a decade, although there is at least a faint possibility that congressional leaders and the Obama administration could seek to defer or mitigate such cuts through stopgap measures.¹³³

Defense Spending Trends

Over the long term, a number of enduring structural trends, as well as political and strategic factors associated with leadership views and security perceptions, will largely determine the ability and willingness of the United States either to increase levels of defense spending, or to reduce the resources within the military budget available for force modernization.

Structurally speaking, the ability of the United States to maintain a given level of defense spending depends to a significant extent on its economic capacity, which would include not only growth rates and federal revenue but also debt and other structural imbalances that could consume a greater proportion of the budget available for discretionary spending. These economic and budgetary conditions would likely act as independent variables that would define the upper limits of the resources that policymakers could devote to military spending, both in the short to medium terms and the long term.

In a low-end economic scenario, a prolonged and severe recession, caused in part by external shocks from the global economy and exacerbated by policy paralysis at home, could lead U.S. leaders to consider another round of more drastic defense cuts. These reductions could correspond to the benchmarks set out under sequestration, in which the U.S. military would see its base budget slashed by an additional 10 percent, in addition to the Obama administration’s phased cuts. The net impact of such measures would correspond to other predicted reductions such that cuts totaling 20 percent of the defense budget could be implemented following drawdowns in Iraq and Afghanistan.¹³⁴ But the political costs associated

FIGURE 4.1
U.S. Military Expenditure as Percentage of GDP, 1988–2010



Source: Stockholm International Peace Research Institute, <http://milexdata.sipri.org>, accessed October 31, 2012.

with such measures would be formidable, especially because a host of civilian and military leaders have declared that cuts of such magnitude would threaten the United States' ability to execute its fundamental security commitments worldwide. (At the same time, it is worth noting that many credible experts disagree with these alarmist warnings, arguing that more deliberately targeted cuts that are equivalent to the amounts in the sequestration deal would not threaten U.S. security objectives and could in fact improve overall foreign policy budgeting procedures.)¹³⁵

More plausibly, some experts predict that the U.S. defense budget will grow only slightly faster than inflation in the coming decades. The CBO predicts that the cost of executing the Pentagon's future plans will require the base budget to increase by an inflation-adjusted rate of 2 percent for the next five years, then 0.5 percent until 2030.¹³⁶ Actual defense spending growth will most likely run slightly higher, if only because cost growth in key acquisition programs will necessitate additional funds to prevent delays and large cuts in orders.

In this more likely midrange scenario, most of the \$487 billion "cuts" planned by the Obama administration would take effect over time as the U.S. government adjusts to an era of moderate growth, flattening revenue, and rising entitlement costs. While the Pentagon's internal reforms could stem the tide of personnel expenses, the U.S. military as a whole would likely devote an increasing portion of its budget to salaries, healthcare, and pensions.

On the higher end of the projection spectrum, some policymakers have championed sustained increases in defense spending that would reverse the Obama administration's planned cuts to field a more expansive force structure. At least one proposal would commit a minimum of 4 percent of GDP to the base budget, although experts have noted that fiscal realities and capacity limits within defense industries would make such a plan difficult to implement for many years at best.¹³⁷ Other advocates of increased defense spending have pointed to the fact that the United States today spends less on defense as a proportion of GDP than it did during World War II and much of the Cold War and that the current naval fleet is the smallest in nearly a century.¹³⁸

However, it seems unlikely that the increases necessary to achieve such greater force structures or higher spending targets could occur in the absence of a marked and sustained revival in the engines of economic growth and a sharp reduction in entitlement costs. Indeed, both the Office of the Secretary of Defense and Joint Chiefs of Staff have voiced concerns about the national security implications of a growing debt burden, endorsing calibrated defense cuts aimed at improving the United States' long-term fiscal health.¹³⁹

More broadly, if the U.S. economy were to recover from its current sluggish pace, U.S. leaders would have greater leeway to spend more on the defense budget. Conversely, a constrained economic climate over the next fifteen to twenty years would provide less space to justify and sustain increases in deployments and capabilities desired for the Asia-Pacific region. At the same time, U.S. defense spending projections are not directly correlated to the growth of the U.S. economy. Other factors such as threat perceptions, leadership views, and other intervening or exogenous variables could work in conjunction to produce less linear and more unpredictable defense spending outcomes.

For example, if Beijing were to pursue more assertive policies that heightened the threat perceptions of U.S. policymakers, this would likely prompt calls for an increasing buildup of capabilities in the Western Pacific, even if at the expense of domestic programs. Conversely, shifts in domestic politics or a reduction in threat perceptions could lead defense spending to stagnate or shrink even if the United States attains middle- to high-range economic capacities. As noted above, during the Clinton years, prosperity in the civilian economy was accompanied by significant cuts to force levels as part of an effort to gain a “peace dividend” following the disintegration of the United States’ chief strategic competitor. While the actual impact of these cuts on operational readiness was arguably less significant than anticipated, budgetary reductions did force the U.S. military to divert funds from procurement and equipment accounts.¹⁴⁰

Bureaucratic and acquisition challenges are yet another factor influencing projections of defense spending. The risks of cost overruns and delays in acquisition could increase as the U.S. military seeks out more integrated, next-generation capabilities to maintain its advantages vis-à-vis China. From 2008 to 2010, acquisition costs for the Pentagon’s ten most expensive programs grew by nearly \$80 billion, with the Joint Strike Fighter accounting for the largest proportion of increases. Indeed, the cost of acquiring and maintaining the entire force of next-generation fighters is expected to reach \$1.5 trillion over a fifty-year period. In turn, cost escalation has often compounded distortions within the politically fraught acquisition process, with possible consequences for U.S. missions and capabilities. Unanticipated costs have often led policymakers to scale back order volumes or delay procurement, causing unit prices to skyrocket and deepening objections to a given program.¹⁴¹ Military leaders have sometimes canceled these programs outright, although they have generally preferred to obtain smaller quantities of still evolving systems while cutting back on more routine modernization that would keep legacy platforms in play.¹⁴²

Lastly, the accumulated legacy of conflicts in the Middle East and ongoing engagements across the world could weigh heavily on policymakers looking to assess future commitments to the Asia-Pacific region. Having spent \$1.3 trillion on war costs and stabilization efforts in Iraq and Afghanistan—with anywhere from \$200 billion to \$500 billion in remaining costs over the next decade—the United States will also face costs associated with veteran care and rapidly aging equipment. From a broader standpoint, the U.S. military will continue to face challenges in allocating finite resources across multiple geographic theaters to manage a wide spectrum of potential contingencies, from counterinsurgency and stabilization missions to high-intensity conventional warfare.¹⁴³ The global scope of U.S. obligations contrasts sharply with China’s dedicated focus on a handful of contingencies in the Asia-Pacific region.

Ultimately, the impact of any given level of defense spending on allied capabilities in the Western Pacific will hinge on the ability of U.S. leaders to make careful allocation decisions in the face of objective material constraints. As part of its strategic “rebalancing,” the Obama administration has vowed to increase deployments in the Asia-Pacific region, insulating forces in the region from budgetary cutbacks. However, the feasibility of this pledge will

hinge on both structural trends in the U.S. economy and the nation's fiscal health as well as on the various intervening factors detailed above, making it by no means certain that the Obama administration or future administrations will be able to stand by such commitments.

SOCIAL AND DEMOGRAPHIC ISSUES

The United States faces a range of social and demographic trends that could impact its economic growth, defense spending, military power, and policy priorities over the next fifteen to twenty years. These include, most notably, an aging population and the ballooning budgetary burden of old-age entitlements, as well as weaknesses in education and health-care outcomes that could decrease American competitiveness. At the same time, however, the United States will continue to benefit from moderate growth in both overall population and the size of the military-age and working-age populations, due to continued immigration and birth rates near population-replacement level. As a result, America's demographic outlook is relatively positive in comparison to those of China, Japan, and most advanced developed nations.

The overall U.S. population is projected to grow by a total of between 16.5 and 20.4 percent between 2010 and 2030—from approximately 310 million to between 362 and 374 million. The average annual or compound population growth rate over these two decades is thus expected to range between 0.77 and 0.93 percent.¹⁴⁴ This growth will be driven primarily by immigration, but supported by birth rates higher than the developed nation average. Although immigration declined during the 2008 recession to close to net parity, expert observers predict that immigration levels will recover in coming decades and will continue to drive U.S. population growth in the future.¹⁴⁵ Fertility rates have been close to replacement rate in the United States since 1990 and are projected to remain so throughout the timeframe of this study, likely declining from 2.06 births per woman in 2015 to 2.02 in 2030 (replacement rate is generally considered approximately 2.1).¹⁴⁶

Accordingly, the U.S. male population aged fifteen to twenty-four years (a common proxy for military-age manpower) is slated to grow slowly but consistently throughout the coming decades, as is the proportion of that population with a secondary or tertiary education. This steady growth will provide the United States with a reliable population base for its armed forces, and the gradually improving education levels of this age cohort could prove to be an important factor in an age of high-technology and information warfare.¹⁴⁷

Similarly, the labor force is projected to continue to grow in size, though at a slightly lower rate than in the past. Though the annual growth rate in the labor force from 2000 to 2010 averaged 0.8 percent, the Bureau of Labor Statistics projects it to slow to an average of 0.7 percent over the decade from 2010 to 2020. Simultaneously, an aging population will result in a significant increase in the old-age dependency ratio—the number of people aged sixty-five years and older as a percentage of the number of people aged twenty to sixty-four years—which is projected to grow from 22 in 2010 to 28 in 2020 and to 35 in 2030.¹⁴⁸

Such demographic change presents some risks for economic growth, which depends upon labor force growth for productivity gains. However, because the labor force is projected to continue to grow at a healthy, albeit slightly slower rate, it is unlikely that the aging of the American population will impose any more than a marginal or indirect constraint on economic growth. Rather, the real demographic squeeze will arise from the budgetary pressures of old-age entitlements, which could necessitate government borrowing, taxing, or spending cuts that could, in turn, have a negative impact on economic growth, as noted above.

Indeed, the rising costs of Social Security and Medicare, the main national entitlement programs for retirement income and retiree health insurance, present major budgetary challenges for the federal government. Under current law, Social Security will only be able to disburse 75 percent of benefits beginning in 2033.¹⁴⁹ Meanwhile, the Medicare Trust Fund will become insolvent in 2024¹⁵⁰—and possibly earlier, if the laws regarding doctor reimbursements continue to be amended, as is likely.¹⁵¹ Although it is possible that policymakers will implement reforms that minimize growth in federal government expenditures on these entitlement programs, it is also virtually inevitable that these demographic changes will continue to provoke a rigorous debate over the guns-and-butter trade-off.

In all, as indicated above, the collective impact of overall population growth, sluggish employment growth, and ballooning entitlement costs could erode the share of the federal budget available for defense spending. Unchecked entitlement costs could produce debilitating second-order effects such as an increased national debt, higher borrowing costs, and depressed economic growth—each of which would serve as an external constraint on defense spending.

At the same time, entitlement costs could also generate pressure *within* the defense budget that could potentially squeeze out vital programs relevant to capabilities in the Western Pacific. The CBO predicts that Department of Defense personnel expenses and equipment maintenance costs will grow from roughly \$350 billion in 2012 to \$459 billion in 2030.¹⁵² Specifically, mounting obligations in pay, pensions, and healthcare could consume virtually all projected growth in the defense budget over this time period. The rate of increase in the overall defense budget may be less important to the U.S. force posture than the distribution and composition of spending, particularly as future scenarios in the Western Pacific will likely feature a number of sophisticated air and naval capabilities that have just begun to make their way through a long and uncertain acquisition process.¹⁵³

In short, dynamics in the social and demographic makeup of the United States in the next fifteen to twenty years may have a significant influence on U.S. policy and security strategy toward the Asia-Pacific region. Entitlement obligations and rising healthcare costs are likely to place considerable strain on the federal budget that could in turn shape and likely constrain the ability of policymakers to implement certain capabilities desired for the maintenance of security in the region.

FOREIGN AND DEFENSE POLICY ACTORS¹⁵⁴

The U.S. foreign and defense policymaking process is an amalgamation of constitutional and formal processes, informal or bureaucratic variables, and personal views and relationships. First, the effectiveness of process-related features such as interagency coordination through the National Security Council-led system can influence, in some cases decisively, the utility and effectiveness of U.S. policy in defining, protecting, and advancing American interests in Asia and with regard to China and the United States–Japan alliance. Second, a variety of organizational and group interests can influence policy outcomes in unexpected ways. These variables include key intragovernmental relationships—for instance, within the executive branch and between the executive branch and Congress—and key political and social interests in the form of political parties, organized interest groups, the public, and the media. Third, the personal views and relationships of key policymakers also play an integral role in defining and implementing U.S. foreign policy.

*Bureaucratic Relationships:
Organizational Complexity and Interagency Rivalry*

Bureaucratic behavior in the U.S. policymaking process involves differing interagency viewpoints and rivalries that are brought out in the interagency debate and competition necessary to flesh out the pros and cons of different policy approaches and to introduce new ideas into the political system. Growing bureaucratic competition over turf issues, policy priorities, and other matters has emerged as the number of executive branch agencies that deal with China, Japan, and East Asia policy overall has increased and as these agencies' connections to particular interests and policy approaches have deepened. An increased number of actors that have a desire to speak authoritatively on matters of concern to them can create a highly inconsistent U.S. policy message, resulting in missed opportunities to influence Beijing because of poor signaling, Chinese and U.S. miscalculations, and lost leverage.

Different executive branch agencies vary in their preferred policy preference or strategic outlook. Such differences understandably reflect the somewhat contrasting policy priorities and primary responsibilities of the different organizations, as well as the political calculations and strategic views of individual senior officials. For instance, the Department of State and the Department of Defense generally differ in the emphasis they place on aspects of cooperation versus competition with Beijing. Interagency friction exists regarding the relative emphasis placed in China policy on engagement activities (often stressed by State) and deterrence and shaping activities (often stressed by Defense).¹⁵⁵

Moreover, State and Defense usually coordinate their approaches only at the working level, regarding specific policies, and not at the larger grand strategic level. This allows both agencies to at times take “semiautonomous” directions in policy approach. Both State and Defense hold different views regarding the metrics for success and the time frame applied to policy performance. Whereas State tends to focus primarily on short-term or immediate

issues and recent successes or failures, the Pentagon often adopts a longer-term perspective, involving the evolution of relative military capabilities between Beijing and Washington and the long-term defense requirements of the alliance with Japan. One major exception to this general difference is with regard to the U.S. basing issue in Japan and near-term changes in U.S. weapons systems deployed to Japan. As discussed in chapter 3, the U.S. Marines, U.S. Air Force, and U.S. Navy all desire to resolve the basing issue on terms favorable to their regional missions and service interests. In partial contrast, the State Department is highly attentive to the implications of the basing issue for the larger United States–Japan alliance relationship. These sometimes contrasting interests can create both opportunities and obstacles to the effective management or resolution of the basing issue and the alliance.

There are also differences within the defense establishment between the Pentagon (in particular the Office of the Secretary of Defense and the Joint Chiefs of Staff) and PACOM over a variety of military-related issues involving China. These differences include, for example, the relative emphasis placed on deterrence and military competition versus the search for more cooperative, trust-building, and positive-sum interactions with the Chinese military, and the degree to which the larger goals of the United States–China relationship should shape defense interactions with both Beijing and Taipei. The precise substance of this divergence often varies from administration to administration and commander to commander.¹⁵⁶ Such differences are also shaped by structural factors such as PACOM's relative physical isolation from Washington (headquartered as it is in Honolulu) and its more ground-level and operational orientation. The former dynamic can mean that the Pentagon is arguably more influenced than is PACOM by the political winds that blow in Washington regarding the Chinese military and the larger bilateral relationship, as well as the arguments and pressures exerted by defense contractors. The latter factor can lead PACOM to take at times a more cooperative approach shaped by a desire to forge a constructive military-to-military relationship with the PLA, and at other times a more confrontational approach shaped by tendencies to prepare for worst-case tactical scenarios.

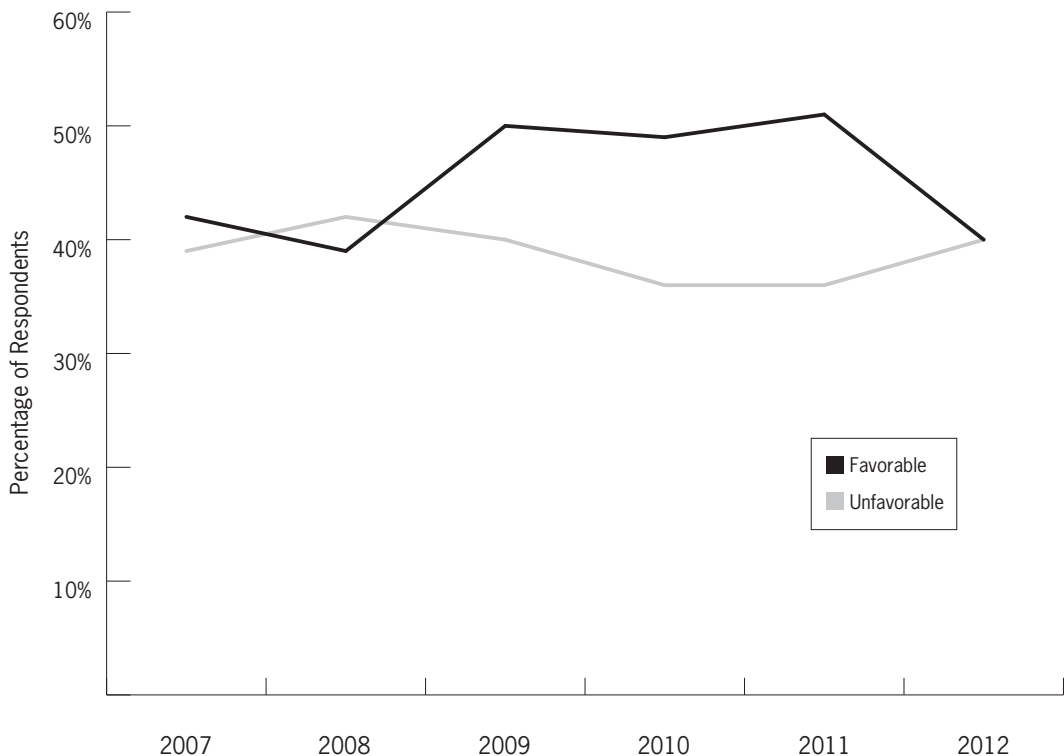
Perhaps more important, given the essentially maritime nature of the Asia-Pacific theater, the U.S. Navy traditionally plays a major role in defining the U.S. military's depiction of the threat posed by China and the proper means of dealing with it. Regarding the latter issue, the U.S. Navy has traditionally placed a strong emphasis on forward-deployed, highly mobile naval units, centered on carrier battle groups and nuclear attack submarines based largely in Japan and Guam. However, with the possible advent of a credible Chinese countercarrier ASBM system with a range of roughly 1,500 nautical miles, differences have apparently emerged within the U.S. Navy over the continued utility of forward-deployed surface platforms, such as carriers based in Japan. Some Navy analysts seek to defend the value of carriers as *rearward*-based assets to be deployed only in the later stages of a conflict, after an ASBM system has been neutralized, while others argue in favor of continuing the U.S. reliance on the forward basing of surface assets via the deployment of more robust BMD systems. Still other Navy analysts insist that only submarines should operate well forward within range of China's ASBM systems, given the likely porousness of even a sup-

posedly robust BMD system. Such differences could produce a prolonged debate over the best strategy for dealing with China's growing A2/AD-type capabilities. In the absence of a clear resolution of this issue, traditional assumptions might prevail, thus obstructing efforts to adopt new operational concepts that emphasize long-range air power and rear-deployed naval assets.

*Challenges Posed by the Congress
and Its Relationship With the Executive Branch*

Another organizational challenge is the sometimes dysfunctional nature of congressional influence on foreign policy, and China policy in particular. Although Congress has fewer foreign policy instruments at its disposal than the executive branch, it can nevertheless play

FIGURE 4.2
U.S. Public Opinion Toward China, 2007–2012

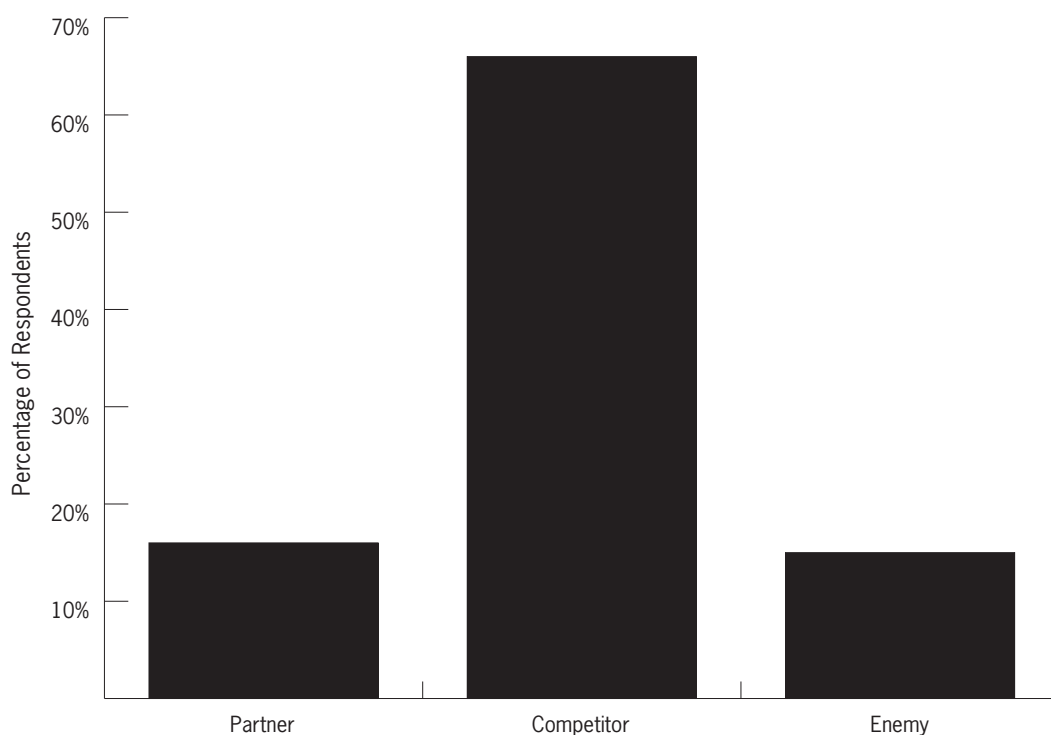


Source: This graph plots data points from six surveys conducted by the Pew Global Attitudes Project from 2007 to 2012. www.pewglobal.org/2007/12/11/how-the-world-sees-china, www.pewglobal.org/2008/06/12/chapter-3-views-of-china, www.pewglobal.org/2009/07/23/chapter-3-rating-major-powers, www.pewglobal.org/2010/06/17/chapter-5-views-of-china, www.pewglobal.org/2011/07/13/chapter-4-views-of-china, www.pewglobal.org/2012/06/13/chapter-4-rating-countries-and-institutions.

a role in shaping U.S. overseas defense strategy, policy toward China, and America's relations with key allies such as Japan.

Given the influence of a multitude of interest groups concerned about various aspects of Beijing's domestic and foreign policies, members of Congress have at times engaged in symbolic actions or statements that appear to have been designed primarily to curry political favor with relatively narrow political interest groups, rather than to improve U.S. policy or appeal to more diffuse general public sentiment (which tends to be more ambivalent but favors a generally cooperative approach, as discussed in greater detail below).¹⁵⁷ Moreover, Congress may be more reliant on negative inducements when dealing with China because it has relatively few "carrots" in its arsenal. Public attention, interest group attention, and hence congressional attention, are often stimulated by negative economic, military, and human rights behavior (actual or alleged) on the part of China, thus prompting calls for some form of retaliation or pressure on Beijing. Taken as a whole, these factors naturally orient Congress toward a punitive approach when dealing with China.

FIGURE 4.3
U.S. Public's Views of China as Partner, or Enemy, 2012



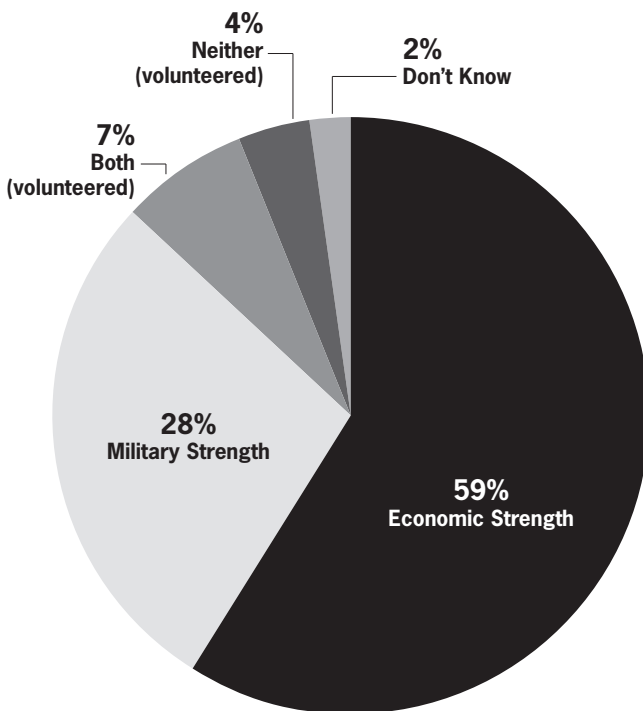
Source: "U.S. Public, Experts Differ on China Policies: Public Deeply Concerned about China's Economic Power," Pew Global Attitudes Project, September 18, 2012, www.pewglobal.org/files/2012/09/US-Public-and-Elite-Report-FINAL-FOR-PRINT-September-18-2012.pdf.

In setting appropriations for the defense budget, Congress can exercise a degree of influence over specific military capabilities relevant to the Western Pacific and occasionally U.S. policy toward China. For instance, congressional appropriations for the next-generation bomber and the carrier-based long-range drone not only determine the funding available for such systems but also shape, in indirect ways, their specifications.¹⁵⁸ In addition, Congress has made modernization of the United States' already-sophisticated nuclear force a condition for implementation of New START, with possible implications for the nuclear balance in the Western Pacific.¹⁵⁹ Congressional advocacy and support for more extensive arms sales to Taiwan and close alliance relations with Tokyo have significantly influenced U.S. policy toward both China and Japan. In these instances, Congress has often worked in conjunction with members of sitting administrations or the foreign policy bureaucracy, sometimes amplifying perspectives that favor more confrontational policies

toward Beijing.

More broadly, and in contrast to the post-World War II history of strong, bipartisan congressional support for high levels of defense spending and robust overseas military deployments, Congress could also play a role in reducing U.S. military capabilities in the Western Pacific over the medium to long terms. Depending on the severity and duration of America's economic problems and the threat perceptions of future administrations, members of Congress could be compelled to reduce defense spending to levels that make it impossible to sustain the current capabilities and operational tempo of U.S. overseas forces, even in vital areas such as the Asia-Pacific region. Alternatively, such factors could generate seemingly endless political debates among and between

FIGURE 4.4
U.S. Public's Views of Chinese Economic vs. Military Strength, 2012



Source: "U.S. Public, Experts Differ on China Policies: Public Deeply Concerned about China's Economic Power," Pew Global Attitudes Project, September 18, 2012, www.pewglobal.org/files/2012/09/US-Public-and-Elite-Report-FINAL-FOR-PRINT-September-18-2012.pdf.

the political parties over defense spending levels that create enormous uncertainty regarding long-term military deployments and capabilities, resulting in erratic and suboptimal defense strategies.

In addition, the political relationship between the president and Congress can also have a decisive and disruptive influence over defense policies toward China. During the 1990s, efforts to avoid confrontation with Congress led the Clinton administration to adopt highly risky policies in economic and security relations with Beijing on at least two occasions. Most obviously, President Bill Clinton acceded to Congress in granting a visa to Lee Teng-hui to visit the United States in 1995, which precipitated the United States–China Taiwan Strait crisis of 1995–1996. Similarly, Clinton responded to congressional pressure in deciding to back away from an agreement with China regarding its entrance into the World Trade Organization in 1998.

Despite these examples, more broadly speaking, major U.S. policy decisions about China, Japan, and the alliance have not usually been made in response to the specific views of interest groups or even members of Congress.¹⁶⁰ Although the views of such entities can play an important role in shaping basic policy approaches—and in some cases can prove decisive with regard to specific, usually narrow policy actions—they usually do not dictate broad policy, much less strategic decisions. As a result, China policy has shown remarkable consistency across six administrations.¹⁶¹

PUBLIC OPINION

Public opinion can also exert some influence on decisions regarding defense spending, foreign policy, and security strategy, although when it comes to U.S. policy toward Asia, this influence usually operates at the margins. American attitudes toward defense spending are ambivalent, as are American views toward the U.S. military presence in Asia.¹⁶² By and large, Americans view Japan relatively positively. Paradoxically, Americans support the notion of strengthening the United States' alliances with its partners in Asia (including Japan and South Korea), while expressing some skepticism about troop levels in Asia and a preference for greater burden-sharing on the part of U.S. allies.¹⁶³

The U.S. public has tended to favor cooperation and engagement with Beijing over any efforts to limit China's economic growth or engage in military confrontation with it. Similarly, few Americans view China as an adversary or enemy, although many do see it as a competitor (figure 4.3).¹⁶⁴ Since 2007, roughly 40 to 50 percent of Americans have held favorable views of China, while approximately 40 percent have held unfavorable views (figure 4.2).

The American public perceives China as a greater economic than military threat, consistently ranking such matters as losses of jobs to China, Chinese ownership of U.S. debt, and the U.S.-China trade deficit as the threats of most concern that are related to China—as opposed to a potential conflict over Taiwan or the rise of China's military, which are generally ranked lower on lists of perceived threats (figure 4.4).¹⁶⁵

Given the generally ambivalent—and at times, slightly friendly—attitudes of the American public regarding United States–China relations and China's rise, it is unlikely that variations in public opinion will contribute significantly to shaping the possible trajectories of U.S. strategy toward China.¹⁶⁶ Rather, public opinion polls seem to confirm that a continually strained financial environment and rising entitlement costs may pose the greater challenge to the United States' strategy in the Asia-Pacific region.¹⁶⁷

TRAJECTORIES FOR U.S. SECURITY STRATEGY AND MILITARY CAPABILITIES

Today, there are inevitable differences over budgets and priorities within the United States, but unlike the contentious atmosphere of twenty years ago, there is a broadly shared renewed consensus on the value of the United States–Japan alliance. That value has increased with the rapid rise of Chinese fortunes and capabilities and the uncertainties they convey.

In Japan, too, with the passage of time and changes of leaders since the first lasting transfer of power between political parties since World War II in 2009, the value of the alliance seems to have reasserted itself. The Great Eastern Japanese Earthquake in 2011 and the effectively coordinated response of the JSDF and American military to the ensuing crisis also publicly revalidated their roles.

Thus, the political fundamentals appear strong for maintaining and developing the alliance to allow it to meet its future challenges. But, as noted in chapter 3, stalemated Japanese national politics, security policy, budget deficits, and constitutional and political impediments pose challenges to alliance coordination and management. Japan's defense budget has been shrinking or stagnant and is unlikely to increase significantly except under extraordinary circumstances and after extensive reflection and debate. These situations leave the United States necessarily with less than ideal choices in deciding how to deal with the alternative trajectories of Chinese power and behavior described in chapter 2.

The conventional journalistic scenario of a rapidly rising China and declining United States suggests that Washington should lean more heavily on Tokyo for security cooperation going forward. According to chapter 3, this might translate into efforts to press Japan to adopt a strategy of “competitive engagement with a hard edge.” Similar thinking, however, might offer good reason for Japan to seek to reduce friction with China in favor of an accommodation that will suit Japanese economic requirements and not strain Japan's limited military capabilities and ambitions. In fact, Japan may want to reposition itself at a point more equidistant between Beijing and Washington.

If the conventional scenario is wrong, and the United States defies expectations and regains strength after a fiscal time-out, and if China hits a figurative wall in its economic and political development over the next ten years or so, similar to the one Japan hit in the late 1980s, then the challenges to the United States–Japan alliance appear far more manageable.

Tokyo and Washington will be freer to pursue their respective national interests and sustain regional stability with each other’s support as China tends to its needs at home.

The following subsections describe three possible trajectories for overall U.S. economic and military strength through 2030, with two variants within each trajectory positing different U.S. foreign and security policy approaches. Each trajectory is largely based upon variations in the determinants described throughout this chapter, and the three trajectories are presented in order of general likelihood (table 4.1).

Trajectory 1: Strength

Under Trajectory 1, the United States would pursue a strategy oriented toward retaining military primacy in the Western Pacific, involving medium- to high-range defense capabili-

TABLE 4.1
Possible Trajectories for the United States Through 2030

		1: STRENGTH	2: FALTERING	3: WITHDRAWAL
CHARACTERISTICS	Probability	Most Likely	Likely	Unlikely
	Military capabilities	Mid–High	Low–Mid	Very Low
	Policy toward China	Variant A: Cooperative engagement and hedging, emphasis on hedge Variant B (as a result of “wild card”): Containment	Variant A: Cooperative engagement and hedging, emphasis on engage Variant B: Limited accommodation	Withdrawal combined with cooperative accommodation
	Policy toward the alliance	Pressure on Japan to boost defense capabilities, significantly enhance interoperability	Incremental strengthening of alliance, improvements in interoperability	Major reduction of military presence in Japan, but Mutual Security Treaty and skeleton of alliance maintained
DETERMINANTS	Average annual GDP growth, 2012–2030	2.5–3%	2–2.3%	1–2%
	Defense spending as % of GDP	4.5–5.5%	3.5–4.5%	≤ 3%
	Political dynamics	Less domestic discord, resources directed toward bolstering Asian presence	Domestic discord, but a general bipartisan consensus on need to maintain presence in Asia	Persistent gridlock, preoccupation with domestic problems
	Public opinion	Heightened perception of Chinese threat	Ambivalent, not a policy constraint	More inward-looking

ties and efforts to incrementally expand the scope and function of the United States–Japan alliance. While the most likely strategic variant under this trajectory would entail a dual U.S. policy of cooperative engagement and hedging vis-à-vis China, a more extreme, far less probable variant (only likely to emerge as a result of a “wild card” triggering event described below) would see Washington undertaking a zero-sum, confrontational effort to “contain” Beijing.

FOREIGN POLICY AND MILITARY STRATEGY

Under this trajectory, the United States would continue to pursue the long-standing balance between cooperation and hedging in its strategy toward China, but in this case from a position of higher capabilities. In the former area, Washington would continue to deepen and expand its efforts to work with Beijing to address a wide (and likely growing) variety of common challenges, ranging from climate change to WMD proliferation and economic problems, while also seeking to shape or restrain China’s policies and behavior by vesting it more deeply in regional and global regimes and norms and continuing the many bilateral engagement dialogues of the past. More broadly, Washington would continue to expand its overall involvement in the Asia-Pacific region’s political, economic, and security forums and to raise its overall profile and influence in the region through a variety of diplomatic and other means. In short, a version of the so-called pivot or rebalancing toward Asia would continue, reflecting a priority on the region in overall U.S. global strategy and a strong military component.

This strategy would also include a continued strong stress on the United States–Japan alliance as the cornerstone of Washington’s political and security presence in the larger region. In this regard, U.S. leaders would continue to work closely with their Japanese counterparts to resolve sources of disagreement or tension in the bilateral relationship, including, first and foremost, the basing issue. Washington would also attempt to increase the level and scope of coordination with Tokyo in addressing both regional and global political, economic, and security challenges. This could at times involve U.S. efforts to encourage Japan to incrementally increase its role in various regional security undertakings.

As a focus of its hedging approach, Washington would continue to pursue a defense strategy and doctrine toward China that combines the development and deployment of a more potent set of counter-A2/AD or other deterrent capabilities and expanded security relationships across the Western Pacific. Efforts to counter China’s A2/AD capabilities would probably include implementation of the JOAC, possibly through a variant of the ASB concept or so-called Offshore Control concept (discussed in chapter 6). Washington might also become more sensitized to potential Chinese threats to Pacific SLOCs and seek to bolster the ability of U.S. forces to impose local sea control to conduct operations in those maritime lanes. These undertakings would reflect the continued U.S. desire to maintain the overall primacy of American military power in maritime Asia while actively shaping and deterring Chinese security perceptions and behavior toward the region.

As a central part of this effort, Washington would strive to strengthen the United States–Japan military relationship, through greater levels of coordination in a multitude of defense-related areas, ranging from joint warfare and operational doctrine to ISR and deployments in the region. Under this trajectory, the United States would encourage Japan to continue its post–Cold War reorientation of its existing limited forces from the north to the southwest, where Chinese naval and air activity are increasing. ISR would be comprehensively strengthened and interoperability would be deepened in each of these areas.

These hedging efforts in the security realm would likely be combined with attempts to deepen and expand the scope and variety of both bilateral and multilateral interactions with the Chinese military, including peacekeeping operations, antipiracy missions, and humanitarian relief. However, given Washington’s pronounced efforts to maintain military primacy over China in the Western Pacific (including within the first island chain), Beijing would likely be less amenable to such efforts.

DETERMINANTS AND UNCERTAINTIES

As the above suggests, under this trajectory, the United States would at some point recover its economic strength, eventually returning to annual growth rates above 2 percent and levels of unemployment below 5 percent. Equally important, U.S. economic policies would begin to reduce the huge budget deficit and reestablish a reasonably high level of public confidence in the long-term strength and vitality of the economy. This is in part because American deleveraging of corporate and household debt would in this case continue to proceed faster than anywhere else in the world. Moreover, U.S. technology advantages, superior tertiary education, and entrepreneurship incentives would all come into play, especially over the long term. Thus, the economic base for popular support of an engagement and forward deployment strategy in the Asia-Pacific region would not be fundamentally challenged in the United States.

Such a recovery could occur under two basic scenarios: a relatively rapid and strong economic turnaround (as described in the high-end economic scenario detailed above) or a partial and gradual one, leading to a more complete and robust recovery in the latter years of the period under examination.¹⁶⁸ Economic policy toward China under this trajectory would continue to stress the need to alleviate or resolve a variety of problems or concerns, ranging from alleged World Trade Organization violations to Chinese investments in areas of the U.S. economy related to national security, but Washington would also continue to place a strong emphasis on deepening United States–China economic relations and avoiding trade wars.

This relatively competitive strategic approach would also almost certainly be conditioned to a great degree on Chinese behavior and capabilities. This trajectory would be most likely to occur if a growing consensus were to develop in Washington that Beijing posed a serious and concerted threat to U.S. military primacy in the Western Pacific, to American allies or partners in the region, or to U.S. interests in regional stability. As a result, U.S. elites may

see a declining value in positive-sum political, diplomatic, military, and economic relations with Beijing, thus leading them to emphasize the hedging elements of U.S. policy toward China.

Under this and other trajectories, America's foreign policy and political elites would certainly experience a variety of unpredictable pressures and bureaucratic limitations that shape U.S. policies and deployments in the Western Pacific. Policymakers would possess options for sustaining the emphasis on Asia, but whether policy and strategy coordination is effective would help determine whether the United States effectively implements a unified approach or whether divergent bureaucratic interests pull policy in different directions.

One factor that could produce a variant of this trajectory involving a much more zero-sum, confrontational U.S. strategy toward China is the possible occurrence of one or more of the sort of "wild card" events discussed in previous chapters, including a severe and sustained crisis over regional territorial disputes involving China and perhaps Japan, and the emergence of an ultranationalist Chinese leadership. Such events, if sufficiently severe, could push Washington toward a Cold War-style containment strategy toward Beijing, involving a drastic reduction in efforts at bilateral cooperation with Beijing and an increased emphasis on more offensive-oriented, deep-strike military concepts such as a very robust version of the ASB concept, or a version of so-called Offshore Control, designed to establish a strong barrier to Chinese access to the second island chain during a conflict. This type of shift could have profound but uncertain implications for Japan and the alliance, possibly resulting in attempts to more fully incorporate Tokyo into the policies and deployments of a robust ASB concept, or a reduction of U.S. dependence on forward-deployed assets in Japan. It could also result in clearer and more public support for Japan's position on territorial and resource disputes in the East China Sea. These factors are discussed in greater detail in chapters 5 and 6.¹⁶⁹

DEFENSE SPENDING AND MILITARY CAPABILITIES

Depending on which economic scenario unfolds in this trajectory, Washington would either retain or expand current defense spending levels on the one hand, or reduce and eventually reacquire those levels on the other hand, and would in either scenario ultimately manage to expand the sophistication, power, and presence of its military capabilities in the Western Pacific. In particular, military hardware, technologies, and systems of greatest relevance to the defense of Japan and the maintenance of deterrence capabilities in the region would eventually develop at maximum or near-maximum estimated levels. However, a late recovery could restrict the speed and extent of this development, possibly forcing guns-and-butter-type trade-offs in the near term that could serve to constrain U.S. regional deployments. This U-shaped evolution of U.S. military capabilities could unnerve regional states and increase the near- to medium-term chances of miscalculation regarding security issues involving Japan and the alliance, such as policies toward disputed territories in the East China Sea.

Given the United States' continued ability under this trajectory to pursue a strategy of cooperation and hedging toward China from a position of relatively high capabilities, the offensive capabilities of the United States would most likely remain more competitively advantageous than those of China. In other words, the U.S. force posture would be capable of inflicting significant punishment in response to the use of antiaccess capabilities by China and disrupting, though not necessarily neutralizing, many of the systems underlying Chinese antiaccess-type networks. As the following discussion indicates, however, superior offensive capabilities in many domains would not necessarily translate into an effective defense against Chinese capabilities that target core weaknesses in the U.S. force posture, such as forward-deployed aircraft carriers and fixed land bases. This would hold true despite the United States' success in developing a capable joint force to implement counter-A2/AD strategies.

The Maritime Domain

Under this trajectory, the United States would likely preserve the basic configuration of its eleven-carrier fleet while increasing the numbers of highly capable surface combatants and submarines. Multiple layers of onboard active and passive defense systems would enable ships to more effectively target the kill chains of incoming ASCMs and ASBMs, although such defenses could be overwhelmed by sustained fire or swarming attacks.¹⁷⁰ Heightened integration and interoperability would give U.S. naval forces a better chance of anticipating and outmaneuvering enemy vessels in a force-on-force engagement. Yet the operational risks and prohibitive costs of confronting antiaccess defenses head-on could continue to limit the ability of carrier groups to serve familiar doctrinal roles in conveying presence or bringing TACAIR into the theater.¹⁷¹

In addition, the United States would possess a greater number of SSNs with expanded payload modules, capable of conducting antisurface, antisubmarine, and land-attack missions. A robust submarine presence in Chinese waters would thus allow U.S. forces to capitalize on their existing advantage in offensive undersea warfare. Yet U.S. forces would nevertheless face difficulties in conducting ASW and countermine warfare. Although UUVs and distributed sensors could give a small boost to undersea situational awareness, any ASW aircraft and minesweeping ships within the first island chain would be relatively exposed in the event of a conflict.¹⁷²

The Air Domain

In this instance, the United States would field limited numbers of one or more long-range strike capabilities aimed at disabling C4ISR networks, crippling antiaccess defenses, and facilitating the entry of power projection assets.¹⁷³ The United States could potentially possess several dozen long-range bombers or—under a particularly competitive trajectory—unmanned combat drones with the stealth, range, and endurance to penetrate integrated air defense systems (IADS) and strike at targets deep within enemy territory. Yet the considerable

financial costs and technical challenges associated with such systems would impose limits on their numbers, specifications, and payload, a shortcoming that enemies could exploit by hardening important facilities or dispersing and building redundancy into C4ISR networks.¹⁷⁴

Although fifth-generation fighters would likely prove superior to their Chinese counterparts in air-to-air engagements, their limited combat radius and potential vulnerability to sophisticated IADS could hamper their use. And though U.S. forces could deny airspace to enemy fighters, surveillance aircraft, or aerial refueling tankers, they would not be able to guarantee the safety of their own supporting aircraft against attacks from enemy IADS.

The Ground Domain

Despite its comparatively high level of military spending under this trajectory, the United States would still be hard pressed to reduce the vulnerability of its forward bases in Japan to crippling saturation attacks. An integrated, flexible, and mobile network of Patriot batteries and THAAD systems could extend coverage across bases and ports in Japan, and would likely be equipped with a somewhat greater number of interceptors than would likely be produced under other trajectories. Yet such systems would offer only partial and temporary protection, and could quickly be overwhelmed by large volumes of comparatively affordable cruise or ballistic missiles.¹⁷⁵

Although passive defenses and countermeasures would play a secondary role, the United States could also take steps to harden runways, erect aircraft shelters, and protect fuel and logistical supplies. Cost would remain a serious constraint, as the United States would be unlikely to build the hundreds of shelters necessary to house aircraft at Kadena. Asset dispersal would provide an alternative, but would require significant investments in redundant support systems, along with a high tolerance for degraded sortie rates. The United States would likely seek out basing and access agreements with its regional partners, but such measures would not substitute for the favorable location and centralized infrastructure of U.S. bases in Japan.

The Space and Cyberspace Domains

Whether the United States would abandon its current reservations about weaponizing space would hinge on its perceptions of the threat environment and its calculations about how confrontations in this unfamiliar domain would affect the larger military balance in the Western Pacific. Under a more competitive version of this trajectory, the United States could potentially field a range of ASAT capabilities, including direct-ascent vehicles, directed-energy weapons, co-orbital systems and microsatellites, and jamming technologies to disable or destroy satellites in GEO. In this instance, the United States would also be more likely to possess long-range strike capabilities that could potentially disrupt the ground-based systems for enemy satellites and ASAT capabilities.

Alternatively, fears of sparking an uncontrollable—and perhaps unwinnable—arms race in space could also lead the United States to shun dedicated ASAT capabilities in favor of electronic warfare to sever links between satellites and other C4ISR systems. In either case,

the United States would likely invest in hardening, improved maneuverability, dispersal, and redundant systems for its space-based assets, including reserve satellites that could be quickly launched to reconstitute damaged networks. Indeed, the U.S. military could also attempt to reduce its dependency on space by developing more sophisticated HALE UAVs to perform critical functions currently assigned to satellites.

In the cyber domain, the United States would likely maintain superior offensive capabilities that would allow it to infiltrate, disrupt, and paralyze enemy networks throughout a conflict. Cyber operations would be highly integrated with U.S. capabilities in other domains, disabling enemy battle networks to amplify the destruction of kinetic attacks. Yet the United States would most likely be unable to conduct a perimeter defense to seal off its networks against external threats, and it would have to contend with the possibility that attacks on unclassified networks could disrupt logistical networks and thwart deployments at the onset of a crisis.¹⁷⁶ Given enough time, however, the United States could potentially recover and resume operations even in the face of persistent infiltration of unclassified networks.

The Nuclear Domain

Under this trajectory, the United States would be highly unlikely to pursue warhead reductions beyond the threshold mandated by New START. Indeed, the United States would have strong incentives to reverse course on any numerical cuts, all but ensuring that its arsenal will dwarf China's. Modernizing the nation's aging warheads and delivery vehicles could take on greater importance, with somewhat higher levels of funding devoted to extending the life spans of ICBMs, building new SSBNs and developing new SLBMs, and fielding a new long-range bomber. Although dysfunctions in the acquisition process could still have some impact on U.S. strike options—limiting, for instance, the numbers and specifications of a next-generation bomber—the United States would most likely sustain its existing advantages vis-à-vis China and maintain a nuclear triad capable of upholding extended deterrence in the Western Pacific.

Command and Control

In this trajectory, a high level of integration and interoperability among U.S. (and potentially) allied forces would allow the military services to execute joint campaigns across domains in quick succession: Under an ASB concept-oriented approach, for instance, the United States could potentially use cyberattacks, ASAT capabilities, and deep strikes with long-range bombers to execute “blinding” campaigns against C4ISR. Decentralized C2 would allow military service leaders to quickly request and coordinate strikes featuring air and naval systems. From a technological standpoint, overlapping and integrated C4ISR networks would reduce—but by no means eliminate—the likelihood that individual attacks in cyberspace or outer space would disrupt the connectivity between headquarters and forces on the front lines.¹⁷⁷

Trajectory 2: Faltering

Under Trajectory 2, the economic and military capacity of the United States would falter. As a result, Washington would pursue continued cooperative engagement and hedging toward China (with a marginal stress on the former) and an increased reliance on alliance relationships for maintaining regional security. Such an approach could be manifested in one of two strategic variants—one that largely attempts to follow the engagement- and primacy-based approach described in Trajectory 1, but that nonetheless confronts notable limits in terms of political and defense capabilities in the Western Pacific; and another that reacts to such constraints by pursuing limited accommodation with Beijing on such issues as Taiwan, territorial disputes, and U.S. military activities in the EEZ. This overall trajectory is deemed slightly less likely than the “Strength” trajectory described above.

FOREIGN POLICY AND MILITARY STRATEGY

Under this trajectory, Washington would continue to emphasize its current two-sided strategy toward China, albeit with a greater stress on the search for deeper levels of cooperation and perhaps even accommodation with Beijing. Washington would exert efforts to involve Tokyo and other regional friends and allies in as many cooperative ventures as possible with China, seeking to maximize interdependency and reduce Chinese incentives to strong-arm neighbors. U.S. leaders would also attempt to increase their reliance on friends and allies for the attainment of political and security objectives and to develop a less engaged overall military strategy based on the need to reduce the scope and scale of some U.S. deployments and activities in the Asia-Pacific region.

As a result of these imperatives, Washington would seek to deepen political, economic, and security ties with Tokyo through greater accommodation over contentious issues such as the restructuring of the U.S. bases in Okinawa. At the same time, U.S. leaders might also attempt to pressure their Japanese counterparts to take on a greater share of the defense burden in the areas surrounding Japan while providing repeated reassurances of Washington's defense commitment and deterrence capacity in the Western Pacific.

In terms of security policy toward China, the United States could pursue two different approaches under this overall “Faltering” trajectory. If PLA capabilities were to remain constrained, if China exhibited particularly benign behavior toward the United States and its allies in the region, or if the U.S. economy were to continue to languish at lower growth rates, Washington might adopt a defense strategy and doctrine vis-à-vis China that is more oriented toward limited accommodation on some volatile regional security issues, such as territorial disputes in the South China and East China seas, U.S. surveillance operations along China's coastline, and even defense assistance to Taiwan. Under extremely adverse economic conditions, it is not inconceivable that U.S. leaders would seek to put in place a lower-profile, less robust defense strategy based on alternatives to primacy in maritime Asia. This could involve the jettisoning of the ASB concept in favor of other operational concepts discussed in chapter 6. However, under less adverse economic conditions or if faced with

greater Chinese assertiveness, the United States would more likely make fewer accommodations and attempt to maintain something approximating the current, primacy-based defense strategy, albeit involving a greater reliance on allies.

DETERMINANTS AND UNCERTAINTIES

As suggested above, this trajectory would most likely emerge in part as a result of prolonged U.S. economic and political difficulties. In the former area, growth levels would likely persist at medium to moderately low levels throughout the period under examination, meaning less than 2 percent growth (and possibly less than 1 percent growth in some years), sustained, unacceptably high levels of unemployment or underemployment, and the continuation of a sizable, if not massive, budget deficit. The more extreme version of this growth scenario could involve significant domestic political and social unrest and growing pressures among the public to greatly limit U.S. overseas involvement. In the political sphere, sharp disagreements would continue over economic policy, with growing demands for increasingly more significant cutbacks in both military and civilian sectors of the U.S. government. The best-case economic circumstances in this trajectory would likely involve sustained, mid-level growth, but without any significant improvement over the long term, and with many unresolved political and social problems.

The occurrence of various “wild card” events in the Western Pacific, such as a severe clash between China and Japan over disputed territories, could greatly influence both U.S. defense and foreign policies under any future trajectory. Under this trajectory, such events would likely facilitate a U.S. effort to rely more heavily on regional allies (by driving them more toward Washington) while strengthening the resolve of U.S. leaders to focus their more limited military resources on Asia. However, these factors would probably not lead to the overtly confrontational strategy described in the more extreme variant of the “Strength” trajectory, especially if Washington were facing severe domestic economic and political problems.

DEFENSE SPENDING AND MILITARY CAPABILITIES

Under this trajectory, diminished budgetary resources and continued political disarray could create pressing imperatives to rein in long-term deficits through any means necessary, resulting in broad and even deep cuts to entitlements and defense spending alike. At the same time, cost escalation for the high-technology capabilities that make up the vast majority of the Air Force’s and Navy’s acquisitions through the 2020s would continue unabated, forcing the Pentagon to delay or even reduce some important areas of force modernization. However, though defense spending and deployments would experience significant overall reductions, U.S. leaders would also likely strive mightily to continue to devote significant military resources to the Western Pacific. Of course, Washington’s ability and willingness to sustain such an effort over the long term would depend greatly on the severity of the economic and political problems confronting the nation, and the level of threat perceived from China and other nations such as Iran.

As stated above, the U.S. strategy toward a very strong, if not clearly predominant, presence in the Asia region would continue to prevail under this trajectory. However, this commitment would have to be made under constraints of an increasingly tight fiscal environment, with long-term economic growth proceeding at about a sluggish 1 percent annually. The major difference between this trajectory and the “Strength” trajectory described above should not be seen as an absolute divergence in weapons capabilities or force posturing; rather, it ought to be viewed as a change in the tempo of deployments of more advanced technologies needed to maintain the desired level of U.S. presence in the Asia-Pacific region.

The Maritime Domain

Per existing trends, the U.S. fleet would continue to shrink in overall size even as new carriers, surface combatants, and submarines slowly entered the force. Onboard defenses for carriers and other surface combatants would likely be less comprehensive, sophisticated, and integrated in nature, increasing the risk that individual ASBM or ASCM attacks could result in a mission kill or actual destruction of a vessel.

Upgraded SSNs would likely allow the United States to extend its existing advantage in offensive undersea capabilities. However, the United States would probably lack the capabilities to fully and effectively chart and navigate a treacherous undersea environment within the first island chain; current experiments with UUVs and unattended sensor arrays would be unlikely to reach fruition, while any minesweeping vessels, ASW aircraft, and maritime patrol aircraft would be at risk from anti-air defenses.

The Air Domain

Under this trajectory, U.S. forces would likely acquire fewer fifth-generation fighters than anticipated due to growing resource constraints. Given the reduced prominence of the ASB concept and heightened fiscal constraints under this trajectory, the United States would be far less likely to possess long-range strike capabilities; though next-generation bombers could still enter the force in small numbers and with fewer specifications, unmanned combat drones would most likely remain experimental. Although fifth-generation fighters could potentially outstrip their PLA Air Force counterparts in direct air-to-air engagements, opportunities for such symmetrical matchups would become scarce as forward bases, carriers, and the infrastructure underlying TACAIR grow increasingly vulnerable to missile attack. And while U.S. forces could conduct area denial against enemy maritime surveillance aircraft, aerial refueling tankers, and other airborne assets, they would not be able to guarantee the safety of their own UAVs, airborne C2 relays, and refueling tankers against robust and sophisticated IADS.

The Ground Domain

The United States would continue to invest in active and passive defense, though any gains as a result of these measures would be incremental and insufficient to compensate for the inherent vulnerability of forward bases to missile attack. Though a network of Patriot batteries and THAAD systems could force enemies to expend greater munitions in any attack on Kadena, the United States would remain at a significant disadvantage due to the prohibitive unit costs of BMD and the relatively low numbers of warheads needed to cripple the base. Apart from securing fuel storage, pre-positioning supplies, and optimizing its logistical network, the United States could also take steps to harden facilities, disperse assets, and even create bases at sea. Yet not all these measures would prove complementary or mutually reinforcing—a more dispersed presence, for instance, would necessitate greater redundancy in systems and potentially create more assets in need of shielding.¹⁷⁸

In this scenario, the United States would probably not be able to overcome the technical and financial obstacles necessary to field a Conventional Prompt Global Strike system over the next fifteen to twenty years. Though standoff weapons could also substitute in offensive missions against land-based targets, they would be slower, more susceptible to Chinese surface-to-air missiles, and often reliant upon vulnerable platforms such as ships and aircraft.

The Space and Cyberspace Domains

Under this trajectory, efforts to emphasize cooperative elements in its relationship with China might lead the United States to limit its development and acquisition of dedicated ASAT capabilities. Nevertheless, the United States would continue to possess the ability to field a variety of ground-based interceptors, lasers, and jamming technologies that, in the aggregate, could target enemy satellites in GEO. Electronic warfare to sever the uplinks between satellites and other communications networks would provide a relatively attractive, low-risk counterbalance to China's growing inventory of space assets. Defensive countermeasures would be less comprehensive than under the "Strength" trajectory described above, and may consist of limited hardening, antijamming technologies, and efforts to increase the redundancy of C4ISR systems.¹⁷⁹

Relative to some costly and experimental counter-A2/AD programs, the development of U.S. cyber operations would be less dependent on high levels of funding and would likely persist unabated. As a result, the United States would likely be able to infiltrate and paralyze Chinese networks, amplifying the impact of kinetic operations. Nevertheless, the United States would continue to face the possibility of unexpected and crippling attacks in the opening moments of a crisis, at least with regard to relatively unprotected, unclassified government networks.

The Nuclear Domain

The United States would continue to modernize its arsenal of nuclear warheads, and the stock reserve would decrease as mandated by treaties. Still, the size of the U.S. nuclear arsenal would continue to dwarf that of most competitors, including China. In this instance, irregular or insufficient funding for specific modernization programs could, at the margins, have an impact on the range of U.S. nuclear strike options. The United States could find itself with fewer SSBNs than anticipated, while the numbers and specifications of a future long-range bomber could suffer as a result of a difficult acquisition process. It is possible, as a result, that one or more legs of the triad could be reliant upon aging, Cold War-era delivery vehicles, potentially reducing the operational flexibility of U.S. nuclear forces. Even under such conditions, however, U.S. nuclear forces would likely still have the numbers, survivability, and penetrative capability to preserve deterrence (and extended deterrence) vis-à-vis China.

Command and Control

In this trajectory, U.S. forces would improve their integration across domains, facilitating the use of cyber and space operations to create openings for kinetic strikes. On one hand, decentralized C2 would allow commanders in the field to request and coordinate strikes between air and naval platforms, although U.S. forces as a whole might operate at a somewhat slower tempo than under the previous “Strength” trajectory. On the other hand, technical obstacles to creating shared, real-time “operating pictures” between air and naval platforms could make it difficult for U.S. forces to patrol the vast areas within the first island chain. Though the United States would continue to build redundancy and resilience into C4ISR networks, well-timed cyber or ASAT strikes could disrupt connectivity between commanders and troops in the theater.¹⁸⁰

TRAJECTORY 3: WITHDRAWAL

Under Trajectory 3, Washington would execute a significant U.S. military withdrawal from the Asia-Pacific region, involving variable attempts to reduce the adverse impact of such an action on the security environment, heightened efforts to accommodate China, and a severe reduction, if not end, to the United States’ security alliance with Japan.

Foreign Policy and Military Strategy

Under this extremely unlikely but not impossible trajectory, the United States would drastically reduce its forward presence and alliance commitments in the Western Pacific. As a result, the hedging elements of U.S. policy toward China would diminish significantly, in favor of a far greater stress on cooperation and accommodation than witnessed in the

trajectories described above. This trajectory would also witness a heavier reliance on multi-lateral political, diplomatic, economic, and especially security structures designed to integrate China into the region, provide more viable alternatives to the past United States–led hub-and-spokes bilateral alliance system, and reduce the likelihood of destabilizing crises.

Washington would thus continue to work closely with China and other Asian powers not only to address common regional and global challenges (as in the above trajectories) but also to develop new approaches to managing regional hot spots, from the Korean Peninsula to the South China Sea. This effort would probably require significant accommodation to Chinese interests and views. At the same time, U.S. leaders would attempt to transform bilateral alliance relationships into structures that could simultaneously lend greater support to emerging multilateral security structures while retaining the credibility of the U.S. extended deterrence commitment. This would likely require Washington to maintain its nuclear umbrella over Japan while also preserving the capacity to inject significant conventional forces into nearby areas if needed. Most U.S. military forces would be located on Guam, Hawaii, and the Continental United States (CONUS), however, with limited patrolling and possible access arrangements remaining in forward areas.

The overall U.S. defense strategy under this trajectory might thus approximate a version of the “offshore balancing” approach advocated by some analysts—assuming, that is, that the United States were clearly to retain the capacity to return to the region militarily.¹⁸¹ As part of this undertaking, Washington would likely also encourage Tokyo to strengthen its conventional military capabilities and deepen its security relationships with other Asian capitals, including both Beijing and Seoul.

The above-noted actions and approaches constitute a “best case” variant of this trajectory, derived in large part from relatively high levels of regional cooperation, a relatively benign China, the absence of most if not all of the “wild cards” discussed above, a relatively incremental decline in U.S. capabilities, and astute diplomatic efforts—all discussed in the next chapter. Such a positive variant might also emerge from an appreciable reduction in U.S. and regional threat perceptions, as a result of a variety of positive developments also described in the next chapter.

A “worst case” variant of this trajectory would involve a badly prepared and probably precipitate U.S. withdrawal under extreme pressure and with a greatly lessened regard for regional reactions. Under this most unlikely variant, Washington would virtually end its forward presence in the Western Pacific; greatly draw down its forces in other parts of the region; and drastically reduce, if not eliminate, the level and scope of its defense cooperation with Japan and other allies. This would occur almost entirely as a result of severe domestic economic and political constraints in the United States, with little consideration for the state of political and defense relationships across the region or the presence or absence of major crises. Hence, though the United States might attempt to retain a type of “offshore balancing” strategy in Asia under this variant, few if any outside observers would view U.S. military commitments or capabilities as credible.

Determinants and Uncertainties

As the above discussion clearly suggests, this trajectory could only emerge under a condition of extreme U.S. political, economic, and social disarray. Such a near-catastrophic situation would likely result from a prolonged and extreme economic crisis marked by near-zero or negative growth rates, severe unemployment well above 8 percent, a worsening debt crisis, major cutbacks in domestic social and health programs, and expanding social unrest. In the political realm, the United States would likely witness the emergence of a leadership consensus behind a transition toward a “minimalist” global security strategy, involving severe cutbacks of the sort summarized above. The ability of U.S. leaders to manage such a wrenching transition could vary greatly, depending on the speed and severity of the U.S. decline, the political and diplomatic acumen and the level of cooperation existing among both leaders and government officials, and the actions and reactions of other powers. In the most extreme situation, the last variable might not matter greatly, as indicated above.

Defense Spending and Military Capabilities

Under such circumstances, U.S. defense spending and military modernization programs would inevitably suffer major cutbacks, leading to serious declines in the military hardware, technologies, and systems of greatest relevance to the maintenance of deterrence capabilities beyond U.S. shores. In short, the guns-versus-butter trade-off would by necessity become heavily tilted in favor of civilian demands. The emphasis on domestic priorities would increase as the economy slid more deeply downward, speeding the process of downsizing and eventual withdrawal from the region.

In this extremely unlikely trajectory, there would invariably still be some degree of military investment and advancement. However, this would most likely appear, as a result of constrained budgetary capacity and domestic civilian demands, in the form of minimal “hedging” capabilities that could enable U.S. forces to intervene in a regional crisis, albeit in a limited capacity. Yet the simultaneous convergence of fiscal pressures, bureaucratic infighting, and political disarray could potentially wreak havoc on the delicate acquisition process, producing cost overruns, delays, and cancellations that would limit the capabilities available to U.S. forces. This would also suggest that within each domain, there would be less time and resources devoted to training and exercises and by extension, a lower constant level of readiness.

The Maritime Domain

For the United States, drastic reductions in military spending would be manifested in a smaller, older, and less capable fleet that would be more likely to find itself overburdened and outmatched in a potential crisis in the Western Pacific. Major shortfalls in surface combatants and submarines would compromise operational readiness, despite the best efforts of the Navy to extend deployments and service lives. Among other weaknesses, U.S. forces

would be unable to impose the local sea control that would be required to engage in successful SLOC operations. However, a managed drawdown could potentially see the United States attempt to mitigate the impact of such shortfalls by scaling back programs for carriers and surface combatants to preserve attack submarines and develop additional standoff weapons. Conversely, the circumstances surrounding a precipitous withdrawal would be unlikely to permit much forward planning to ensure a more optimal distribution of capabilities in the fleet. In that case, the United States would likely contend with a gradual hollowing out of the fleet.

In either case, moving forward-deployed ships out of the Western Pacific would severely hamper their ability to intervene in the early stages of a conflict. A ship departing from Guam could take upward of two to three days to reach a conflict in the East China Sea, while one departing from the CONUS could require over a week longer.¹⁸² ASW and mine countermeasure missions would take on an added dimension of difficulty, as the United States would likely possess fewer SSNs than under previous trajectories. At the same time, the United States would have fewer capabilities to secure the permissive aerial or maritime environments necessary to operate maritime patrol aircraft, helicopters, or minesweeping vessels.

The Air Domain

The impact of the United States' withdrawal would arguably be most severe in the air domain. Relocating airbases from Japan to areas further out into the Western Pacific would deprive aircraft of the proximity and concentrated base infrastructure necessary to sustain high sortie rates and intense campaigns. Given the objective resource constraints it would face under this scenario, the United States would likely procure fifth-generation fighters in dramatically reduced quantities and compensate by upgrading or otherwise extending the service of fourth-generation fighters. Although the United States could attempt to invest in long-range bombers as part of a managed drawdown from the region, fiscal and bureaucratic obstacles would likely thwart the development of deep-strike capabilities in any meaningful numbers by 2030.

Relative to the previous trajectories, then, U.S. aerial forces would be even more vulnerable to sophisticated IADS, yet similarly dependent on in-theater allied bases or aerial refueling. In addition, the United States would have even fewer capabilities at its disposal to neutralize land-based, maritime, or aerial threats to UAVs, airborne C2 relays, and refueling tankers.

The Ground Domain

As noted above, the United States would likely shift the majority of its base assets to Guam, Hawaii, or the CONUS under this trajectory, reducing—but by no means eliminating—their exposure to missile attack.¹⁸³ Under a phased withdrawal, the United States could negotiate with its regional partners to secure basing and access rights, establish logis-

tics and supply networks, and pre-position equipment and supplies to facilitate the possible reentry of U.S. forces into the theater. A forced and hasty departure from the region would see few if any such precautionary measures, creating a set of financial, operational, and political difficulties in the event that the United States attempted to reinsert itself into a future conflict. Although the United States would lack the means to invest in active and passive defenses on behalf of its allies, any TACAIR operations would still require the proximity and concentrated infrastructure of allied runways and base infrastructure vulnerable to saturation missile attacks.

From an offensive standpoint, the United States would be unlikely to field a Conventional Prompt Global Strike system, relying instead on aging standoff weapons to strike at land-based targets. Such weapons, however, could lack the range or numbers necessary to penetrate layers of surface-to-air missiles to disable shielded or dispersed targets.

The Space and Cyberspace Domains

Financial, technical, and bureaucratic constraints would most likely limit potential U.S. ASAT capabilities to direct-ascent weapons and jamming technologies. However, the United States could maintain reservations about openly pursuing ASAT systems, given its continued dependence on space-based C4ISR and the increased possibility that it could find itself at a disadvantage in an unrestricted arms race. Defensive countermeasures—such as hardening satellites, dispersing assets, and building redundant networks—would at best be partially implemented, if at all.

Given their relative affordability and asymmetric potential, programs for offensive cyber capabilities would be unlikely to suffer significantly under this trajectory. The United States would likely retain the ability to paralyze enemy networks and impair C4ISR functions, creating an opening for kinetic strikes. However, a likely reduction in allied military cooperation could extend to monitoring and information sharing regarding cyber threats. At the same time, unclassified networks would continue to remain vulnerable to crippling attacks, particularly at the onset of a crisis.

The Nuclear Domain

Under this trajectory, budgetary woes afflicting the military services could have some impact on the sophistication and numbers of U.S. delivery vehicles for nuclear warheads. The Navy could struggle to replace some of its aging SSBNs with next-generation variants, which could reduce the number of SSBNs on station in the Western Pacific. Without a next-generation bomber, the Air Force would likely rely on legacy B-2 or even B-52 bombers to support its leg of the triad. Life extension programs would likely allow the United States to preserve its ICBMs without serious difficulty. Although U.S. nuclear capabilities would suffer in comparison with the previous trajectories, they would still be more than sufficient—at least in numerical and operational terms—to deter China's limited force.

Command and Control

In this trajectory, the withdrawal of U.S. forces would severely hamper efforts to break down bureaucratic stovepipes, decentralize C2, and create integrated counter-A2/AD campaigns. The likely reduction in surveillance and exercises in the Western Pacific that would accompany any withdrawal would impair efforts to improve real-time situational awareness across the military services or enhance cross-domain operations in the theater. Differing tactics and procedures between the services would likely prevent subordinate commanders from operating effectively under combined assault from multiple antiaccess systems. From a technical standpoint, C4ISR networks between the services could still suffer from differing specifications that would limit interoperability and slow the pace of any counter-A2/AD missions. Moreover, U.S. forces as a whole would be more vulnerable to electronic warfare aimed at severing the links between commanders and forces in the theater.

5

ALTERNATIVE SECURITY SCENARIOS IN 2030

This chapter presents six alternative future trilateral security environments for circa 2030 that could emerge as a result of combinations of the trajectories in the future military capabilities and security behavior of China, Japan, and the United States presented in chapters 2 through 4. These security environments are presented in descending order of overall likelihood of occurrence. Estimates of scenario probability are primarily derived from combined qualitative assessments of the probabilities of the various trajectories presented in the country chapters.

As described in chapter 1, the primary factors determining the features of each country's trajectories include (1) long-term economic and technological capacities, sociodemographic features, and geostrategic position; (2) domestic politics, leadership perceptions, social attitudes, and bureaucratic competition (including civil-military relations); and (3) potential exogenous shocks arising from fourth-party dynamics or contingent developments (that is, "wild cards") that could alter each country's threat perceptions. The primary outcomes, or dependent variables, of the country chapters include alternative projections to approximately 2030 of each country's military capabilities, foreign and defense strategies and policies, and specific types of behavior, defined largely in terms of levels of competitive or assertive versus cooperative actions.

As also indicated in chapter 1, in this chapter, variations in these outcomes for each country become the independent variables determining two critical features of the alternative future security environments that could emerge by 2030: the overall political, dip-

lomatic, and strategic situation confronting Japan and the United States; and the relative military capabilities of the three countries. The former is defined largely in terms of the level of overall threat perceptions and overtly competitive defense/foreign policy strategies of China, Japan, and the United States likely prevalent in each environment. The latter is expressed in terms of the likely state of the military competition between China and Japan and between China and the alliance occurring in the seven domains identified in the preceding chapters.

These two features, along with possible exogenous or intervening variables, together provide the basis for an assessment of the general level of stability or instability (viewed in terms of the propensity for zero-sum versus positive-sum competition and the overall likelihood of severe confrontation or conflict) for each trilateral security environment. Thus, in this analysis, as with any net assessment, instability is not simply a function of relative military capabilities but is also the consequence of political and diplomatic behavior and dynamic security perceptions.

SCENARIO SUMMARIES

The six alternative future scenarios for the trilateral security environment among China, Japan, and the United States (table 5.1) are summarized here and discussed in greater detail below.

Scenario 1—Eroding Balance. The first of two equally likely scenarios would be marked by the overall continuation of present-day diplomatic and military approaches, centered on similar policies of cooperative engagement in China, Japan, and the United States alongside hedging or deterrence efforts in the military realm. In this scenario, cooperation would likely be reinforced by deepening levels of Sino-Japanese economic interdependence and an emphasis by all sides on stability-inducing positive-sum interactions in dealing with common problems.

Although the military realm would remain characterized primarily by significant levels of allied superiority in most domains, under this scenario, China would nonetheless have made notable absolute gains in several critical military capabilities and significantly increased its overall military presence in the areas surrounding Japan. This situation would result in a greater likelihood of tensions and incidents, especially over territorial and resource issues—assuming, as would be likely, a continued absence of credible mutual security assurances or crisis management mechanisms. At the same time, the scenario assumes that the region would avoid the kind of truly severe incidents or highly adverse developments that could generate a rapid increase in the level of threat perception and hostility among the elites and publics of China, Japan, or the United States.

In all, the regional security environment under this scenario would be more unstable than at present yet most likely would still prove manageable, despite significant increases in

TABLE 5.1

Alternative Scenarios in the China–United States–Japan Security Relationship in 2030

		1: ERODING BALANCE	2: LIMITED CONFLICT	3: MITIGATED THREAT	4: ASIAN COLD WAR	5: SINO- CENTRIC ASIA	3: SINO-JAPANESE RIVALRY	
CHARACTERISTICS		Probability	Most likely	Likely	Possible	Unlikely	Very unlikely	Most unlikely
		Degree of stability	Somewhat unstable	Very unstable	Somewhat stable	Very unstable	Medium-term stability but long-term uncertainty	Extremely unstable
		Military balance favors...	Alliance (narrowly)	Uncertain	Alliance	Alliance (narrowly)	PRC	PRC (narrowly)
Trajectories (cf. Chapters 2, 3, & 4)		China	1: Cautious Rise or 2: Assertive Strength	2: Assertive Strength	3: Cooperative Weakness	4: Aggressive Ultrationalism	1: Cautious Rise or 3: Cooperative Weakness	4: Aggressive Ultrationalism
		U.S.	1: Strength (engagement variant)	2: Faltering (engagement variant)	2: Faltering (accommodation variant)	1: Strength (containment variant)	3: Withdrawal (gradual variant)	3: Withdrawal (precipitate variant)
		Japan	2: Soft Hedge	1: Hard Hedge	2: Soft Hedge	3: Competition	4: Accommodation	5: Independence
Military capabilities		China	Mid–High	High	Low	High	Low–Mid	Variable (likely High)
		U.S.	Mid–High	Low–Mid	Mid	High	Low	Very Low
		Japan	Low–Mid	Low–Mid	Low	High	Low	High
Strategy, policies, and behavior		China	Engage and hedge	Engage and hedge, emphasis on hedge	Engage and hedge, cautious and internally focused	Aggressive	Benign	Aggressive
		U.S.	Engage and hedge, emphasis on hedge	Engage and hedge	Engage and hedge, emphasis on engage	Containment, strengthened alliance	Withdrawal or hollowing out	Drastic withdrawal or hollowing out
		Japan	Engage and hedge	Engage and hedge, emphasis on hedge	Engage and hedge, emphasis on engage	Normal military power	Strategic accommodation	Strategic independence (nuclearization)
DETERMINANTS								

Chinese capabilities. This scenario would likely result from combinations of either high- or midrange levels of economic development, military spending, and hence military capabilities for Washington and Beijing—that is, the “Strength” trajectory for the United States and either the “Cautious Rise” or “Assertive Strength” trajectory for China from the respective country chapters. It would also involve low- to medium-level military capabilities for Japan, resulting in part from continued restraints on Japan’s willingness to greatly increase defense spending, as postulated in the “Soft Hedge” trajectory in chapter 3.

Scenario 2—Limited Conflict. The second likely scenario would be marked by a significant increase in the relative military capabilities of China vis-à-vis Japan and the alliance, and a greatly increased emphasis on the hedging dimension of each nation’s overall strategic approach. Under this scenario, increasingly sophisticated and high levels of Chinese military capabilities would considerably reduce, though not entirely eliminate, the large margin of conventional superiority that the allies have traditionally enjoyed in the air and waters surrounding Japan. Although positive-sum political, diplomatic, military, and economic engagement between Beijing and both Tokyo and Washington would continue (albeit probably at a diminished level), the security environment would likely witness intensifying patterns of military competition and rivalry as China’s capabilities increase relative to the alliance. Indeed, the perception, if not the reality, would likely emerge in some quarters that China had achieved a very significant level of deterrence against U.S. and Japanese intervention in a Taiwan crisis, and perhaps even (albeit to a lesser extent) in a crisis over Sino-Japanese disputes in the East China Sea. This would result in an increased likelihood that Japan would pursue a somewhat harder hedge in its overall cooperative engagement with China, involving modest reinterpretations of constitutional constraints and sustained (though not significantly increased) levels of defense spending. These developments would also likely increase the probability of serious crises or even limited conflict, especially in the absence of credible mutual security assurances between China and the alliance.

That said, incentives to avoid severe crises and, if they occur, to limit escalation, would remain fairly strong, especially given continued high levels of Sino-Japanese economic interdependence and the likely absence of truly paradigm-changing triggering events such as the emergence of a vastly more aggressive Chinese leadership. Nonetheless, taken as a whole, the regional security environment under this scenario would likely be one of the more unstable of the six scenarios (along with Scenarios 4 and 6) presented herein, involving a significant weakening of allied deterrence capabilities and the unnerving of other Asian nations.

Overall, this scenario would likely result from low- to midrange levels of economic development and military spending in the United States (that is, the “Faltering” trajectory from chapter 4) and continued relatively high levels of economic development, military spending, and military capabilities in China (“Assertive Strength”), alongside a Japan that marginally reinterprets its political, military, and social constraints to pursue the “Hard Hedge” trajectory described in chapter 3.

Scenario 3—Mitigated Threat. The third scenario, less likely than the first two scenarios described above but also a real possibility, would be marked by continued high levels of cooperative engagement between China and Japan and between China and the alliance, alongside a slowly increasing or steady level of Chinese military and civilian naval presence in both the “open” ocean and disputed waters around Japan, lower patterns of military competition in most domains, and a resulting decreased capacity for serious tensions and crises. In this scenario, cooperation would be reinforced by deepening levels of Sino-Japanese economic interdependence and an emphasis by all sides on stability-inducing, positive-sum interactions in dealing with common problems. In addition, while achieving some modest gains in military modernization, China would prove unable to alter both the perception and the reality of the existing military imbalance in the Western Pacific; that is, the United States and Japan would continue to operate their forces in the Western Pacific near Japan as a clearly superior combined force in all military domains.

This trajectory would likely entail a China faced with more severe social unrest than in the trajectories described above and focused on maintaining internal stability rather than pursuing greater external military capabilities. As a result, Chinese leaders would likely become even more cautious and conservative in their actions abroad than at present, especially given their need to address growing domestic social problems associated with seriously declining growth rates, a weak social safety net, controls on internal migration, and increasing concerns about government corruption. The likelihood of such a Chinese approach would increase further if Tokyo also adopted a cautious and conservative approach to its territorial and resource disputes with Beijing, a likely occurrence under this scenario.

That said, assuming the absence of any regional or bilateral mutual security assurances or crisis management mechanisms or processes, the danger of an inadvertent crisis and rapid escalation in a crisis would almost certainly remain—although such occurrences would arguably be less likely than under the scenarios described above. In addition, adverse developments, such as the emergence of an aggressive, ultranationalist Chinese leadership in response to domestic unrest and a U.S. effort to consolidate its military superiority through deployment of a more threatening Air-Sea Battle (ASB) concept or an Offshore Control-based force structure (both discussed in greater detail in chapter 6), cannot be entirely discounted under this scenario. In other words, U.S. and Japanese behavior toward a weakened China, as well as Chinese leadership politics, would constitute key variables in this scenario.

As suggested above, this scenario would likely result from midrange levels of economic and technological development in the United States and a significant downslide in economic development and military spending levels in China, as represented in the “Faltering” trajectory for the United States from chapter 4 and the “Cooperative Weakness” trajectory for Beijing from chapter 2. Under this scenario, on balance, Japan would most likely witness lower growth levels than in the scenarios described above, due to the probable influence of a declining Chinese economy, while continuing to operate under most if not all of the other domestic restraints on defense spending and policies associated with the “Soft Hedge” trajectory from chapter 3. Nonetheless, such constraints would not appreciably erode the

Sino-Japanese military balance favoring Tokyo nor weaken the overall level of allied superiority over China.

Scenario 4—Asian Cold War. The fourth scenario, possible but less likely than the three scenarios described above, would be characterized by an incipient Cold War in Asia, centered on a steadily increasing level of zero-sum strategic rivalry and across-the-board political, economic, and military competition between China and the alliance, and a greatly increased likelihood of severe political-military crises, assuming an absence of credible mutual security assurances between the two sides. Under this scenario, Japan would become something close to a “normal” conventional military power and a fully active security partner of the United States in the alliance, largely in response to the emergence of a highly assertive, if not aggressive, and militarily strong China and the occurrence of one or more serious Sino-Japanese “wild card” crises. Although all three countries would likely continue to seek diplomatic and economic cooperation with one another (and other Asian nations) where possible, their military actions and defense policies would suggest a much greater willingness to employ military instruments in support of regional foreign policy objectives, including resource and territorial claims in the East China Sea. This scenario would therefore likely witness a shift toward more ultranationalist and assertive leaderships to varying degrees in all three capitals, but probably emerging first in Beijing and then, in response, in Tokyo and perhaps to a lesser extent in Washington.

Despite significant absolute and some relative Chinese gains in military capacity, considerable enhancements in alliance capabilities under this scenario would prevent major erosion in the superiority of the United States–Japan alliance in most military domains. That said, by approximately 2030, China would be able to field a set of air, naval, cyber, and command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) capabilities that could challenge regional perceptions of allied superiority under certain contingencies, such as a crisis over Taiwan or in the South China Sea. Such uncertainties, combined with the emergence of more risk-acceptant leaderships and more stridently nationalistic publics in both China and Japan, along with a zero-sum-oriented U.S. China policy, would almost certainly result in an increased likelihood of miscalculations or assertive behavior by all sides, especially regarding highly sensitive security issues such as territorial disputes. More broadly, this type of security environment could significantly weaken overall regional deterrence and greatly unnerve nearby nations.

This scenario would likely result from mid to high levels of economic and technological development in the United States and China, and a Japanese transition toward higher levels of defense spending and a higher and more expansive set of military capabilities and defense objectives. Under this scenario, the emergence of an ultranationalist Chinese leadership would likely result from a combination of both domestic and external factors, including high but socially destabilizing levels of economic growth and heightened threat perceptions due to high levels of U.S. and Japanese military capacity and an increased regional presence. In terms of country trajectories, this “Asian Cold War” scenario would most likely

result from a highly assertive China (the “Aggressive Ultrationalism” trajectory described in chapter 2), an intensely competitive variant of the “Strength” trajectory for the United States (offering little support for cooperative interactions with Beijing), and the “Competition” trajectory for Japan that sees Tokyo become a normal military power.

Scenario 5—Sino-Centric Asia. The fifth and sixth scenarios emerge primarily as a result of a major withdrawal or hollowing out of U.S. forces in the Western Pacific, a highly unlikely but not entirely inconceivable possibility over the time frame of this study. The first variant of this contingency, a “Sino-Centric Asia,” would be marked by a high level of Japanese strategic accommodation to an economically important and yet politically and militarily nonthreatening China. Under this scenario, Beijing’s military presence and capabilities relevant to Japan would likely increase at a more gradual pace than at present, especially if China’s economy were experiencing serious problems. In particular, China would likely respond to the U.S. drawdown by reducing the more threatening aspects of its force deployments, training and exercise programs, and defense policy statements of most relevance to Tokyo, while pushing hard to expand levels of bilateral military-to-military, political, economic, and diplomatic cooperation. Moreover, Beijing would be more likely to seek mutual security assurances and confidence-building measures with Tokyo under this scenario, including joint development of East China Sea resources and the shelving of territorial disputes over the Senkaku/Diaoyu Islands. Beijing would also likely seek to avoid provocative or threatening political or other actions toward Washington that might reverse the U.S. withdrawal.

This scenario would almost certainly witness a significant downgrading of the United States–Japan alliance. As a part of this development, Tokyo would likely seek to greatly reduce or eliminate its support for U.S. basing in Japan, including those U.S. defense policies and military actions viewed as most threatening to China, either in response to Chinese “encouragement” or as a result of an independent decision. However, Beijing would likely support a gradual approach to the process of alliance revision, in an effort to not overly alarm the United States and to reduce Japanese arguments in favor of acquiring a nuclear weapons capability. And Tokyo would seek to retain at least the basic framework of the alliance, in order to remain covered by the United States’ extended deterrence umbrella and possibly to secure support in missile defense vis-à-vis North Korea.

This scenario would most likely result from a long-term, severe level of U.S. economic stagnation and decline, combined with strong U.S. public pressures to reduce America’s overseas commitments, and low- to mid-level economic growth rates in Japan and China; however, other combinations of growth rates and spending levels would be conceivable, such as a high-capacity China without an ultranationalist leadership. The scenario also likely assumes significant positive changes in Taiwan and the Korean Peninsula, ranging from peaceful reunification in a way that precludes residual political uncertainty or conflict to the establishment of a very stable long-term *modus vivendi* between the sides. Taken together, these features mark this scenario as relatively stable—albeit with some significant

uncertainties—over the time frame examined in this study, but possibly quite unstable over the long term (that is, beyond twenty years) and certainly very unlikely.¹ In terms of the trajectories outlined in the country chapters, this scenario would most likely involve variants of the “Cautious Rise” or “Cooperative Weakness” trajectories for China, the “Accommodation” trajectory for Japan, and the gradual variant of the “Withdrawal” trajectory for the United States.

Scenario 6—Sino-Japanese Rivalry. The sixth and final scenario would be marked by a very different strategic consequence of the U.S. withdrawal or hollowing out in the Western Pacific. In this instance, Beijing would seek to take advantage of the situation by increasing pressure on Tokyo in a range of political and economic disputes, particularly those related to territorial and resource claims in the East China Sea and possibly also historical issues. Out of a sense of insecurity fostered by the U.S. withdrawal and provoked by aggressive Chinese behavior, Tokyo would implement a major realignment in its national security strategy, moving toward an independent military capability that most likely would include nuclear weapons, as well as all the doctrinal and force structure accoutrements of a “normal” conventional military power. The result would be a sharpening Sino-Japanese rivalry.

For its part, China would seek to greatly increase its military capability to coerce Japan without the use of force, relying on enhanced conventional and nuclear capabilities in specific areas. Under this scenario, the process through which Japan were to develop and deploy nuclear weapons would have an enormous influence on the propensity for crises or even conflict with Beijing. For example, to establish a credible and timely deterrent before Beijing might conceivably attempt to coerce Japan militarily, such as over disputed territorial and resource claims, Tokyo would need to establish a survivable and highly potent second-strike nuclear capability within a relatively short time frame.

This scenario would result from a badly prepared and probably precipitate U.S. withdrawal from the Western Pacific, most likely brought on by a far more intense and prolonged economic crisis than the recent global financial crisis of 2008, and would almost certainly involve a severe hollowing out, if not abrogation, of the U.S.-Japan Mutual Security Treaty. It would also likely require the emergence of (1) a highly nationalist, aggressive, and risk-acceptant leadership in China, in the context of continued mid to high levels of economic growth accompanied by inadequate reforms, significant social unrest, and sharp leadership debate, (2) a greatly alarmed Japanese public willing to acquire nuclear weapons to ensure its security; and (3) a sea change in U.S. leadership attitudes or a level of domestic political discord that compels a rapid U.S. withdrawal, despite China's more aggressive behavior. In terms of trajectories from the country chapters, this “Sino-Japanese Rivalry” scenario would combine the “Aggressive Ultrationalism” China trajectory, Japanese “Independence,” and a domestically focused, disorganized variant of the “Withdrawal” trajectory in the United States.

Needless to say, this scenario would present an enormous potential for severe crises and escalation and thus marks the most unstable of the six scenarios. Fortunately, this scenario is

also extremely unlikely, given the limited possibility that the United States would withdraw from the region in the face of high levels of Chinese assertiveness and acute Sino-Japanese security competition. Even if confronted with major economic constraints, Washington would likely go to great lengths to prevent such a scenario from unfolding. Moreover, Beijing would probably recognize the self-defeating aspects of adopting such a belligerent stance in the face of a withdrawal by Washington, and it would thus be more likely to respond in the manner presented in Scenario 5.

The following more detailed presentations of each scenario first describe the overall foreign and defense strategies and relationships prevailing among China, Japan, and the United States. This is followed by an integrated analysis of the main features of the military competitions between China and Japan and the alliance across seven domains (maritime, air, ground, space, cyberspace, nuclear, and command and control). The analysis then addresses the level of tension or confrontation likely within the scenario, as a general measure of stability. Each scenario concludes with an assessment of its main determinants, underlying assumptions, and uncertainties, derived in large part from the country chapters.

SCENARIO 1: ERODING BALANCE

This scenario posits a regional security environment marked by continued, extensive levels of political, diplomatic, and economic engagement and cooperation between Beijing and Tokyo alongside a steadily increasing Chinese military and civilian naval presence in both the “open” ocean and disputed waters around Japan, intensifying patterns of military competition in most if not all domains, and a resulting growing degree of military, political, and diplomatic rivalry and tension. These tensions would emerge in large part because, although the alliance would retain a margin of military superiority in most domains, that margin would have eroded over time in light of advancing People’s Liberation Army (PLA) capabilities.

Foreign and Defense Strategies

Under this scenario, China would be inclined to pursue a version of the “deter and embrace” approach toward Japan and the alliance presented in chapter 2, marked by continued efforts to strengthen bilateral and regional diplomatic and economic cooperation; moderate levels of flexibility in diplomatic and political interactions on maritime and territorial security issues (involving, for example, continued Chinese support for defense dialogues and greater transparency and a willingness to consider confidence-building measures and joint development in the East China Sea); and a continued policy of restraint overall with regard to the activities of the People’s Liberation Army Navy (PLAN), as opposed to the actions of nonmilitary entities (such as China Marine Surveillance vessels) or paramilitary actors in disputed areas. These features would reflect both a continued desire to avoid tensions

and crises that might derail China's national development program, and a growing effort by Beijing to use increasing economic, political, and military capabilities to create more "space" between Tokyo and Washington in their respective China policies, in part by courting both capitals.

Similarly, Japan would likely continue a version of the "cooperative engagement with a soft hedge" approach discussed in chapter 3. This would be marked by a continued stress on bilateral economic ties and avoidance of a "China threat" focus in Japanese foreign policy, continued low to moderate levels of defense spending, a stress on the defense of the home islands, and moderate increases in the defense capabilities of the southwest islands—largely reflected in enhanced ISR systems and a higher tempo of Japanese Maritime Self-Defense Force (JMSDF) activities. These actions would likely occur alongside efforts to avoid the militarization of the Sino-Japanese territorial dispute, a continued stress on strengthening security cooperation with China, and a continued emphasis on the United States–Japan alliance, albeit possibly to a lesser degree than Washington might desire. Overall, Tokyo would likely continue to pursue its existing two-pronged strategy of keeping the United States engaged in the region while enmeshing China in a variety of bilateral and multilateral institutions and processes.

Under this scenario, the United States would also continue its long-standing policy of balancing between cooperative engagement and hedging toward China, while seeking to strengthen and incrementally expand the scope and function of its security relationship with Japan. Washington would likely maintain its current stress on expanding regional cooperation designed to integrate China into the regional and global order and restrain or shape China's security outlook and behavior, while also enhancing its ability to hedge against growing Chinese military power. Thus, the United States would show no signs of withdrawing from the region, and would continue to implement a variety of military deployments designed to counteract growing PLA capabilities in the Western Pacific. Such an approach could see extensions in rotational deployments in nations such as Australia and Singapore, increased U.S. engagement in regional forums, and efforts to advance preferential trade agreements with allies and strategic partners. In the aggregate, these measures would augment the United States' role as a regional counterweight to Chinese influence, but fall well short of treating Beijing as a Cold War–style strategic adversary requiring major increases in both U.S. and Japanese military capacities and a largely zero-sum alliance orientation toward China. The emphasis in this scenario would remain on largely positive-sum interactions.

That said, the possibility—indeed likelihood—would also exist in this scenario of significantly increased tensions and incidents associated with ongoing territorial disputes and hotspots involving the Senkaku/Diaoyu Islands, Taiwan, and the Korean Peninsula, or as a result of interactions between a growing number of Chinese air or naval vessels and Japanese or U.S. vessels operating in increasingly close proximity to one another. Such adverse events could result from a steadily increasing Chinese military presence in the air and seas surrounding Japan (including increasingly large and sophisticated exercises and more regu-

lar and possibly intrusive patrolling), greater Chinese capabilities in many domains relevant to Beijing's ability to exercise political (including coercive) influence in the area, and more vigorous patrolling by the Japan Self-Defense Forces in response to China's growing presence. Moreover, the danger of inadvertent and rapid escalation in a crisis would probably become more pronounced in the likely absence of any regional or bilateral mutual security assurances or crisis avoidance or management mechanisms or processes (a key assumption of this scenario, as discussed further below). Such structures could decrease the chances of miscalculations or destabilizing escalations.

Military Competitions

Under this scenario, Japan and the United States would retain a competitive edge over the Chinese military in most if not all of the seven domains of military competition. To ensure the attainment of this objective, the United States might proceed with plans to implement a primarily offensive-oriented response designed to neutralize most if not all of China's antiaccess and area denial (A2/AD) or offshore power projection capabilities. As discussed in some detail in chapter 6, such an approach could entail doctrinal shifts to emphasize penetrating strikes against ground targets critical to an enemy's antiaccess network, restrictions on the ability of China to project combat-oriented power within and beyond the first island chain, heightened integration between military services and allied forces, and an expansive suite of next-generation capabilities. Nonetheless, China would likely acquire a much greater level of absolute capability in each domain, thereby giving it a greater presence and capacity to undertake an expanding number of missions in the vicinity of Japan. Indeed, China's increasingly dense, connected, and accurate network of antiaccess-type weapons would highlight fundamental vulnerabilities in the United States' forward posture, ranging from fixed airbases in Japan to big-deck aircraft carriers and their escorts and support ships.

THE MARITIME DOMAIN

In the maritime domain, U.S. carrier strike groups would have an improved ability to intercept or frustrate Chinese cruise and ballistic missiles by deploying sophisticated missile defenses and onboard countermeasures. Yet carrier groups and other allied surface combatants might not be able to fully or reliably disrupt the "kill chain" of an antiship ballistic missile (ASBM) system, and could potentially see their magazines depleted by a barrage of antiship cruise missiles (ASCMs) and torpedoes from sea, subsurface, air, and possibly land-based platforms.² At the same time, vessels would likely encounter a fundamental trade-off in attempting to allocate finite munitions inventory between kinetic interceptors and offensive weapons.³ U.S. forces could neutralize large numbers of Chinese surface combatants in engagements at sea, but allied ships in the first island chain would nevertheless operate at greater risk.

In contrast, the relative weakness of Chinese antisubmarine warfare (ASW) capabilities would enable allied submarines to maintain area denial vis-à-vis Chinese ships within the first island chain. U.S. nuclear-powered fast-attack submarines, known as SSNs, in particular could target surface, undersea, and land-based assets, albeit with a relatively limited inventory of munitions. However, antiaccess defenses working across domains could hamper the effective use of ASW networks and barriers in a conflict, as critical ASW platforms such as maritime patrol aircraft would be dependent on vulnerable land bases and could become prime targets for a land- or ship-based integrated air defense system (IADS). Although unmanned underwater vehicles and distributed sensors could enhance situational awareness in the undersea environment, Chinese submarines in the first island chain could elude allied forces.

THE AIR DOMAIN

In the air domain, large-scale acquisitions of fifth-generation aircraft and continued high levels of training and logistics support in both Japan and the United States would likely enable the allies to maintain an edge in air-to-air combat situations near Japan, as well as the ability to disrupt Chinese airborne and ISR operations in the area. That said, such short-range fighters would be dependent upon vulnerable regional bases and carriers (see below), making it unlikely that allied forces would be able to gain or maintain air superiority until the later stages of an extended conflict.

In that vein, it is also possible that the United States and Japan could be on the verge of deploying next-generation bombers or unmanned combat drones by 2030, thus increasing the allies' capability to penetrate Chinese air defenses. Yet the considerable financial costs and technical challenges associated with such systems would impose limits on their numbers, specifications, and overall payload, a shortcoming that China would exploit by hardening or dispersing targets. At the same time, coastal and ship-mounted surface-to-air batteries could increase attrition rates for allied fighters and pose a serious risk to maritime patrol aircraft, refueling tankers, and other airborne support systems operating within China's 200-nautical-mile exclusive economic zone (EEZ), if not farther out.⁴

THE GROUND DOMAIN

Despite increased efforts to harden bases, disperse forces, and enhance ballistic missile defense (BMD) networks, allied forces would likely remain vulnerable to highly damaging and possibly crippling saturation attacks on forward bases in Japan, and to a somewhat lesser extent in Guam. The United States could mount a recovery from an initial attack on forward bases in Japan, repairing runways and reconstituting logistics and supply networks. But a continued reliance on short-range tactical aircraft would force the United States to concentrate fighters, base infrastructure, and logistics within the first island chain, putting them well within the reach of China's expanding inventory of ballistic and cruise missiles. Thus, in all, allied airpower near Japan would likely become more vulnerable over time under this scenario.

Offensively, during the time frame of this study (that is, over the next fifteen to twenty years), it is possible that the United States could begin to deploy precision-guided conventional weapons capable of reaching targets on the Chinese Mainland within an hour under this scenario, as part of a prompt global strike system. Similarly, the United States could obtain several dozen, though probably less than one hundred, long-range stealth bombers, increasing its capacity to neutralize many of the C4ISR nodes that underpin China's A2/AD-type system. Conversely, mobile transporter-erector-launcher vehicles would likely remain out of reach to even the most robust allied targeting, and could potentially threaten fixed, land-based assets even if the allies succeeded in degrading C4ISR networks. And while conducting "penetrating strikes" on inland targets at the outset of a conflict could potentially be successful, such attacks might also be perceived as threatening to China's ability to control its strategic nuclear forces (see below).

THE SPACE DOMAIN

The dynamics and outcome of competition in space would depend in part on the extent to which China and the alliance attempt to field dedicated antisatellite (ASAT) weapons. In a more competitive version of this scenario, the United States and Japan could leverage BMD technology to create direct-ascent vehicles, while developing directed-energy weapons and jamming technologies to disable Chinese satellites in geosynchronous orbits, possibly without generating debris that would otherwise damage allied satellites. Allied long-range strike systems could also target the ground-based systems underlying China's ASAT capabilities, although they could be frustrated by Chinese efforts to disperse or harden targets. Overall, however, China would likely possess the capabilities necessary to threaten allied satellites in geosynchronous orbit, even those with shielded or backed-up systems. If the allies were to shun the use of dedicated ASAT weapons, they would likely opt for electronic warfare and jamming technologies to sever links between Chinese satellites and other C4ISR systems.

In either case, the allies could adopt a mixture of defense countermeasures—such as hardening, improved maneuverability, dispersal, and redundant systems—that could potentially reduce the delays and gaps resulting from Chinese ASAT strikes.⁵ Given the network-dependent nature of their militaries, however, the allies would remain disproportionately vulnerable to space warfare, and the likely continued absence of any meaningful rules of engagement would make escalation likely in a conflict.

THE CYBERSPACE DOMAIN

In the domain of cyberspace, the alliance (particularly the United States) would probably maintain an edge in offensive capabilities, thus potentially significantly degrading the capacity of Chinese battle networks, communications, and ISR systems. Neither party, however, would be able to conduct perimeter defense against external threats, and both would need to contend with the likelihood of persistent infiltration of critical networks. In

the opening moments of a crisis or conflict, China could launch paralyzing attacks on allied unclassified military networks, potentially degrading logistical chains and delaying deployments to the theater. A more protracted conflict, however, would allow the allies to recover and bring highly sophisticated capabilities to bear against China's own networks, and Chinese cyber operations would probably prove less effective against secure, highly sensitive U.S. military networks. Nevertheless, as with the space realm, the likely continued absence of rules of engagement could produce rapid escalation and compress the time frame available to policymakers.

THE NUCLEAR DOMAIN

In the nuclear domain, the U.S. nuclear triad would continue to maintain significant numerical and qualitative margins of superiority over its Chinese counterpart and uphold the credibility of extended deterrence in Northeast Asia. Steady upgrades to sophisticated warheads and delivery vehicles, as well as the possible development of a next-generation long-range bomber, would reinforce the United States' ability to deliver precise counterforce strikes on short notice. For its part, China would reinforce its ability to hold targets within the continental United States at risk and make significant progress toward expanding its second-strike capabilities by fielding early-generation ballistic missile submarines. But relative to an offensively oriented U.S. posture and arsenal, China's nuclear forces would likely remain sharply constrained by a no-first-use policy and lack the range, numbers, or precision to serve as effective tools of warfare or political coercion against Japan or the United States.⁶

Nonetheless, two factors could prove destabilizing to the overall Sino-alliance nuclear balance. First, allied efforts to dominate the conventional realm could have negative spillover effects on strategic stability. From Beijing's perspective, even an imperfect array of conventional prompt global strike (CPGS) or long-range precision-guided weapons, improved C4ISR, and integrated BMD networks could pose a threat to the viability of China's minimal deterrent. Chinese leaders could thus consider expanding the numbers of deployed nuclear weapons or lowering thresholds for threatening the use of such weapons in a crisis. Although it would likely suffer from the operational constraints imposed by a no-first-use policy, China could nevertheless engage in some form of declared policy of "anticipatory self-defense" to protect its territorial interests.⁷

Second, lingering weaknesses in China's nuclear command-and-control capability could prove to be more of a curse than blessing to the allies, given that several counter-A2/AD missions could trigger sudden escalation. Deep strikes on C4ISR nodes could potentially disable the command-and-control networks that underpin the Second Artillery's nuclear forces, while attacks on inland missile brigades and allied interdiction of Chinese submarines could also threaten China's land- and sea-based deterrents. Chinese nuclear-powered ballistic missile submarines (also known as SSBNs) could face difficulties in communicating with Beijing during a crisis, leading to dangerous standoffs. Although allied forces would

face serious challenges in identifying and discriminating between targets, Chinese leaders might be tempted to escalate in the face of what would appear to be efforts to disarm their nuclear forces.

COMMAND AND CONTROL

In the domain of command and control, it is likely that under this scenario, the allies would establish a partially integrated aerial, naval, ground, and space system, enabling missions in which U.S. and Japanese militaries, services, and capabilities work in concert to counter Chinese antiaccess campaigns. For its part, China could achieve some level of real-time command-and-control network for joint A2/AD missions, and would likely make enough progress in integrating services, systems, and missions to successfully execute—and complete—several joint antiaccess campaigns against the allies. Although they could potentially be caught off guard by the opening salvo of such an attack, allied forces would be able to reconstitute their forces and retaliate within a fairly short period of time, while operating in an austere environment with degraded networks.

Offensively, allied forces could attempt to disrupt and degrade Chinese C4ISR systems through a rapid succession of cyberattacks, ASAT strikes, and missile and bombing campaigns against coastal and inland targets in China. However, while the likelihood for success in this area (and hence the deterrent effect of the capabilities involved) would be greater than under the next scenario, there would still be operational challenges inherent to identifying and disabling shielded and dispersed Chinese C4ISR infrastructure across vast geographic distances.

Determinants, Assumptions, and Uncertainties

The overall security environment of continued cooperation alongside growing tension and an increased proclivity toward political-military crises presented in this scenario derives in large part from a combination of most features of the “Cautious Rise” or “Assertive Strength” trajectories presented for China in chapter 2, the “Soft Hedge” trajectory presented for Japan in chapter 3, and the “Strength” trajectory posited for the United States in chapter 4, as well as the presence of several likely underlying conditions or assumed situations. These trajectories include combinations of mid- to high-range levels of economic development, military spending, and military capabilities for both Washington and Beijing. They also include continued restraints on Tokyo’s willingness to greatly increase its defense spending levels, for reasons largely unassociated with levels of economic development.

For both Washington and Beijing, relatively robust levels of economic development and spending are deemed necessary for the acquisition of the types of military capabilities posited in the competitions described above.⁸ In particular, mid to high levels of defense spending would enable the United States to absorb the large cost overruns associated with complex, high-technology capabilities and insulate critical programs from the budgetary

“squeeze” created by ballooning personnel and operations costs. Robust economic growth would prevent zero-sum contests for limited resources within the Pentagon and the larger U.S. government, facilitating the political consensus needed to revise doctrine, accelerate procurement, and integrate services. Such conditions would enable the United States to maintain military superiority in the Western Pacific as described above.⁹

Although Washington might continue to struggle for many years under this scenario to mount a full recovery in the case of a still-anemic global economic climate, it will nonetheless possess many of the fundamental drivers of long-term growth. In particular, the United States is likely to maintain unique advantages in human capital and innovation, fueled in large part by inflows of skilled immigrants, a world-renowned higher education system, and a dynamic private sector. Though partisan polarization could thwart many of the policies needed to revive short-term growth and bring long-term deficits under control, shifts in the electoral landscape—or the mounting costs of inaction—could also yield much-needed reforms.

In China, although structural distortions could spark a crisis in the short term, Beijing would likely be able to engineer a recovery to mid- to high-range levels of economic growth, judging by past behavior. Moreover, China’s experience over the past decades suggests that a crisis could spur an otherwise risk-averse leadership to institute at least some of the structural reforms needed to dislodge vested interests, revitalize unproductive sectors of the economy, and lay the groundwork for more sustainable development.¹⁰ In this regard, China’s comparatively low levels of capital stock, infrastructure, and consumption suggest that there remains significant potential for further growth through 2030.¹¹ That said, much will likely depend on the political will and capacity of the Chinese leadership to push forward with more fundamental reforms.

As chapter 3 indicates, Japan’s economic capacity is not such an important determinant of military spending levels, and hence military capability, as it is in the case of China and the United States. Intervening variables—such as the views of political leaders, social attitudes, and the behavior of Beijing and Washington—are far more important. Moreover, as also indicated in chapter 3, there are few military capabilities that China could acquire over the next fifteen to twenty years that would *on their own* cause Japan to shift toward competitive engagement with a hard hedge—involving major increases in defense spending and deployments directed at China. Instead, continued American military strength in the region and the absence of a significantly more belligerent hypernationalist Chinese leadership would likely minimize Tokyo’s willingness to respond to Beijing’s growing military presence and influence with major shifts in defense policy and increases in military capability.

Indeed, many factors operating within the scenario suggest that both Washington and, especially, Tokyo will likely remain unwilling or unable to greatly strengthen their alliance in ways that might make the more adverse features of this most likely scenario less probable. In particular, in the absence of adverse triggering events or developments, Tokyo will probably not perceive the degree of urgency and alarm necessary to break through existing political and social barriers to a more energetic, focused, and domestically unified approach

to dealing with Beijing. As indicated above and in chapter 3, absent such triggers, Japan will likely continue to confront constraints such as

- Domestic economic and fiscal limits, some associated with the costs of providing for an aging population;
- The likely resilience of antimilitarist or pacifist attitudes in Japan; and
- An elite and popular stress on the continuation of critical economic interests supportive of cooperative relations with China.

Regarding the last point, on the positive side, the levels and structures of economic development and interaction underlying this scenario suggest that, despite Beijing's growing economic strength and military presence in the region, both Japan and the United States will still have many incentives to support a strong policy of cooperative engagement with China. This will be due in part to the benefits both countries will continue to derive from strong bilateral economic ties with Beijing, as well as the continued need of both Tokyo and Washington will face to cooperate with China in order to address a wide number of regional and global challenges, ranging from climate change to ongoing economic problems.

That said, despite these economic incentives and the apparent military advantages enjoyed by the alliance under this scenario, avoiding disruptive incidents or crises and sustaining a high level of regional stability throughout the coming fifteen to twenty years could become much more difficult over time. This would be due in large part to the significant absolute increases in Chinese military capabilities in many domains (and especially air and naval capabilities within the first island chain), the projected higher, more regular, and possibly provocative Chinese military or paramilitary presence in nearby Japanese waters, and the increasing bilateral political tensions likely to result from this escalating military competition.

The increased level of tension and instability associated with this integrated scenario also stems in part from the assumption that, during the next fifteen to twenty years, Japan and China will probably not establish an effective, credible, and enduring mutual security assurance or crisis avoidance or management mechanism of the sort that could lower the propensity toward greater rivalry, miscalculation, and risk taking posited in this scenario. Although limited confidence-building or crisis avoidance or management procedures are certainly possible over the next fifteen to twenty years, ongoing historical suspicions and animosities among both elites and publics in China and Japan, growing Chinese capabilities and presence, and the many technical and political difficulties confronting any effort to establish credible security assurances (discussed in greater detail in chapter 6) all suggest that such assurances will remain difficult to achieve.

In part as a result of the absence of such mechanisms, it is possible that the region could witness severe incidents or adverse developments over time that could generate a rapid in-

crease in the level of threat perception and hostility among the elites and publics of China, Japan, and the United States. As noted in previous chapters, these might include:

- A major military-related crisis or clash regarding Taiwan, North Korea, or the Senkaku/Diaoyu Islands beyond anything witnessed thus far;
- A prolonged and severe United States–China and Sino-Japanese trade war; and
- The emergence of a hardline, hypernationalist Chinese leadership that actively seeks to (1) exclude foreign militaries from operating in China's "near seas" (*jinhai*) or (2) militarily assert China's claims to disputed maritime areas.¹²

Such "wild card" factors would introduce the possibility of highly adverse scenarios under virtually any relative level of economic development and military capability among China, Japan, and the United States. Unfortunately, however, as indicated in chapters 2 and 3, one or more such factors are more likely to emerge under this and especially the following scenario, due in large part to the influence of increasingly assertive and chauvinistic strains of nationalism in China along with internal social pressures associated with mid to high levels of Chinese economic development and a growing Japanese desire to take a more assertive stance toward China in order to deter crises and conflicts.

The "best case" outcome under this scenario would likely emerge from a variant that features an absence of such adverse triggers or developments and the presence of stability-inducing mutual security mechanisms. Under such conditions, and given the many incentives that will probably exist in other areas to continue cooperating, all three countries are likely to conduct forms of diplomacy designed to reduce the chances of confrontation, maximize incentives to cooperate, and reassure other Asian nations. However, such relatively positive outcomes are less likely than the combination of growing tension and continued cooperation posited in the scenario overview.

A final, related uncertainty involves the level of diplomatic acumen and overall caution and prudence exhibited by political leaders and diplomats in all three capitals, in the face of growing military concerns and tensions. Such unpredictable qualities could also greatly influence the likelihood and severity of political-military crises associated with this and all the following scenarios, even in the absence of a more aggressive Chinese leadership.

SCENARIO 2: LIMITED CONFLICT

As in the "Eroding Balance" scenario, this scenario posits a regional security environment marked by continued but declining levels of positive-sum political, diplomatic, military, and economic engagement between Beijing and both Tokyo and Washington. However, in this scenario, faltering U.S. capacity coupled with significantly enhanced PLA A2/AD-type capabilities would render the overall military balance between China and the

alliance uncertain at best, with Beijing seriously threatening the alliance's capabilities in key domains within the first island chain. Chinese military and civilian naval and possibly air presence in both the "open" ocean and disputed waters and airspace around Japan would be increasing at an even greater pace than in the previous scenario, resulting in intensifying patterns of military competition and rivalry. As a result, exacerbating "wild card" incidents would also become more likely to unfold.

Foreign and Defense Strategies

Under this scenario, national strategies in all three capitals would include variants of the "engage and hedge" approach outlined in the "Eroding Balance" scenario, but characterized by an increased emphasis on the "hedge" element of the approach. This would be particularly true of Beijing, whose military capabilities and presence in waters near Japan would be advancing at a rapid pace, and whose policies—while not becoming overtly competitive or belligerent—would nonetheless be more assertive, particularly in terms of territorial disputes and near seas defense. In response to this growing assertiveness, Japan would likely adopt a "cooperative engagement with a hard hedge" strategy, involving efforts to sustain its defense spending at a minimum of 1 percent of GDP and reinterpret some existing constitutional and political limitations on Japanese military operations, particularly in regard to the U.S. alliance. Such efforts, however, would fall well short of the type of competitive strategy that would transform Japan into a full-fledged "normal" military power, and they would still be combined with efforts to cooperatively engage Beijing, particularly on economic issues.

Meanwhile, though Washington would also continue its two-sided strategy as outlined in the scenario described above, including both efforts to cooperatively engage China and attempts to maintain its military primacy in the Western Pacific, China's significantly increased capabilities relative to a constrained U.S. military presence would render the "hedging" aspects of Washington's strategy less effective. Such a dynamic would likely heighten feelings of insecurity in Tokyo, while still enflaming the nationalist sensitivities of a more assertive Beijing, and possibly emboldening China in the pursuit of its assertive strategies.

Despite sharing some overall similarities with the "Eroding Balance" scenario described above, this scenario would nonetheless generate an increased likelihood of severe crises or even conflict, resulting primarily from the clear erosion of the local military advantage enjoyed by Japan and the alliance relative to China in key competitive domains, along with possible adverse changes in leadership outlook and behavior, especially in Beijing, and the likely absence of any significant security assurance or confidence-building mechanisms. Such a significant shift in the relative balance of military power and influence in the area surrounding Japan, if mishandled, could generate destabilizing uncertainties regarding the ability of allied forces to deter or limit dangerous escalation in a crisis or ultimately prevail militarily in a confrontation with China over territorial and other issues.

Such uncertainties (discussed in greater detail below and in chapter 6) could result in an increased likelihood of miscalculations or assertive behavior by all sides, especially regarding highly sensitive security issues such as territorial disputes, and thus increase the likelihood of severe crises or incidents. Hence, the overall level of instability accompanying this integrated scenario would probably be considerably higher than in the one described above.

Military Competitions

The most destabilizing factors associated with this future security environment derive primarily from likely changes in both absolute and relative military capabilities in the region. In this scenario, increasingly sophisticated Chinese military capabilities would greatly reduce, though not necessarily entirely eliminate, the large margin of conventional superiority that the allies have traditionally enjoyed in the air and waters surrounding Japan. As a result, Japan and the alliance would be likely to confront a range of increasing vulnerabilities in all of the domains examined in this study.¹³

THE MARITIME DOMAIN

In the maritime domain, both Japanese and U.S. capital ships within the first island chain, particularly within the Sea of Japan and the northern portion of the East China Sea, would face a significantly increased risk of damage or destruction from ASBMs and ASCMs. Even limited numbers of Chinese ASBMs relying on a hodgepodge of over-the-horizon radar systems and sea-based cueing would create a highly uncertain operating environment for carriers, which could divide the fleet and restrict the United States' ability to introduce tactical aviation in a crisis. Ship- and submarine-based ASCMs would pose an increasingly sophisticated threat, as their range, accuracy, and lethality improve over the next fifteen to twenty years. In the early stages of a conflict, onboard defenses for allied ships could be pushed to their limit if not beyond.

Second, Japanese and U.S. naval assets based in Japan would likely confront a small numerical shortfall by 2030 against an increased number of advanced PLAN surface ships and submarines, straining the capacity of the allies to track, shadow, or interdict vessels in responding to possible provocations or crises in the waters around Japan. A significant increase in Chinese submarine presence in particular would likely notably increase the challenge posed to both Tokyo and Washington in tracking such vessels, and thereby increase the risk to allied ships. As a result, security of sea lines of communication within the first island chain (including areas near Japan) would become a matter of heightened concern for the alliance. If rapidly deployed in sufficient numbers, naval mines could also pose a significant threat to allied submarines and ships in China's littoral regions and nearby choke-points. Nevertheless, allied submarines would probably retain their advantages in stealth, endurance, and firepower against the PLAN's improved but still relatively weak ASW capabilities, operating relatively freely within the first island chain.

THE AIR DOMAIN

In the air domain, allied fourth- and fifth-generation combat aircraft would likely maintain their overall edge in air-to-air combat proficiency. However, under this scenario, much greater ballistic and cruise missile threats to land- and ship-based aircraft and their bases would limit both the operating range and sortie rate of aircraft in a conflict. This would be severely compounded, in areas close to China, by the presence of a strengthened land-based air defense system. Such sophisticated systems would greatly complicate the operations of even the most advanced allied combat aircraft. In addition, both Japanese and U.S. airborne C4ISR and refueling tankers would likely face an increased threat from PLA Air Force (PLAAF) and PLAN combat aircraft and PLAN surface-to-air missiles (SAMs). Finally, allied air forces and navies could face some difficulties in performing unfamiliar joint missions, although they would likely operate with higher levels of integration than the PLAN and PLAAF.

THE GROUND DOMAIN

In the ground domain, as suggested above, forward bases and other strategic land assets in Japan would likely confront an increased vulnerability to missile and air attacks in the event of a conflict. Barring serious revisions to the U.S. force structure, a continued reliance on tactical aircraft would force the allies to concentrate reinforcements and logistics at Kadena or other air bases vulnerable to China's medium-range ballistic and cruise missiles. As such, strengthened missile defense and hardened infrastructure could provide only partial coverage of densely packed assets, many of which could be crippled by a handful of warheads. Japan's need to devote an increasing amount of scarce resources to the defense of the Senkaku/Diaoyu Islands and other southwest islands, and to enhance C4ISR capabilities overall, could also severely constrain its ability to enhance the allied defense against such threats to its four main home islands.

THE SPACE DOMAIN

In the space domain, even though the allies (especially the United States) would almost certainly retain an edge in space-based C4ISR capabilities, they would also likely become more vulnerable to antispace systems and space warfare in this scenario. Although the allies would likely have reservations about pursuing dedicated ASAT capabilities, a sharp increase in tensions vis-à-vis China could push policymakers over the threshold and increase the likelihood of an arms race in this domain. Moreover, as stated above, the likely continued absence of any agreed-upon rules of engagement would increase the dangers of escalation in a crisis, given the likely significant relative increase in Chinese capabilities that would occur during the next fifteen to twenty years under this scenario. Nonetheless, this does not necessarily suggest that a space competition with China is inevitable, given that the United States would likely continue to develop assets that replicate the function of space satellites to avoid reliance on the space domain alone.

THE CYBERSPACE DOMAIN

In the domain of cyberspace, Japan would likely continue to exhibit severe limitations in its ability to deter or defend against cyberattack, especially given advances in Chinese capabilities. Overall, military networks would probably remain vulnerable to at least partly paralyzing attacks at the outset of a crisis. Moreover, even though the United States would likely retain its current edge in offensive capabilities, the establishment of a reliable “perimeter defense” to keep out such threats would likely remain unfeasible in both Japan and the United States, given the huge difficulties involved in establishing such a defense, along with probable increases in Chinese cyberattack capabilities. Allied networks would continue to remain vulnerable to infiltration, and the likely continued absence of reliable rules of engagement in the cyber realm could significantly increase the risk of rapid escalation in a crisis.

THE NUCLEAR DOMAIN

Under this scenario, the United States would see its margin of superiority over China's nuclear forces diminish somewhat, although the underlying dynamics of the Sino-alliance nuclear balance would remain stable. The United States would continue to modernize warheads and missiles to ensure the mobility, survivability, and penetrative capability of its nuclear forces, although it would be slightly more dependent on legacy air and underseas platforms. Allied ballistic missile defense would be less integrated and more sparsely deployed than under the previous scenario, allowing a larger number of Chinese land- or sea-based nuclear weapons to hold Japanese territory and the continental United States at risk.

In this regard, China's penetrating aids and increasingly secure retaliatory capabilities would chip away at the enormous advantages the United States currently enjoys in the nuclear domain. Yet the constraints imposed by China's no-first-use policy and minimal deterrence posture would likely prevent its leaders from converting these incremental gains into political leverage against Japan, much less the United States.¹⁴ Sizable numerical and qualitative disparities would still distinguish the U.S. nuclear triad—developed and refined through decades of intensive competition with the Soviet Union—from China's still-evolving sea- and land-based deterrent. And though Japan would be understandably wary of China's maturing nuclear capabilities, the fundamental credibility of U.S. extended deterrence would probably prevail.

COMMAND AND CONTROL

In the command-and-control domain, despite their likely continued possession of more sophisticated and capable C4ISR networks, the United States and Japan would probably become more vulnerable to Chinese “blinding” attacks that disable space-based ISR or disrupt computer networks. Although all parties would endeavor to integrate C4ISR across the military service, the gap between Chinese and allied capabilities would probably narrow

under this scenario. In particular, China would make significant strides in creating an integrated wartime command to break down existing barriers to cross-regional and interservice cooperation, while enabling rapid decisionmaking in a potential contingency. Though the allies would likely retain an edge in the quality of their training and extent of their interoperability, the PLA would maximize the asymmetric potential of its capabilities by integrating cyber and space operations, theater missiles, and layered attacks by air and naval platforms into a combined campaign.

Determinants, Assumptions, and Uncertainties

An overall security environment of continued cooperation alongside greater tensions and a heightened likelihood of severe crises or even conflict stems in large part from a combination of (1) the “Assertive Strength” trajectory for China, the engagement-focused but primacy-oriented variant of the “Faltering” trajectory for the United States, and the “Hard Hedge” trajectory for Japan, as presented in each of the country chapters; (2) the ongoing presence of positive economic incentives for continued cooperation; and (3) the relatively more likely emergence (when compared with the “Eroding Balance” scenario described above) of several adverse political and social factors or “wild cards,” especially in China.

These country trajectories include low- to midrange levels of economic development and military spending in the United States and continued relatively high levels of economic development and military spending in China, resulting in a gradual erosion of U.S. advantages within many critical local military domains, including key air and naval capabilities, as indicated in the discussion above of military competitions.¹⁵ Such a significant, long-term imbalance between relatively superior Chinese and relatively inferior U.S. levels of economic development and defense spending is judged to be less likely than the type of relative levels posited in the first scenario (centered on the erosion but overall continuation of relative U.S. and Japanese economic and military advantages), largely because:

- China is likely to confront growing domestic social and economic problems—primarily as a result of high growth rates and aggravated structural imbalances—that serve to suppress the ability and willingness of the political leadership to devote sufficient resources to acquiring such major gains in most key military domains.
- The U.S. and Japanese economies are unlikely to decline to such a degree that they adversely constrain capabilities in most domains to a level sufficient to generate obvious and severe weaknesses when compared with Chinese gains.

As a result, the “Eroding Balance” scenario wherein Washington continues to enjoy some level of superiority in most major relevant military technologies and systems over most of this time frame remains more likely, due to both the extent of the “lead” the United States possesses at present and the likely continued obstacles that Beijing will face in rapidly developing its own military technologies and systems. That said, such likely Chinese

deficiencies and U.S./Japanese strengths are not judged significant enough to make this scenario *appreciably less* likely than the preceding one. In other words, the emergence of relative Chinese gains in key domains, and hence the erosion of U.S. (and Japanese) advantages in these domains, are still quite possible over the next fifteen to twenty years.

Despite Beijing's growing relative economic strength and military capabilities and presence, and the increased amount of hedging evident, many incentives will probably nonetheless remain in both the United States and Japan to support a strong policy of cooperative engagement with China. As in the "Eroding Balance" scenario described above, this will be due in part to the benefits both countries will likely continue to derive from strong bilateral economic ties with a growing Beijing, as well as both Washington's and Tokyo's continuing need to cooperate with China to address a wide number of regional and global challenges, ranging from climate change to persistent global economic problems.

That said, as suggested above, one cannot entirely rule out the possibility that "wild card" events such as a severe incident involving a loss of life or military clash between Tokyo and Beijing over the Senkaku/Diaoyu Islands or some other dispute might occur. Indeed, as indicated, they are seen as more likely under this scenario than under the "Eroding Balance" scenario. Such events would likely take place as a result of miscalculations brought on by the more markedly changing military balance in the areas surrounding Japan. However, as argued in the relevant trajectories of the country chapters, any such crisis under this scenario would probably not escalate to the point of severe conflict; and if a clash were to occur, it would almost certainly not become widespread largely because all parties would place a premium on resolving a crisis rather quickly; moreover, both China's continued need for cooperative economic relations with the West and Japan and the military capabilities of both Washington and Tokyo would likely remain sufficient to suppress escalation in a crisis.

Of course, more serious crises could become possible under this scenario if the kind of aggressive, "ultranationalist" Chinese leadership described in chapter 2 were to emerge, thus resulting in a far more risk-accepting set of assertive policies toward Japan and the alliance. As argued in that chapter, this type of leadership is more likely to emerge under conditions of continued rapid but destabilizing growth in China than in the context of a severe economic decline or collapse. But its emergence would also depend on the political calculations and power balance existing within the senior Chinese leadership, as well as the policies pursued by Washington and Tokyo. Under this regional scenario, the economic and strategic incentives for continued Chinese cooperation with the United States and Japan, combined with the continued absence of a highly confrontational, zero-sum U.S. policy toward China, would on balance reduce the likelihood that an aggressive Chinese leadership would emerge.

Overall, the chances for continued stability under this scenario would be greatly reinforced if the three powers could create the types of credible mutual security mechanisms discussed in the country chapters. However, this scenario might present increasing challenges over time to any effort to create such mechanisms, largely due to the difficulties confronting any U.S. and Japanese effort to elicit Chinese agreement in an environment

of declining allied relative military capabilities. Under such circumstances, Beijing might become less inclined to place significant limits on its increasingly influential behavior as part of any agreement, while also perceiving U.S. accommodation as a sign of weakness. Conversely, Washington might feel compelled to avoid signaling weakness by being too supportive of such an agreement.

SCENARIO 3: MITIGATED THREAT

This scenario posits a regional security environment marked by continued extensive levels of political, diplomatic, and economic engagement between China and Japan alongside an only slowly increasing or steady level of Chinese military and civilian naval presence in both the “open” ocean and disputed waters around Japan; the maintenance of United States–Japan military superiority over China and lower patterns of military competition in most domains; and a resulting decreased capacity for tension and crises.

Foreign and Defense Strategies

Under this “Mitigated Threat” scenario, Beijing would be highly unlikely to pursue confrontational policies that deliberately antagonize the United States. Overall, Chinese leaders would likely become more cautious and conservative in their actions abroad than at present, especially given their need to address growing domestic social problems associated with seriously declining growth rates (see below). Indeed, on the economic front, Beijing would almost certainly seek to sustain or expand trade, investment, and resource-oriented activities with Japan and the West and other regions to strengthen its overall situation. As a result, maintaining cooperative, nonconflictual diplomatic ties with Tokyo and Washington would likely also remain especially important to China over the next fifteen to twenty years.

In the military area, the Chinese weapons hardware, technologies, and support systems and deployments that are of greatest relevance to Japan would develop at significantly less than expected levels. And the presence of PLAN and nonmilitary naval vessels in nearby Japanese waters would likely increase at a much slower rate than during the past ten to fifteen years. As a result, over time, China would prove unable to alter either the perception or the reality of the existing military imbalance in the Western Pacific; that is, the United States and Japan would continue to operate their forces in the Western Pacific near Japan as a clearly superior combined force. Indeed, under this scenario, despite some improvements in China’s force capabilities, they would probably not be perceived as clearly superior to even those of Japan alone. Moreover, under such conditions, Beijing would almost certainly maintain a largely defensive mindset and continue many of the strategic and military concepts in evidence since the emergence of the “active peripheral defense” and “limited war under local conditions” concepts first emerged and evolved in the late 1980s and 1990s.

In other words, the basic underlying logic behind China's current foreign policy approach to Japan would not change markedly over the coming fifteen to twenty years, unless some unlikely highly adverse triggering event occurs or there are adverse shifts in the China policies of the United States and Japan.

Under this scenario, Japan would very likely pursue the type of "cooperative engagement with a soft hedge" policy toward China outlined in chapter 3. This policy would be similar to the approach posited in the "Eroding Balance" scenario, but with an even "softer" hedge, given China's domestic distractions and lessened pace of military development. Hence the mixed features of Japanese foreign and defense policies outlined under the two scenarios described above would likely prevail, with an even stronger stress on strengthening economic and security cooperation with Beijing wherever possible. Tokyo would also continue to provide support for the United States–Japan alliance. However, given the likely absence of growing Japanese elite and public alarm over the relatively low Chinese military presence (and the continued presence of many of the domestic constraints described above), Tokyo would probably not prove amenable to strengthening the alliance to the degree that Washington might prefer. Overall, limitations on Japanese defense and foreign policies and overall levels of defense spending would remain significant.

For its part, under this integrated scenario, the United States would almost certainly continue some version of its cooperative engagement and hedging policy toward China, while also working to sustain its alliance with Japan. However, Washington might place a lessened emphasis on the hedging elements within this policy, given China's stagnant or declining situation, and especially if the United States were also still struggling significantly with domestic social and economic problems. Much would depend on the severity of the problems facing the United States, and assessments of the severity and longevity of China's declining fortunes.

If the U.S. economy were clearly rebounding, Washington might calculate that it should ensure its long-term predominance in the Western Pacific by significantly upping its military presence and adopting a more robust operational approach to potential future Chinese capabilities, such as the ASB or Offshore Control concepts discussed in the next chapter. Such efforts might greatly alarm a struggling China, perhaps giving greater support to those Chinese who argue that the United States is attempting to undermine and weaken the struggling PRC regime through such "containment-oriented," high-pressure policies. Thus, in the absence of a fundamental downturn in the overall Sino-U.S. relationship, and given the continuation of Japan's limited security role, China's weakened economic state and attention to domestic problems, and the likely continued value placed by both Washington and Tokyo on maintaining cooperative political and economic relations with Beijing under this scenario, it seems more likely, on balance, that Washington would avoid pushing hard to implement robust counter-A2/AD operational concepts, and that China would continue to emphasize the positive aspects of interactions with both Washington and Tokyo. Indeed, Beijing is more likely to work hard to improve its political and economic relations with Tokyo in particular, in order to ensure Japanese resistance to any more robust counter-A2/AD efforts on the part of the United States.

The overall emphasis on cooperative engagement and the domestic distractions precipitated by instability-inducing low levels of economic growth in China suggest that, absent certain adverse trigger “wild card” events, the likelihood of severe crises or limited military clashes arising from territorial or resource disputes or other interactions between Chinese and Japanese (or U.S.) aircraft or naval vessels would probably be considerably lower under this integrated scenario than in the two scenarios described above. However, the danger of inadvertent or rapid escalation in a crisis would almost certainly remain—albeit arguably with a lower likelihood than under the preceding scenarios—assuming the absence of any regional or bilateral mutual security assurance or crisis management mechanisms or processes.

Military Competitions

The combination of an economically weak and socially unstable China and a United States experiencing mid to high levels of economic growth and defense spending, along with a largely “steady-state” Japan (in military terms), would most likely greatly reduce the level of Chinese defense spending and weapons deployments in the Western Pacific relative to the United States and Japan in comparison to the preceding scenarios and thus lower tensions or instabilities arising from the PLA’s modernization in the vicinity of Japan. As indicated in the “Cooperation” trajectory outlined in chapter 2, certain “high-end” Chinese military capabilities could prove significantly less relevant under this scenario, due perhaps to a failure to surmount key technological obstacles in fielding component parts (for example, turbojet engines, avionics, and associated C4ISR), difficulties in creating network-supporting infrastructure necessary to ensure regular and effective use in actual combat, or the prohibitive cost of developing weapons systems in sufficiently large numbers to alter the existing balance favoring the allies.

Overall, Chinese military forces would therefore remain clearly inferior to both Japanese and U.S. forces in critical areas relevant to combat operations beyond Chinese territory. Beijing’s offshore capabilities would continue to remain centered on its inventory of ballistic and cruise missiles, a navy with highly limited blue-water and endurance capabilities, and very limited offshore air-support capabilities. Second, the lethality and accuracy of China’s A2/AD or counterintervention network would diminish significantly in the sea and airspace beyond its 200-nautical-mile EEZ, the likely result of a relative emphasis on coastal defense and an ISR network with significant gaps in coverage and increased vulnerability to disruption. Third, under this scenario, China might delay its rollout of costly power projection systems such as aircraft carriers, opting instead to maintain an emphasis on stealthy, asymmetric platforms such as conventional submarines.¹⁶ Finally, the PLA’s ability to coordinate across different systems, services, and regions would suffer, due to constraints in its C4ISR capabilities and in the joint interoperability of its forces. Although such networks would ordinarily serve as a force multiplier to enhance a suite of modern capabilities, the PLA would contend with the possibility of sudden and acute failures in hardware and software that could cripple a joint antiaccess mission.

That said, under this integrated scenario, as suggested in chapter 2, even a low-capability China would probably achieve some modest relative gains in military competitions of significant concern to Japan and the United States over the next fifteen to twenty years, in many cases regardless of the level or type of capabilities deployed locally by Tokyo and Washington.

THE MARITIME DOMAIN

Despite clear deficiencies in the overall sophistication of its maritime capabilities, over the lengthy time frame of this study, Beijing would likely field a reasonably credible ballistic-missile-centered weapons system with the numbers and specifications necessary to threaten large surface ships such as aircraft carriers.¹⁷ Though onboard defenses such as kinetic interceptors, obscurants, and decoys would force China to expend a greater number of ASBMs against individual vessels, allied forces would still face an uncertain operating environment within the first island chain. In this instance, however, China's antiaccess network would likely prove more porous and less resilient than under the two previous scenarios. Kinetic and electronic attacks would have a higher probability of degrading Chinese C4ISR networks to the extent necessary to permit intermittent access for allied vessels, at least in the later stages of a conflict.

Given the likely persistent weakness of China's ASW capabilities under this scenario, allied submarines—and the U.S. Navy's nuclear submarines in particular—would operate virtually unfettered within the first island chain as well as China's littoral waters. Yet China would still present a credible threat to both Japanese and U.S. surface ships via conventionally powered submarines with ASCMs. Even assuming that the level of technological sophistication—and perhaps numbers—of Chinese submarines does not increase substantially above the present level, these vessels, if equipped with advanced air-independent propulsion systems, could remain submerged and undetected for several weeks within much of the first island chain, launching sea-skimming ASCMs that would be difficult for most onboard systems to intercept. As in the scenarios described above, crucial allied ASW platforms—such as maritime patrol aircraft or surface ships that could dramatically expand allied sensory awareness of undersea environments—could remain vulnerable to IADS or ASCMs. As a result, the allies could be forced to rely on the U.S. Navy's nuclear submarines as their primary ASW platform in conducting an extended sweep of the waters near China's coast.

THE AIR DOMAIN

In the air domain, China's SAM batteries would probably continue to significantly threaten access to airspace out to the country's 200-nautical-mile EEZ. Under this scenario, allied fifth-generation fighters would enjoy a greater margin of superiority vis-à-vis Chinese fifth- and fourth-generation aircraft, which could lack important components such as advanced avionics. Nevertheless, allied short-range fighters would be dependent upon vulnerable regional bases and carriers, making it possible that allied forces would be unable to conduct intense air campaigns in at least the early stages of a conflict.

Though Chinese IADS could continue to threaten allied maritime patrol aircraft, aerial refueling tankers, and other supporting systems within the first island chain, China would almost certainly not be able to mount the capabilities necessary to deny airspace out to that distance. Although China's coastal air defenses would remain formidable, the PLAAF's ability to conduct offensive operations would be more constrained by limits in technology and training than under the preceding scenarios.

THE GROUND DOMAIN

Despite the objective material and technical constraints that China would face in this scenario, allied forward bases in Japan and, to a lesser degree, in Guam would still be vulnerable to attacks by theater missiles. Indeed, a low-capacity China would likely view conventional missiles as a relatively affordable and asymmetric means of thwarting or at least delaying allied intervention in a conflict, and invest accordingly.

In this instance, Washington and Tokyo would likely build a more integrated BMD system in an attempt to shield bases and ports in Japan, with enhanced sensors and greater numbers of interceptors. At the same time, the allies could adopt passive countermeasures such as hardening shelters, dispersing assets, and creating rapid runway repair kits. Yet, even under this scenario, China would most likely possess ballistic and cruise missiles in numbers sufficient to overwhelm any BMD systems protecting forward bases in Japan, delaying the introduction of short-range tactical aircraft into the theater. In contrast to Chinese efforts to track and target moving U.S. vessels, missile strikes on stationary runways or parked aircraft would require significantly less in the way of complex, overlapping C4ISR networks.

THE SPACE DOMAIN

In the space domain, under this scenario, China could potentially possess some mix of direct-ascent ASAT capabilities, ground-based lasers, and jamming technologies capable of disabling allied satellites in low Earth orbit, and to a somewhat lesser extent medium Earth and geosynchronous orbit. Calibrated ASAT strikes could thus create outages and gaps in coverage in allied ISR networks, particularly if launched in conjunction with cyberattacks as the opening move of an antiaccess campaign. Although the allies would maintain the latent capacity to field similar, if not more sophisticated ASAT weapons, they could be reluctant about pursuing an arms buildup and rely instead on electronic attack and cyber capabilities to accomplish a similar effect.

Defensive measures such as increased redundancy, selective hardening, dispersal, and onboard maneuvering could potentially improve the resilience of allied satellite networks to ASAT strikes. At the same time, the allies could attempt to reduce their reliance on space-based assets by shifting key functions to C4ISR platforms in other domains. In contrast, China's ISR network in this scenario would consist primarily of a patchwork quilt of satellites and over-the-horizon radar systems that would likely prove vulnerable to allied disruption.

THE CYBERSPACE DOMAIN

Given the low cost and asymmetric nature of cyberespionage and cyberwarfare, under this integrated scenario, China would probably be able to infiltrate and possibly paralyze some U.S. systems, which most likely would consist of unclassified networks at the outset of a crisis.¹⁸ In particular, China could exploit vulnerabilities in networks containing logistics information to thwart the timely deployment of U.S. reinforcements to the theater. However, the allies would be able to leverage their superior offensive capabilities to cause more permanent damage to Chinese systems and to multiply the impact of follow-up kinetic attacks. On balance, a longer engagement would favor allied forces, which would have a better chance of undoing the damage from a possible initial flurry of Chinese cyberattacks. However, the probable lack of clear thresholds for retaliation and rules of engagement would continue to pose uncertainties for all parties involved.

THE NUCLEAR DOMAIN

Under these circumstances, the United States would maintain a clearly favorable position vis-à-vis China in the nuclear domain and preserve extended deterrence in the alliance. China's troubled submarine-launched ballistic missile program could succumb to a familiar array of technical challenges, making its land-based intercontinental ballistic missiles (ICBMs) the sole provider of its nuclear deterrent. (In contrast, even a steady-state U.S. nuclear force would likely include several SSBNs stationed in the Pacific at any given time.) The United States would thus confront minimal difficulty in extending its present advantages in the mobility, survivability, flexibility, and penetrativeness of its nuclear forces across domains. Relative to the two scenarios described above, Japan would have even less to fear regarding the status of extended deterrence—although it is worth noting that even the emergence of a high-capacity China would be unlikely to erode the United States' ability or resolve to deliver on this fundamental security guarantee.

Still, a lopsided nuclear balance would not necessarily serve the allies to great effect in responding to China's antiaccess networks. Indeed, in a conflict, allied forces would face significant challenges in neutralizing Chinese missile brigades or C4ISR infrastructure without provoking Beijing's fears of a disarming first strike against its relatively small contingent of nuclear weapons.

COMMAND AND CONTROL

In this scenario, the alliance would maintain a considerable edge over China in deepening institutional and technological integration to enable real-time cooperation in countering A2/AD threats. Allied forces would make strides in decentralizing command and control while improving secure data links, communications, and ISR networks, enhancing performance in shared missions such as ASW and BMD.

In contrast, the PLA could continue to feel the effects of stove-piped bureaucracies, irregular training and exercises, and disparities in the level of modernization across its forces. Although the PLA could potentially execute integrated campaigns at the outset of a crisis, where it could have the advantage of surprise, it would be far less resilient in the face of electronic and kinetic attacks aimed at dismantling its C4ISR network. Operating with greater cohesion and resilience, allied forces would have a higher probability of recovering from an initial attack and paralyzing their Chinese counterparts through retaliatory strikes.

Determinants, Assumptions, and Uncertainties

This scenario of the regional security environment in circa 2030 would arise primarily from a significant decline in Chinese growth rates and the consequent emergence of severe domestic instability, combined with a United States that either (1) continues to confront significant economic and social problems yet averts any further economic decline and maintains relative local military superiority vis-à-vis China, or (2) fully recovers and further strengthens its military capabilities in the Western Pacific.¹⁹

As indicated in the section above and discussed in chapter 2 under the “Cooperative Weakness” trajectory for China, other determining factors would likely include lowered levels of Chinese technological innovation and development, associated with lower growth rates. Over this time period, in the most extreme cases, China’s domestic stability could be disrupted by sudden shocks from a rift in the top leadership or the emergence of an anti-regime movement precipitated largely by domestic economic crises. Such crises might emerge from the increasing collective weight of worsening structural challenges such as inequality, unemployment, an aging population, and environmental pollution. As described in chapter 4, the United States could endure a halting recovery and period of adjustment, but eventually return to a modest- or high-growth trajectory. Although structural deficits and growing entitlement costs would exert downward pressure on defense spending, the United States could still make incremental upgrades to its already-sophisticated capabilities.

Under this scenario, on balance, Japan would most likely witness lower growth levels than in the two scenarios described above, due to the probable influence of a struggling Chinese economy, while continuing to display most if not all of the other domestic restraints on defense spending and policies presented above and in the “Soft Hedge” trajectory in chapter 3. However, this growth trajectory would not significantly undermine the capacity of either Japan or the United States to retain a strong military position in the Western Pacific, due largely to the strength of the U.S. situation. In other words, given that Japan would likely retain its modern, experienced, and capable maritime forces even if its economic growth rate were to drop notably, the alliance would likely sustain a clear margin of military superiority over an enfeebled China during the time frame examined in this study.

This scenario would most likely see the United States following a variant of the “Faltering” trajectory outlined in chapter 4, with midrange economic growth and defense spending. America would recover from the worst of the financial crisis, although the spillover

effects of a Chinese recession would dampen U.S. growth. Likewise, entitlement costs and a long-term deficit would impose downward pressures on defense spending. Still, Washington would almost certainly possess the minimal resources required to maintain current levels of technical sophistication and integration to prevail against a low-capacity Beijing.

This scenario is deemed less likely to occur over the fifteen- to twenty-year time frame covered in this study primarily for one reason: The very low-capacity trajectory for China postulated in this scenario is less likely to unfold than the mid- to high-capacity China trajectories underlying the scenarios discussed above, for the reasons presented in chapter 2.

As indicated above, under this trajectory, China would likely confront a growing array of severe domestic problems associated with low growth, including increasingly large-scale and coordinated levels of labor and ethnic unrest, higher levels of unemployment and underemployment, a still-weak social welfare system, continued, huge disparities in regional income, limits on labor migration, and increasingly severe levels of water and air pollution. Such problems would almost certainly focus leadership attention—and government resources—increasingly inward.

Most of the assumptions and intervening or exogenous variables underlying this scenario are similar to those presented in the two more likely scenarios presented above: the absence of mutual security mechanisms; a limited United States–Japan alliance; an overall leadership desire among all three states for continued and, where possible, close cooperation; and the absence of major triggering events or developments that could produce a much-heightened level of tension and possibly conflict (that is, the “wild cards” described above). In fact, a low-capacity China would probably increase leadership incentives in all three countries to avoid such triggering events. Beijing’s attention would likely focus on growing domestic challenges, while, under a slow but certain economic revival, Washington would likely place less emphasis on the need to develop, for example, a robust version of the ASB or Offshore Control concepts and would instead devote more resources to lowering the national budget deficit and enlarging its political and economic ties across the Asia-Pacific region. Tokyo would almost certainly seek to maximize its economic and political ties with both Beijing and Washington under this scenario.

Of course, as in the scenarios discussed above, one cannot entirely eliminate the possibility that one or more developments would occur under this integrated scenario to exacerbate the security environment. Even though the incentives to avoid such events would arguably prove very strong, highly adverse incidents could nonetheless occur, especially if Beijing’s leadership were to face significant challenges as a result of domestic or internal infighting. Severe domestic turmoil precipitated by economic decline and official corruption could produce major divisions within the leadership that could result in the weakening of central control over local, bureaucratic, and military actors. A weakened central Chinese government could encounter greater difficulty in coordinating and controlling the military and maritime law enforcement agencies, particularly at the operational level, which could increase the likelihood of crises with Japanese and American forces, especially in disputed air and naval regions. In the worst case, such crises could escalate into a broader conflict,

particularly if the weakened PRC regime felt constrained in its crisis management efforts by domestic politics and allowed itself to be locked into commitment traps.

Beyond the danger of splintered central control, intense internal turmoil could precipitate a transition to an entirely new set of leaders or could generate a consensus among the existing leadership regarding the need to increase the PRC regime's coercive capacities and activities. In either case, an ultranationalist leadership could emerge from such radical changes and possibly pursue a more aggressive foreign policy toward both Japan and the United States. Such a seemingly illogical shift (in the context of a weakening PRC economy and a stronger United States) would presumably result in part from a desire to use foreign policy to unify domestic support for the Chinese government in a highly turbulent internal environment. This development would be even more conceivable if the United States were to fully implement a robust military strategy (involving, for example, the ASB concept) clearly targeted at China. It might create the impression in China that a weak and insecure Beijing was being humiliated by Washington (and Tokyo), thereby fueling nationalist anger and resentment.

Although not inconceivable under this integrated scenario, as indicated in the previous scenario, the rise of such a leadership, with such a foreign policy stance, is more likely under the conditions of a strong China possessing greater confidence than a weak and divided China. As noted in chapter 2, most evidence suggests that a severely weakening Beijing would prefer to pursue a low-key foreign policy in order to maintain a stable external environment, enabling it to focus its resources and attention on internal challenges. The theory of diversionary war—that a state facing domestic unrest would deliberately create foreign military conflicts (as opposed to limited tension) to shore up domestic support—has little support in modern Chinese history.

SCENARIO 4: ASIAN COLD WAR

This scenario would be characterized by an incipient Cold War in Asia, involving the strengthening and integration of the United States–Japan alliance, with Japan becoming a normal or near-normal conventional military power, in response to more aggressive Chinese behavior and high-level Chinese military capabilities.

Foreign and Defense Strategies

Under this scenario, China would possess much higher levels of military capabilities of relevance to Japan and pursue a highly aggressive set of policies toward regional territorial disputes. Although Beijing would continue to seek to cooperate with and reassure Tokyo (and other Asian capitals) both economically and diplomatically, its military actions and defense policies would suggest a much greater willingness to employ *military* instruments in support of regional foreign policy objectives. This might include the declaration of some-

thing approaching enforced “no-go” zones for foreign militaries undertaking any activities other than innocent passage through China’s EEZ and “near seas.”

In the area of military capabilities, the Chinese weapons hardware, technologies, support systems, and deployments that are of greatest relevance to Japan and the United States in the Western Pacific would develop at very high rates, to high levels of sophistication, including the full deployment of a very potent A2/AD-oriented military system, significantly increased numbers of more sophisticated surface and especially subsurface combatants in the waters around Japan, much larger numbers of land-, naval-, and air-based ballistic and cruise missiles capable of striking targets across Japan, and a much improved C4ISR and cyberwar capability. Regular patrols of PLAN and nonmilitary naval vessels in nearby Japanese waters would increase in frequency and size under this scenario. Consequently, China’s relevant force capabilities would probably be perceived as in many ways superior to those of Japan. As a result, China would eventually convey the impression of possessing an ability to at the very least vie for control over limited sea space and airspace near Japan in a crisis or conflict.

Partly in response to these major changes in Chinese military capabilities and policies, under this scenario, Japanese public and elite attitudes would likely shift decisively in favor of far higher levels of defense spending, greatly improved military capabilities, an expanded set of security roles beyond the defense of the home islands, and a far greater level of responsibility as a more equal security partner within the alliance. While continuing to seek collaborative relations with Beijing where possible, Tokyo would adopt the foreign and defense policy approach outlined in the “Competition” trajectory of chapter 3. In short, Japan would acquire most of the conventional military capabilities and defense policies of a “normal” power while also becoming far more integrated into the alliance with the United States.

Under this scenario, Washington would place the highest level of emphasis of any of the scenarios on the deterrence and hedging elements of overall U.S. policy toward China. This would likely involve major increases in military capabilities designed to neutralize China’s A2/AD-type and other power projection platforms in the Western Pacific and the adoption of a robust variant of the ASB or Offshore Control concepts, likely involving a greatly increased forward presence along China’s maritime periphery. All these actions would occur in the context of a highly integrated bilateral alliance structure displaying unprecedented levels of interoperability, C4ISR coordination, and overall power sharing. In general, U.S. Asia policy would not only focus on working with Japan to deter China from employing military coercion or kinetic attacks to advance its objectives in nearby areas but would also seek to elicit a wider range of regional political, diplomatic, and military support for a policy of counterpressure against Beijing’s aggressive policies and actions across the region. Efforts to maintain cooperation with China in addressing regional and global problems through negotiation and peaceful means would continue, but would likely confront far greater obstacles under this scenario.

Under this scenario, the regional security environment facing Japan and the alliance around 2030 would be characterized by a high level of zero-sum-oriented strategic competition with China, much greater levels of tension and possible confrontation, and an

increased likelihood of political-military crises and conflict, well above anything seen at present or under the scenarios described above.

The increased likelihood of crises and conflict under this scenario would result primarily from a gradual yet clear erosion, but not elimination, of the military advantage enjoyed by Japan and the alliance relative to China in key competitive domains within the local region, along with changes in strategic outlook among elites in all three countries, but especially in China (see below). This would constitute something approximating a cold war in Asia, unless significantly mitigated by security assurance mechanisms or other measures capable of maintaining a less contentious and more stable military balance over time. Such a significant shift in the relative balance of military power and influence in the area surrounding Japan and the strategic approaches of Beijing, Tokyo, and Washington, if mishandled, could generate destabilizing uncertainties regarding the ability of the allied forces to deter or limit dangerous escalation in a crisis or ultimately prevail militarily in a confrontation or clash with China over territorial and other issues.

These uncertainties (discussed in greater detail below and in chapter 6) could result in an increased likelihood of miscalculations or assertive behavior by all sides, especially regarding highly sensitive security issues such as territorial disputes. More broadly, this type of security environment could significantly weaken overall regional deterrence—especially in the minds of most Japanese and U.S. defense analysts—and greatly unnerve nearby nations.

Military Competitions

Despite significant absolute Chinese gains, considerable enhancements in alliance capabilities under this scenario would prevent major erosion in the relative superiority of the United States–Japan alliance in most domains. Although China would likely develop the ability to launch coordinated attacks and sustain operations at significantly greater distances, the unprecedented integration of high-end U.S. and Japanese capabilities under counter-A2/AD doctrines and operational concepts would enable the allies to maintain varying levels of access to the seas within the first island chain (or credibly deny Chinese naval access beyond that same perimeter in a conflict—see chapter 6 for details regarding these concepts). However, such access would largely come about as a result of executing preemptive, escalatory, and possibly experimental counter-A2/AD doctrines, with particularly unpredictable consequences in the cyber, space, and nuclear domains. Moreover, by approximately 2030, China would be able to field a set of air, naval, cyber, and C4ISR capabilities that could challenge regional perceptions of allied superiority under certain contingencies, such as a crisis over Taiwan or in the South China or East China seas.

THE MARITIME DOMAIN

In the maritime domain, U.S. carrier groups and their JMSDF escorts would still confront a dangerous operating environment within the first island chain, owing to China's

relatively large number of operational ASBMs and its highly integrated C4ISR networks. At the same time, China's ASCM-equipped submarines, surface ships, and maritime strike aircraft could execute combined strikes that would potentially overwhelm onboard defenses and exhaust the munitions of allied ships. Working as a cohesive, highly networked unit, these layered antiaccess defenses could potentially transform the inner regions of the first island chain, and certainly China's littoral waters, into no-go zones for U.S. ships at the outset of a conflict.

Yet the United States would likely be able to disrupt, if not necessarily cripple, the C4ISR infrastructure underlying China's missile forces with some mixture of electronic warfare and highly capable long-range bombers, hypersonic cruise missiles, or long-range drones. Although China would possess several functioning carrier groups capable of operations beyond the first island chain, these ships would be of limited operational utility if confronted with the payload, range, and coordination of allied antisurface warfare. Ultimately, allied ships in the region would be highly vulnerable at the outset of a crisis, but they could eventually penetrate China's antiaccess envelope through combined attacks on C4ISR nodes and gradual attrition against the PLAN fleet.

As with other scenarios, allied forces would continue to enjoy a margin of superiority in offensive capabilities relevant to the undersea balance. Recapitalized defense budgets would enable the allies, and particularly the United States, to increase the proportion of submarines within their fleet and exploit likely deficiencies in Chinese ASW capabilities. Because Chinese ASW platforms would themselves be vulnerable to allied area denial, U.S. nuclear submarines with expanded payload modules would maintain access to China's coastal waters, from which they could engage surface, undersea, and land-based targets. Yet allied forces would not be able to dispatch most of the PLAN's growing numbers of diesel-electric and nuclear attack submarines. As in the scenarios described above, key ASW systems such as maritime patrol aircraft would be prime targets for Chinese IADS. Although Japan's expansive inventory of ASW and ISR systems could work in conjunction with U.S. distributed sensor arrays and unmanned underwater vehicles to enhance allied awareness of the undersea environment, China's shallow littoral waters could continue to shield its large force of diesel-electric submarines from detection. Allied ASW barriers in geographic chokepoints could limit the movement of PLAN submarines in a conflict but would also probably degrade with time due to the difficulty of replacing or reseeded systems.

Security of Pacific sea lines of communication would almost certainly become a matter of greater concern to the alliance, given the greatly enhanced threat perceptions and increased likelihood of conflict occurring under this scenario, alongside the likely growth in Chinese power projection capabilities and increase in the PLAN's nuclear-powered submarines. These developments would equip Beijing with an enhanced capacity and need to engage allied naval assets in these areas. However, while the PLA would probably be able to deny the alliance a sure ability to control sea lines of communication and interdict Chinese shipping, it would almost certainly not be able to sustain its own offensive operations in such maritime lanes in the face of robust allied air and naval forces.

Given the rapid arms buildup and largely zero-sum strategic outlook envisioned in this scenario, the allies would be more likely to maintain or even enhance a broad maritime presence in the Western Pacific while making fewer compromises on the capabilities and specifications of individual ships. As a result, as indicated above, the allies would be somewhat better positioned and more willing to adopt highly ambitious operational concepts, such as a distant blockade of Chinese commercial shipping, though the potential political, economic, and military costs of such an approach could render such approaches untenable.

THE AIR DOMAIN

Within the air domain, allied forces would reach a division of labor and level of interoperability that would mostly offset the growing numbers, capabilities, and range of PLAAF aircraft. Constitutional revisions would allow the Japan Air Self-Defense Force (JASDF) to mount a defensive campaign over Japanese airspace and ease the burden placed on U.S. Air Force (USAF) assets. And, in contrast to the scenarios described above, increased doctrinal alignment, improved communications and data links, and frequent JASDF and USAF contingency planning would allow the allies to synchronize real-time operations in combating PLAAF incursions.

For its part, the PLAAF would also have significantly improved next-generation fighters and aerial-refueling capabilities, increasing the possibility that Chinese bombers or aircraft using advanced air-launched cruise missiles could target allied forces in Guam. However, a sizable, sophisticated, and highly interoperable allied air force would have a strong chance of prevailing against China's fighters.

Nonetheless, opportunities for such force-on-force engagements would be scarce during the outset of a crisis, as allied fighters would be constrained by their dependence on forward bases and aircraft carriers vulnerable to missile attack. Similarly, China's land- and sea-based IADS could limit the freedom of action of allied fighters while effectively denying airspace to allied maritime patrol aircraft, refueling tankers, and airborne command and control.

Instead, the allies could field a greater number of next-generation bombers and combat drones to strike at C4SIR nodes underlying China's precision-strike capabilities. Though highly escalatory, these attacks could potentially degrade the accuracy and connectivity of China's antiaccess network to the extent necessary to permit the entry of short-range tactical aircraft—albeit gradually, and initially in reduced numbers—into the theater.

THE GROUND DOMAIN

Relative to other scenarios, the allies would likely possess the resources needed to achieve a more calibrated and optimal ratio of missile defense, force dispersal, base hardening, and pre-positioning of assets.²⁰ For one, reinvigorated Japan Self-Defense Forces (JASDF) would collaborate with U.S. forces to extend a more comprehensive and integrated BMD umbrella over ports and bases, equipped with a greater number of interceptors than would likely be produced under other trajectories. Moreover, the allies would be able to

develop the redundant support systems to ensure the viability of multiple dispersed bases, most likely beyond the first island chain. Other passive measures could entail hardening shelters, burying fuel, and investing in rapid runway repair to enable allied forces to reconstitute necessary infrastructure in the aftermath of an attack.

However, such measures would not change the operational realities that would force allies to concentrate base infrastructure within the reach of China's theater missiles, or the fundamental vulnerability of such facilities to saturation attacks. Dispersing fighter squadrons would reduce the likelihood that a single missile strike could paralyze the JASDF or USAF, but the limited combat radius of allied fifth-generation fighters would still necessitate the use of base infrastructure in locations near or within the first island chain. But in this scenario, the Second Artillery would likely possess conventional medium-range ballistic missiles in sufficient numbers to launch multiple waves of saturation attacks against forward bases, rather than expending most of its munitions in early strikes. Allied efforts to conduct "blinding campaigns" against Chinese C4ISR networks with long-range weapons such as bombers or CPGS systems would be unlikely to prevent China from targeting fixed, predetermined locations with its missile forces. Such attacks would thus hamper efforts to introduce continuous sorties of tactical aircraft into the theater, and reduce allied firepower and maneuverability.

THE SPACE DOMAIN

In this scenario, both parties would likely abandon reservations about the weaponization of space, opting instead to pursue ASAT capabilities that could include direct-ascent vehicles, directed-energy weapons, co-orbital systems and microsatellites, and jamming technologies. China would field new constellations of satellites to provide imaging, tracking, and targeting for what would be a formidable precision-strike regime, but it would "inherit" many of the vulnerabilities of the United States in space. Under these circumstances, it would be possible for both China and the alliance to succeed in denying the other the use of space in a conflict.

Whether one party would suffer more as a result of such an engagement is unclear, not least of all because both China and the alliance would attempt to improve the resilience of their C4ISR networks and reduce their dependence on space. Allied satellites could ostensibly enjoy superior positioning, shielding, and redundancy relative to their Chinese counterparts, while the U.S. military could shift ISR and communications functions to high-altitude, long-endurance unmanned aerial vehicles or develop alternatives to the Global Positioning System. Yet China would have a natural advantage in maintaining situational awareness of the airspace and waters near its territorial borders, particularly if its antiaccess network could target allied C4ISR systems in the region. In either case, this scenario could see a higher degree of militarization in space and a greater risk of escalation that could involve satellites with critical military and civilian applications, with few rules of engagement to govern interactions in this unfamiliar domain.

THE CYBERSPACE DOMAIN

A similar dynamic would prevail in the cyber domain. Although allied networks would remain vulnerable to paralyzing attacks at the outset of a crisis, the United States and Japan would have much fewer reservations about converting their advantages in “informatization” into offensive capabilities to target vulnerable nodes in China’s centralized Internet infrastructure. Moreover, the allies would likely integrate these cyberattacks into combined campaigns to cripple China’s A2/AD networks. However, the intensity of military competition under this scenario would also suggest a much greater risk of uncontrolled escalation against military and civilian targets alike, as both parties would be tempted to extract every ounce of advantage in what could prove to be a prolonged conflict.

THE NUCLEAR DOMAIN

Under this scenario, the nuclear domain would be characterized by heightened mistrust and mutually reinforcing competition that could erode strategic stability. Faced with the prospect of confrontation with a resurgent China, the United States could be tempted to increase its deployed warheads to offset Chinese advantages in the conventional military balance. At the same time, an allied trifecta of improved C4ISR, integrated BMD networks, and highly accurate CPGS capabilities would raise Chinese fears of a decapitating first strike against its small nuclear force.

Despite its likely possession of an SSBN force, China could thus feel pressured to produce additional warheads in marginal increments to maintain its position in a shifting nuclear balance. If the United States were to undertake a dramatic buildup of its nuclear forces or to place a renewed emphasis on first-strike delivery vehicles, however, China could accelerate production of warheads or even shift toward a more offensively oriented posture of limited deterrence. Although Chinese efforts to enable counterforce targeting would most likely have little impact on the fundamental credibility of U.S. extended deterrence, such a shift in Chinese strategic doctrine would severely exacerbate Japanese fears of nuclear coercion at the hands of its larger neighbor.

COMMAND AND CONTROL

In this scenario, operational integration between allied forces would provide a competitive advantage against an otherwise formidable Chinese force. Although the JSDF would not depart radically from its existing focus on capabilities and missions where it enjoys a comparative advantage, doctrinal, technological, and institutional alignment would allow the allies to operate with the speed and coordination necessary to disrupt Chinese anti-access campaigns. For instance, JMSDF vessels would be capable of actively defending U.S. ships in the event of Chinese attack, enhancing their capabilities as BMD and ASW platforms, while planning, training, and synchronization between the JASDF and USAF would enable the allies to repel PLAAF sorties. At the same time, Chinese forces would

also likely have considerably improved training quality and interoperability among PLA services vis-à-vis their current low baseline, conducting much more regular joint exercises and patrols.

Determinants, Assumptions, and Uncertainties

The key features of this scenario would primarily derive from fundamental increases in China's military capabilities and major changes in Chinese policies and behavior, especially along the Asian littoral and with regard to territorial and resources disputes with Japan and other local powers. Only in the context of such a radical shift in Chinese capabilities and behavior—perhaps accompanied, or in part precipitated, by a severe bilateral crisis or incident between Tokyo and Beijing over, for example, the Senkaku/Diaoyu Islands—would Japan be willing to undertake the kind of equally radical changes with regard to China and the alliance posited in this scenario.

As discussed in the “Aggressive Nationalism” trajectory for China outlined in chapter 2, the advent of a far more belligerent Chinese policy approach in the Western Pacific would likely require several preconditions, involving, first and foremost, the emergence in Beijing of a hostile, aggressive, ultranationalist leadership under conditions of high but socially destabilizing levels of Chinese economic growth and a growing sense of political and military pressure and encirclement by Washington and Tokyo. These factors could generate:

- A sense of Chinese elite confidence and increased military and political leverage internationally, generated by a shift in the relative balance of military power locally, and by growing Chinese international economic influence;
- Associated, growing levels of ultranationalism among the Chinese public;
- Heightened threat perceptions in the Chinese leadership toward both the United States and Japan; and
- A domestic political environment marked by insecurity and calls within China's civilian and military elite for greater domestic repression, in response to increasing levels of social unrest associated with rapid economic growth.

Under such circumstances, a serious debate over China policy would likely emerge in Japan that could result in a shift to a policy of overt competition with Beijing, whereby Japan would decide to become a “normal” military power and significantly increase its defense spending. As discussed in chapter 3, such an outcome would probably require a major realignment of Japanese politics, coupled with a decline in pacifism in Japanese society.

Although unlikely, such a development is not inconceivable over the next fifteen to twenty years in this scenario, especially if Sino-Japanese economic relations were to become intensely antagonistic and, more important, if Beijing's more belligerent behavior resulted in serious armed incidents or crises with Japan of the type outlined in the scenarios described

above, including clashes over disputed territorial or maritime issues, or a major Sino-American crisis over Taiwan or North Korea.

In addition, the likelihood of one or more such “wild card” incidents would also arguably increase if Washington were to become less risk averse in response to the above developments in China, adopting an approach similar to the containment variant of the “Strength” trajectory described in chapter 4. Under this scenario, U.S. leaders might calculate that they must react more firmly and perhaps more forcibly to a growing crisis between China and Japan than they might have in the past—in large part, to counter the impression that China’s increased military capabilities and aggressiveness have resulted in weakened resolve or a lessened commitment to defend U.S. interests and protect U.S. allies in the area. Such a response would become more likely if members of Congress and the U.S. military leadership were to press for a more confrontational stance toward Beijing and political leaders were to emerge that supported such a stance.

Such calculations could also lead Washington to misjudge the willingness of other Asian partners to insert themselves into disputes with Beijing, particularly in ways that could undermine their own interests in continued economic or political cooperation with an economically strong China. Under such conditions, the United States’ overreach or miscalculation could exacerbate the zero-sum dynamics in its relationship with China, increasing the likelihood of incidents or crises while revealing cracks in the edifice of Asian support for a U.S. presence in the region.

This scenario also rests on two additional assumptions. First, the United States would probably overcome its current economic problems and resume a robust level of economic growth sooner rather than later. It would also encounter minimal budgetary and domestic political constraints to increasing existing levels of defense spending and adopting a largely confrontational approach to Beijing. Second, this scenario largely assumes that U.S. and Japanese forces will prove both willing and able to integrate successfully to form a relatively well-coordinated and potent military counterbalance to China.

As in several of the other scenarios, the chances for continued stability under this scenario would increase if the three powers could create the type of credible stability-inducing mutual security mechanisms discussed in the country chapters. However, this scenario might present significant challenges to any effort to create such mechanisms, largely due to the level of mutual hostility and suspicion that would likely predominate. Under such circumstances, Beijing would likely become less inclined to place significant limits on its growing capabilities as part of any agreement, while also perceiving any U.S. accommodation as a sign of weakness. At the same time, Washington could feel compelled to avoid signaling weakness by supporting such an agreement.

That said, the confrontational behavior and high capabilities posited under this scenario could increase incentives on all sides to seek some way to avoid escalating conflicts that would exacerbate threats to shared levels of economic growth.

SCENARIO 5: SINO-CENTRIC ASIA

This and the final scenario below would involve a major withdrawal or hollowing out of the U.S. military and political presence and capacity in the Western Pacific. Under such a radical development, Japanese strategy could become highly volatile and responsive to Chinese behavior. Two different types of scenarios could unfold. The first (this scenario) would involve a regional security environment in 2030 marked by considerable uncertainty but characterized by peaceful accommodation between China and Japan. High levels of Sino-Japanese political, diplomatic, and economic engagement would coexist with declining levels of military competition and a decreasing likelihood of tension and crises.

Foreign and Defense Strategies

Under this scenario, Beijing would seek to take advantage of Washington's withdrawal from the region to draw Tokyo more fully into its orbit by enhancing cooperation and reducing rivalry. To this end, Beijing would pursue cooperative and even perhaps somewhat accommodationist policies toward Tokyo. This would be done in order to prevent Tokyo from unilaterally and radically increasing its military capabilities (possibly in both conventional and unconventional realms), out of a sense of growing insecurity in the face of Washington's withdrawal or a perceived hollowing out of the U.S. military capacity in the Western Pacific. Similarly, Beijing would also likely avoid provocative or threatening political actions toward both Tokyo and Washington that could reverse the latter's withdrawal. As part of this strategy, China would be more likely to seek mutual security assurances and confidence-building measures with Japan, including joint development of East China Sea resources and the shelving or resolution of territorial disputes over the Senkaku/Diaoyu Islands.

Accordingly, in the military sphere, Beijing's presence and capabilities relevant to Japan would likely increase initially at a more gradual pace than at present, especially if China's economy were experiencing severe problems (see below). In other words, defense-related policies and actions somewhat similar to those described for China in the third scenario above would likely prevail, albeit in this case driven more by a desire to avoid alarming Japan and reversing the U.S. withdrawal than from a declining economy. In a serious effort to extend confidence-building measures into the military sphere, Beijing would likely reduce those military deployments that Tokyo deemed most threatening, including exercises and patrols that transited key Japanese straits without prior notification. China might also seek to conduct more joint exercises with Japan in an effort to improve military-to-military relations.

At the same time, Beijing would likely press for a downgrading of the United States–Japan alliance as a condition of its accommodating stance toward Japan. Specifically, Beijing might call for the limitation (but probably not abrogation) of the Mutual Security Treaty to cover only nuclear attacks, not conventional strikes against Japan. In other words, China

would support a limited United States–Japan security relationship, as a means of constraining Japanese remilitarization and nuclearization. Beijing would likely support a gradual approach to the process of alliance revision, in an effort to not overly alarm the United States.

Tokyo would initially face a great deal of uncertainty under this integrated scenario, as the United States withdrew from the Western Pacific or allowed its forces to be hollowed out significantly. Japanese leaders would most likely be confronted with a variety of competing arguments. Hawks in the government would probably argue that the U.S. withdrawal makes it more imperative than ever that Tokyo pursue the military power and policies characteristic of a strategically autonomous and normal power—particularly if China’s economy continued to thrive and its military capabilities continued to expand. However, other Japanese voices would call for strategic accommodation of China, arguing that the value of cooperative relations with a seemingly more benign Beijing, coupled with a U.S. withdrawal, makes a competitive strategy costly and self-defeating. Under this scenario, the latter voices would carry more persuasive heft, largely due to Beijing’s more cooperative and benign behavior.

Although some in Japan would welcome the United States’ withdrawal from Japanese bases, given long-standing resentment of the U.S. presence, Tokyo would seek to maintain positive relations with Washington and retain at least the basic framework of the alliance and the Mutual Security Treaty, primarily to remain covered by the U.S. extended deterrence umbrella and secure support in missile defense vis-à-vis North Korea.

Under this scenario, Washington would seek to sustain stability in the Western Pacific as it withdraws through efforts to strengthen its cooperative relations with Beijing while seeking to maintain the alliance with Tokyo, including its extended nuclear deterrence commitment. As a part of these efforts, the United States would strongly support military and political confidence-building measures between China and Japan. At the same time, Washington would likely seek to preserve the capacity to again intervene in the region conventionally, if necessary. Indeed, U.S. policy under this scenario might approximate a version of the classic “offshore balancing” approach advocated by some strategists—assuming, that is, that the United States were to clearly retain the capacity to return to the region militarily.²¹

Military Competitions

Some level of military competition would doubtless continue, although such competition would be more likely to manifest itself in the acquisition of capabilities and low-key efforts to hedge against unexpected contingencies. In the aggregate, China’s conventional antiaccess forces would enjoy latent superiority over Japanese forces in a number of domains, particularly because the United States would be heavily constrained in its ability to intervene in any conflict. Yet both Chinese and Japanese forces would operate at a lower level of readiness, given that the terms of mutual accommodation would likely require some reduction in the frequency and substance of training and exercises, and thus in realistic contingency planning.

THE MARITIME DOMAIN

In the maritime theater, the JMSDF could at least match the PLAN in undersea capabilities, although the JMSDF's surface fleet would be disadvantaged vis-à-vis the PLA's antiaccess arsenal. Although the PLA's surface fleet would be a mix of aging vessels and more modern, ASCM-equipped combatants, it would be supported by a small inventory of AS-BMs. Although the PLAN would most likely adjust its deployments, patrols, and exercises to downplay possible confrontation with Japan—thereby reducing its ability to execute any form of combined campaign in the unlikely event of hostilities—the Second Artillery's theater missiles would still highlight China's latent ability to sustain area denial against the JMSDF.

THE AIR DOMAIN

In the air domain, the JASDF would likely maintain the ability to repel potential incursions from a PLAAF consisting of both fourth- and fifth-generation aircraft. However, the JASDF would face numerical shortfalls and be unsuited (or unable) to access the Chinese Mainland, due largely to the presence of China's coastal SAM batteries. Both nations would thus possess the means to maintain no-go zones that would extend to several hundred kilometers from their shores.

THE GROUND DOMAIN

In the ground domain, China's inventory of ballistic and cruise missiles could also challenge Japan's otherwise sophisticated network of missile and anti-air defenses. Japanese BMD systems would remain operational, but they would likely stagnate in numbers, capability, and overall levels of integration, impairing their ability to extend coverage to ports and bases. And, although an actual "bolt out of the blue" attack would be almost inconceivable under this scenario, Japan's geography and population density would continue to make it susceptible to Chinese theater missiles.

THE SPACE DOMAIN

In space, China would maintain some direct-ascent ASAT capabilities that could potentially threaten allied satellites in low Earth orbit. Nevertheless, Japan would likely have continuous access to U.S. surveillance and reconnaissance satellites, many of which are based in medium Earth or geostationary orbit. Moreover, the amenable strategic environment that would be a prerequisite for this scenario would also reduce the motivations for either party to engage in an unbridled arms race in this (and most other) domains.

THE CYBERSPACE DOMAIN

Although China would retain the ability to infiltrate and possibly paralyze some allied systems at the outset of a crisis, most competition in the cyber domain would consist of

commercial and security-related espionage by actors with plausible deniability. Although the United States' physical absence from the theater of conflict would not substantially increase Japan's vulnerability in this domain, an overall reduction in information sharing and cooperation between the two militaries could reduce the allies' ability to defend their networks against intrusions.

THE NUCLEAR DOMAIN

In this instance, interactions in the nuclear domain would remain essentially stable, as United States-backed extended deterrence would persist in modified form even as Beijing and Tokyo reached a state of mutual accommodation. Although the United States would likely revise the terms of extended deterrence to apply only to an enemy nuclear attack on Japan, U.S. forces would still be subject to the Mutual Security Treaty and thus obligated to come to Japan's assistance in the event of a conventional attack. From an operational standpoint, the United States would continue to extend its nuclear umbrella over Japan through SSBNs stationed in the Western Pacific, and most likely ICBMs as well.

Whether Beijing would reduce the pace of its nuclear modernization under this scenario is uncertain, although a likely cutback in allied BMD deployments following a U.S. withdrawal would arguably deprive the Second Artillery of an important pretext for developing additional delivery vehicles and penetrating aids. China would likely adhere to its existing posture of minimal deterrence, and thus would lack the precise, counterforce capabilities necessary to practice nuclear coercion against Japan. Moreover, if enacted, substantive confidence-building measures would place both operational and political constraints on China's ability to threaten Japan with its conventional forces, and would likely prove sufficient to reassure Japan of its benign intentions.

COMMAND AND CONTROL

In this scenario, Japan, and to a somewhat lesser degree China, would likely see a reduction of efforts to streamline command and control and enhance joint interoperability. The withdrawal of U.S. forces, as well as the JSDF's likely decision to adhere strictly to constitutional restrictions on self-defense, would reduce opportunities to align doctrines, coordinate capabilities, and plan for realistic contingencies. Japan's ability to provide rear-area support to U.S. forces would suffer considerably. To assuage Japanese concerns, the PLA could exercise some restraint in conducting joint exercises in the seas and airspace near Japan. A more stable security environment could also reduce the impetus for the PLA to pursue difficult organizational reforms to break down barriers to interservice cooperation and wartime command and control. That said, China would be unlikely to halt the development of and training for integrated antiaccess campaigns, and it would still possess sophisticated capabilities and systems that could be mobilized in a conflict.

Determinants, Assumptions, and Uncertainties

The overall security environment of a U.S. withdrawal and the growing uncertainty and likely turbulence presented in this scenario derive in large part from a combination of some of the least likely trajectories presented for China, Japan, and the United States in each of the preceding country chapters: the gradual variant of the U.S. “Withdrawal” trajectory; a “Cooperative Weakness” (or possibly “Cautious Rise”) trajectory in China, and an “Accommodation” trajectory for Japan. These trajectories would most likely include low economic capacity for the United States and low- to midrange economic capacity for China. It is extremely difficult to conceive of a mid- to high-capacity United States withdrawing from the Western Pacific in the face of a high-capacity China. It is also difficult to conceive of such a withdrawal while China’s economic and military growth remained robust, even if the United States were declining markedly, at least within the fifteen- to twenty-year time frame examined in this study. Under such conditions, Washington would more likely seek to shore up its position through alliance building and other means over that period.²²

That said, it is possible that enormous domestic pressure could force a reconsideration of the existing U.S. posture and thereby precipitate a U.S. withdrawal, even in the face of a China with high economic capacity and an “Assertive Strength” policy approach. Such pressure would likely result from a major and prolonged recession and worsening debt crisis, marked by severe unemployment, greater income inequality, and perhaps growing domestic protests, most likely precipitated by the economic collapse of Europe. Such developments could result in a growing perception among both the U.S. public and elites that foreign military deployments, even in the Western Pacific, have become too costly to sustain at anything resembling present levels, especially given recent experiences in Iraq and Afghanistan. The chance of such a conclusion being drawn would arguably become more likely if Beijing were to maintain a cooperative posture and refrain from directly threatening vital U.S. interests, despite its growing economic capacity. But such a U.S. withdrawal might even occur in the face of a less cooperative China, depending on the severity of the U.S. decline and the state of domestic U.S. politics (scenario 6).

A major U.S. withdrawal from the Western Pacific could also become more likely if America’s threat perception in several key areas were to diminish significantly. Reasons for this might include:

- A resolution of the Taiwan issue, through some version of peaceful reunification or what appears to be a long-lasting cross-strait détente;
- Some form of Chinese democratization, including the more or less peaceful transition to a multiparty regime and the opening of much greater space for freedom of speech, press, assembly, and religion;
- The peaceful resolution of the situation on the Korean Peninsula, including the denuclearization and democratization of the North Korean regime, or the reunification

of the peninsula under South Korean control, in such a way that precludes residual political uncertainty or conflict; or, at a minimum, significant confidence-building measures between the North and South coupled with a strong South Korea capable of deterring and defending itself against potential aggression from the North; and

- Progress toward joint development and peaceful resolution of territorial disputes in the South China and East China seas.

Moreover, as indicated in chapter 2, the international and domestic structures and restraints that Beijing will likely confront during such a U.S. withdrawal scenario would probably continue in this time frame, thus reinforcing existing Chinese incentives in favor of the cautious, pragmatic, stability-maximizing, and growth-oriented economic reform and foreign policies of the past, including efforts to sustain or enhance cooperation with the West.

An element of uncertainty inherent to this scenario would be the potential concern that Washington might feel over the growing accommodation between Beijing and Tokyo. Washington might fear that Beijing would use its growing influence over Tokyo and the region to effectively exclude the United States from not only the possibility of effective military intervention but also economic and diplomatic engagement in the region. This concern would be particularly inflamed if Tokyo were to press for a downgrading of the Mutual Security Treaty under clear pressure from Beijing, or if Tokyo capitalized on the situation to air its long-standing grievances against U.S. bases in Japan and pressed for a faster or more complete withdrawal than the United States preferred. However, if Tokyo were to respond to the initial signs of a U.S. withdrawal with policies designed not only to deepen cooperation with Beijing but also to sustain the alliance in something approximating its current form, Washington policymakers might be reassured that a pullback would not immediately precipitate a regional crisis or further endanger U.S. interests in the region.

Another source of uncertainty could arise from certain “wild card” events, such as an unforeseen accident or provocative efforts undertaken by Chinese or Japanese nationalists in the East China Sea that could provoke greater suspicion between the two sides. Similarly, Japan might become more wary of an accommodating approach—and the United States would probably become more likely to slow or reverse its policy of withdrawal—if Beijing were to, for example, seek to capitalize on the U.S. withdrawal by attempting to force reunification with Taiwan.

Moreover, there is no guarantee that this scenario would prove stable in the long term, particularly if Beijing’s relative economic and military strength continued to grow and it attempted to impose greater political, economic, or security-related demands on the Sino-Japanese relationship that were perceived by the Japanese as burdensome, neocolonial, or hegemonic. Over time, such a scenario could strengthen the hand of hawks in Tokyo who argued that Japan should move toward a more competitive form of engagement, or even strategic independence as a normal power (scenario 6).

In any event, this scenario will remain highly unlikely, especially over a fifteen- to twenty-year time frame, especially in the absence of credible regional mutual security mechanisms and the type of positive developments listed above. America's commitment to maintaining a presence in the region in order to secure a stable regional environment and to upholding its security commitments to allies in the region, including Japan, would most likely prevent it from pursuing such a path, even under the constraints of a sustained level of very low economic growth.

SCENARIO 6: SINO-JAPANESE RIVALRY

This scenario also posits a U.S. withdrawal from the region. However, in this case, this action would be badly prepared for, poorly executed, and excessively rapid (as described in the precipitate variant of the U.S. "Withdrawal" trajectory from chapter 4). Moreover, this scenario posits a China with ever-expanding economic and military capacity and a much more belligerent foreign policy stance (approximating the "Aggressive Ultrationalism" trajectory from chapter 2). Hence, the regional security environment in 2030 would be marked by considerable turbulence and uncertainty, including a possibly radical shift toward intensified rivalry between China and Japan. The escalatory dynamic generated by this more intense and direct Sino-Japanese competition would lead to significantly greater potential for instability, crises, and conflict in the region.

Foreign and Defense Strategies

Under this scenario, Beijing would seek to take advantage of the U.S. withdrawal by increasing pressure on Tokyo in a range of political and economic disputes, particularly those related to territorial and maritime disputes in the East China Sea and possibly historical issues. Out of a sense of insecurity fostered by the rapid U.S. withdrawal and provoked by this aggressive Chinese behavior, Tokyo would most likely implement a major realignment in its national security strategy, moving toward an independent military capability that includes the acquisition of nuclear weapons. Japanese insecurity could be particularly inflamed if Washington were to implement its withdrawal without maintaining a credible U.S. commitment to defend Japan from a distance. Such a scenario would probably constitute the "worst case" for the regional security environment in terms of its propensity toward conflict and instability.

Military Competitions

Under this scenario, a precipitous drawdown by the United States would almost certainly lead Japan to pursue an independent nuclear deterrent, not only to safeguard against (potential) nuclear blackmail but also to compensate for growing disparities in the conven-

tional military balance against China. The Japanese decision to nuclearize could occur in the context of a rational calculation made at the outset of a period of strategic reorientation, or only as the result of a costly but abortive effort to develop more extensive conventional capabilities. But in either case, Japan would still find itself at a disadvantage against conventional Chinese antiaccess capabilities, with U.S. assistance in the event of a conflict likely to be delayed and of limited effectiveness. In stark contrast with the scenarios described above, the nuclear domain would see not only intense distrust but also a significantly elevated risk of confrontation.

Without the benefit of in-theater bases or logistical support, the “tyranny of distance” would drive a wedge between Japanese and U.S. forces, reducing the size, frequency, and durability of reinforcements. Moreover, a low-capacity United States would be highly unlikely to possess long-range strike platforms with the numbers or capabilities to maintain existing levels of deterrence against high-end Chinese forces. Having focused much of its force modernization on defensive missions and rear-area support for U.S. forces, the JSDF would be forced to initiate expensive modernization programs in a variety of unfamiliar areas, and would probably remain vulnerable to many of the PLA’s most potent antiaccess capabilities.

THE MARITIME DOMAIN

In the maritime domain, Japan would be able to mount significant resistance to Chinese area denial, but it would ultimately face a highly constrained operating environment. Although the JMSDF would have formidable antisurface warfare capabilities, it would be less likely to possess land-attack capabilities with the numbers, range, and speed necessary to counter Chinese ASBMs and shore-based threats to surface combatants. To be sure, a more competitive Japan would be better equipped to interdict Chinese submarines near the Ryukyu Islands while fielding additional submarines to hold Chinese surface combatants at risk, including PLAN carrier groups attempting to transit the region. But Japan’s impressive undersea capabilities would not reverse the growing presence of capable and integrated PLAN assets in the Western Pacific. As a result, the security of Pacific sea lines of communication would become a matter of great concern to Tokyo, were a Sino-Japanese war to break out.

THE AIR DOMAIN

In the air domain, the JASDF could potentially prevent the PLAAF from gaining air superiority, at least in areas near the home islands. However, even Japanese fifth-generation fighters would find it difficult to penetrate China’s dense perimeter of land- and ship-based SAM batteries. At a minimum, China would thus be able to maintain a no-go zone around its 200-nautical-mile EEZ, from which it could continuously launch sorties, whittling away at airborne ISR and other assets necessary to prevent further incursions into the home islands.²³

THE GROUND DOMAIN

In the ground domain, Japan would be hard-pressed to guard against potential Chinese saturation missile attacks. China could still expand its existing stockpile of medium-range ballistic missiles and land-attack cruise missiles by several dozen or even a hundred missiles per year, while Japan would be unable to keep pace by purchasing and deploying the BMD systems necessary to shield ports and bases. Dispersal, hardening, and rapid repair could reduce the impact of a single attack, but Japan's geography would work against its efforts in this area.

THE SPACE AND CYBERSPACE DOMAINS

The effects of U.S. withdrawal would most likely not be felt as severely in the space and cyber domains. Japan would likely have access to U.S. surveillance and reconnaissance satellites in medium Earth orbit and geostationary Earth orbit, which would be less vulnerable to Chinese ASAT weapons. Although the United States' physical absence from the theater of conflict would not substantially increase Japan's vulnerability in this domain, an overall reduction in information sharing and cooperation between the two militaries could reduce the allies' ability to defend their networks against intrusions.

THE NUCLEAR DOMAIN

Due in large part to deteriorating trends in the conventional balance described above, as well as its own doubts regarding the credibility of U.S. extended deterrence, Japan could perceive an independent nuclear capability as a cost-effective means of preventing Chinese attack or coercion. Consequently, the nuclear domain would become a locus of destabilizing competition between China and Japan, with a far greater likelihood of outright confrontation than in any other scenario.

Japan would likely pursue a modest sea-based deterrent, most likely in the form of SSBNs, and would adopt a comparatively restrained nuclear posture that places an emphasis on retaliation against countervalue targets. But to maximize the deterrent potential of its arsenal, Japan could maintain some degree of ambiguity regarding the use of its nuclear weapons in very specific contingencies against overwhelming conventional threats.

Although news of such an effort would likely break out within a period of months, Japan would probably require a few years to field the full suite of compatible warheads, missiles, and delivery platforms necessary to ensure a second-strike capability.²⁴ During this period, China could be tempted to launch some form of preventive attack in order to neutralize the emergence of an independent and, in Beijing's view, unpredictable nuclear power on its periphery. Such temptations could grow in the event of a total disintegration of the United States-Japan alliance, although the overall possibility of such a destabilizing and catastrophic scenario would be low.

At a minimum, however, Japanese nuclearization and the open violation of nonproliferation taboos would most likely set off a regional arms race. Faced with a deteriorat-

ing security environment, China could be prompted to shift toward a limited deterrence posture, with an emphasis on a larger nuclear force capable of early attacks against military targets. In this instance, pervasive strategic distrust between Tokyo and Beijing and regular incidents and crises arising from their geographically proximate forces would raise the possibility of brinkmanship and confrontation.

COMMAND AND CONTROL

The fracturing of the alliance would severely degrade the interoperability of U.S. and Japanese forces while highlighting the PLA's gains in conducting integrated antiaccess campaigns. A remilitarized Japan could attempt to integrate its forces under new, offensively oriented doctrines, but whether such a momentous reorganization of the JSDF would actually succeed—particularly by 2030—remains uncertain.

Determinants, Assumptions, and Uncertainties

The kind of U.S. withdrawal posited above would most likely occur in the context of a far more intense and prolonged economic crisis than the global financial crisis of 2008, and would almost certainly involve a severe hollowing out, if not abrogation, of the U.S.-Japan Mutual Security Treaty. Such actions could only occur if the U.S. domestic economic and political environment were to change drastically, involving a sea change in U.S. leadership attitudes or a level of domestic political discord that would compel a rapid U.S. withdrawal, despite China's aggressive behavior.

This scenario would also likely require the emergence of the kind of highly nationalist, aggressive, and risk-accepting leadership in China described in the “Aggressive Ultrationalism” trajectory in chapter 2, in the context of continued mid to high levels of economic growth accompanied by inadequate reforms, significant social unrest, and a sharp leadership debate. It is hard to conceive of a more moderate Chinese leadership eschewing the “benign” approach toward Japan and the alliance described in the previous scenario for an assertive, confrontational approach to a precipitate U.S. withdrawal.

This scenario also assumes that Japan undergoes a fundamental political realignment that includes a decision to revise its Constitution and effectively turn its back on the constraints of the United States–Japan alliance—in other words, the “Independence” trajectory described in chapter 3. It is also most likely in a scenario involving at least mid-level Japanese growth, which would embolden Tokyo in its pursuit of strategic independence and competition with Beijing.

This scenario remains the most unlikely of all of those presented here, given the slight possibility that the United States would withdraw from the region in the face of high levels of Chinese assertiveness and acute Sino-Japanese security competition. Even in the face of major economic constraints, Washington would likely go to great lengths to prevent such a scenario from unfolding.

6

IMPLICATIONS AND POSSIBLE ALLIANCE RESPONSES

ISSUES OF CONCERN

The previous chapter described several possible scenarios in the regional security environment in Northeast Asia in 2030 as they relate to China, Japan, and the United States–Japan alliance. This analysis suggests several major issues of concern for both Tokyo and Washington.

Most notably, Chinese military development at mid to high levels over all or most of the next fifteen to twenty years could lead both to significant improvements in the absolute level of the People’s Liberation Army’s (PLA’s) capabilities and the possibility of relative gains vis-à-vis the United States and the alliance in many key military domains, including those involving air and naval forces deployed in or near Japan. For some observers, the key security problem facing Japan and the alliance derives from the supposed “fact” that such absolute and relative improvements in PLA capacity will inevitably result in an effort by the People’s Republic of China (PRC) to push the United States out of the Asia-Pacific region and to establish the region as a tight sphere of Chinese influence.

Although such an outcome is not impossible, it is also far from inevitable, even under conditions of a relative decline in certain U.S. and Japanese military capabilities. As indicated in chapter 2, Beijing’s long-term security strategy in Asia is at present to a great extent undetermined and focused more on short- and medium-term efforts to deter threats to Chinese territory or sovereignty claims than on establishing hegemonic control decades

in the future. Therefore, the primary threat posed to Japan and the alliance during the time frame covered in this study involves increasing levels of *uncertainty* about the future security environment in the Western Pacific, with a possibly growing likelihood of confrontations or even limited conflicts as both sides respond to shifting relative military capabilities and changing political, social, and economic pressures.

Such dynamic factors could increase Beijing's willingness to utilize military means to signal resolve, exert intimidating pressure, or "punish" alleged Japanese (or even U.S.) wrongdoing within a limited time horizon, thereby increasing the likelihood of crises or incidents. As a result, even limited Chinese gains in several military domains could alter the threshold at which Beijing might contemplate more aggressive military efforts to push back against what it perceives as threatening levels of U.S. surveillance along its periphery, to assert its claim to disputed territories or maritime areas, or to signal resolve in an unanticipated crisis, such as the September 2010 trawler collision between Beijing and Tokyo or the more recent face-off precipitated by Japan's purchase of several of the disputed Senkaku/Diaoyu Islands. Moreover, such possibilities would arguably become more likely if the United States and Japan were unable to reach a more stable *modus vivendi* with Beijing regarding such issues over the time frame of this study, and if political leaders in Tokyo or Washington were to adopt a more confrontational stance toward a more capable and apparently more assertive Beijing.

On a broader level, even under conditions in which the alliance retains overall military superiority, such military shifts, if improperly handled by all sides, could produce an environment of growing uncertainty regarding the durability of the existing preference of all parties for dialogue and restraint vis-à-vis many regional security issues, such as military activities in the exclusive economic zone (EEZ), the security of sea lines of communication, the disposition of the Taiwan issue, and various maritime territorial disputes in the East China and South China seas. At worst, improper handling of the shifting regional environment could greatly reduce the perceived credibility of U.S. security assurances to Japan and other allies and friends in the Asia-Pacific region.

Such a perceptual shift could make regional powers less willing to resist possible Chinese pressures and eventually compel them to accommodate China in ways that might be seen to jeopardize U.S. interests and reduce U.S. influence, however defined. In particular, such a shift in power could result in a significant transition by local powers—including Japan—toward Chinese-supported policies that in some cases might directly or indirectly challenge existing United States-supported norms, institutions, and policies relevant to the overall U.S. security posture in the Western Pacific. These might include forward basing or access arrangements, interpretations of the United Nations Convention on the Law of the Sea with regard to territorial disputes and foreign military activities in EEZs, the purpose and membership of multilateral regional security-related organizations and forums, and so on. Conversely, such a shift could also provoke Japan, and other allies and friends, to engage in a far more destabilizing arms race with China than any yet seen, possibly including efforts to acquire weapons of mass destruction.

In this context, the proper question to ask is not how to prevent China from ejecting the United States from Asia, but rather what set of long-term military and nonmilitary policies Tokyo and Washington should adopt to reduce overall uncertainty, sustain key U.S. and Japanese norms and interests, decrease the probability of severe crises and confrontations, and increase strategic trust among all parties in the region. For Japan and the United States, this requires politically and economically viable and credible policies that combine elements of both deterrence and reassurance toward China—deterrence to maintain a high threshold for coercive or aggressive actions that threaten allied interests; and reassurance to reduce fears in Beijing that Japan or Washington will use its deterrent capabilities to threaten or deny China’s core interests, including both the security of its territory and the survival of the Chinese Communist Party regime.

OBJECTIVES FOR JAPAN AND THE ALLIANCE

Therefore, the principal challenge confronting Washington and Tokyo is the need to develop a coordinated bilateral and regional strategy to manage the changing security environment surrounding Japan. Such a strategy should aim to:

- Significantly reduce the likelihood of nearby crises and incidents, especially under the worst of the high-probability scenarios presented in chapter 5;
- Prevent broader adverse shifts in the calculation of regional states beyond Japan; and
- Achieve such goals in the most cost-effective, flexible manner, accounting for possible variations in relative economic capabilities and political will, and recognizing the long lead times required to put in place credible strategies, especially if such strategies involve significant departures from existing approaches.

In the military realm, this challenge translates into a need to maximize deterrence against the possibility of both kinetic attacks and especially intimidation or coercive actions over disputed territories and economic maritime regions near the Japanese home islands—without provoking otherwise avoidable military and nonmilitary responses (such as intensifying arms races and more assertive security policies) that could greatly increase both regional tensions and the likelihood of unpredictable escalation in a crisis. In this effort, one must ask: What kind and level of U.S. and Japanese military capability, presence, interoperability, and demonstrations of resolve would be both prudent and necessary to achieve this objective?

Under one of the most likely regional scenarios presented in chapter 5 (Scenario 2, “Limited Conflict”), deterring a much more militarily capable and assertive China could prove very difficult, because of concerns in both Washington and Tokyo about resulting escalation or, in Japan, about exposure to Chinese economic and political pressure. To effectively deter coercive Chinese behavior, Japan and the United States would need to demon-

strate resolve and capacity while avoiding both instability in a crisis and the emergence of a more conflictual environment over the long term—no easy task.

Equally important, views of what constitute prudent and necessary levels of deterrence will also depend on a clear and common understanding (either tacit or explicit) in both Washington and Tokyo of the most desirable or at least acceptable long-term distribution of military power in the Western Pacific. As discussed in some detail below, an emphasis on sustaining a clear level of alliance superiority in all areas of military competition with China, right up to Chinese territorial waters, could prove extremely difficult and highly destabilizing. Conversely, a commitment to a more balanced pattern of military power in the Western Pacific could under some circumstances greatly increase incentives for the PRC to “test” alliance resolve, especially in the absence of credible security assurances or reassuring policy changes in areas Beijing views as vital to its interests.

In the nonmilitary realm, the challenge of developing a coordinated alliance security strategy translates into a need to reduce strategic distrust between China and the United States–Japan alliance and to build support for cooperative solutions to problems, via a variety of bilateral and regional means. Such efforts should be directed toward reducing Beijing’s incentives to employ its growing military or paramilitary capabilities to manage disputes or to radically and unilaterally alter broader norms and approaches. This will likely require not only the development of varied and deeper forms of political and other types of leverage vis-à-vis China across the region but also a credible means of (1) reassuring Beijing that its most vital security interests relevant to Japan and the alliance will remain unthreatened, while (2) shaping, in positive ways, China’s view of what is required to defend these vital interests, politically, militarily, and economically.

As argued in chapters 2 and 3, the most important areas of focus in these political and diplomatic efforts over the coming fifteen to twenty years include:

- Major policy differences and tensions among China, Japan, and the United States over territorial issues, especially regarding the Senkaku/Diaoyu Islands and Taiwan;
- Norms regarding the transit of military assets in airspace and seas near Japan, especially within the EEZs of both Japan and China; and
- Approaches to the development of economic resources in disputed maritime areas.

In addition to these three crucial issues, another area of attention that might increase in its salience during the later years of the time frame examined in this study (and for many years beyond that period) consists of sea lines of communication security—that is, possible threats and counterthreats to the maritime lanes upon which Japan, the United States, and China depend for continued economic growth.

Together, these issues fuel much of the tension in Japan (and elsewhere) associated with China’s regional military buildup both at present and for the foreseeable future. Thus, any

effective response to the challenges China poses to Japan and the alliance over this time frame must provide an optimal level of deterrence and reassurance in all of these issue areas.

RESPONSE OPTIONS

The analysis in this study suggests three major possible military-political approaches to achieving the strategic objectives described above (table 6.1): (1) a robust forward presence, (2), conditional offense/defense, and (3) defensive balancing. These alternatives are examined in some detail in the remainder of this chapter.

Strategic Approach 1: Robust Forward Presence

The first possible strategic approach would require that the alliance maintain strong U.S. and Japanese freedom of action and the *clear* ability to prevail in conflicts through a robust operational concept keyed to forward presence and a stress on deterrence over reassurance of China, while pursuing security-related cooperation with both China and (especially) other Asian nations.

This strategy, apparently the one that is most favored by the U.S. military leadership and the majority of defense analysts in the Pentagon and Japan, would involve the creation of a very robust operational approach that integrates Japan and a strengthened alliance structure into a system designed to neutralize any future antiaccess and area denial (A2/AD) or power projection capabilities that China might deploy over the next twenty years and perhaps beyond.

Such strong deterrence signals of overwhelming strength and alliance unity would be combined with many of the existing nonmilitary elements of U.S. and Japanese policies toward China and Asia—including strong demonstrations of U.S. political and economic commitment to and involvement in the region; continued support for different types of multilateral, cooperative structures and dialogues; and continued efforts to engage Beijing and shape its views on a variety of security-related issues.

At the same time, this strategy would probably not require any major changes in existing U.S. and alliance policies and approaches regarding those issues that would most likely generate crises or incidents with China over the next fifteen to twenty years, including maritime territorial disputes, the Taiwan issue, and the presence of foreign military ships and aircraft in EEZs. Indeed, given its objective of retaining or even expanding existing allied military advantages in all relevant domains, this response would likely lead most U.S. and Japanese policymakers to conclude that China would not need to be more significantly reassured, much less accommodated, on any important security issues, despite absolute increases in Chinese capabilities in many domains.

TABLE 6.1
Three Possible Responses for the U.S.-Japan Alliance

	ROBUST FORWARD PRESENCE	CONDITIONAL OFFENSE/ DEFENSE	DEFENSIVE BALANCING
Possible Doctrines/ Operational Concepts	Variant A: Air-Sea Battle (deep strikes) Variant B: Offshore Control (naval blockade)	Primacy without deep strikes or blockade	Mutual Denial Strategy
Political/Diplomatic Strategy	Engage and hedge, strong emphasis on hedge; integration with Japan and other regional allies	Engage and hedge	Engage and hedge, emphasis on engage, with limited accommodation of China
Force Posture	Variant A: TACAIR and naval assets forward-deployed OR naval assets rear-deployed with emphasis on long-range deep strike Variant B: Naval assets deployed at first island chain	TACAIR forward-deployed; dispersed basing; large naval assets rear-deployed in early stages of conflict	Submarines forward-deployed; large naval surface assets rear-deployed; TACAIR rear-deployed
Emphasized Weapons Systems	Variant A: Long-range, deep-strike aircraft and missiles, integrated C4ISR, cyber- and space-based offense and defense Variant B: Submarine and surface naval platforms, integrated C4ISR	BMD and base hardening, TACAIR, integrated ISR, cyber-based offense and defense	Submarines, long-range drones, long-range missiles, enhanced cyber and integrated ISR, ASW and mine countermeasures
Affordability	Low	Low-Mid	Mid
Political/Bureaucratic Feasibility	Variant A: Mid Variant B: Low	High	Low
Deterrence Capacity	Mid-High	Low-Mid	Low-Mid
Alliance Integration	Mid-High	Mid	Low-Mid
Sino-Alliance Tension	Variant A: Mid-High Variant B: High	Mid	Low

On the military level, this strategy could be implemented using a variety of specific operational concepts, including, most notably, an Air-Sea Battle (ASB)-centered approach or an Offshore Control-oriented approach.

As indicated in chapter 4, the ASB concept currently has the most traction in official U.S. military circles. Although still largely undefined, the ASB concept would ostensibly

involve a networked, domain-integrated, deep-strike-oriented force structure designed to disrupt, destroy, and defeat all relevant Chinese A2/AD-type capabilities, encompassing both offshore weapons systems and supporting onshore assets. The doctrine guiding the use of such a force structure would require the ability to survive a possible preemptive PLA air and missile attack on forward U.S. and Japanese military assets and then respond quickly with coordinated strikes on China's command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) infrastructure, followed by the destruction or neutralization of all of the PLA's A2/AD-type weapons systems, both offshore and onshore and in both space and cyberspace.¹

An ASB-oriented force posture would likely include several components:

- A well-developed suite of long-range strike capabilities, and the willingness to support deep penetrating strikes on Mainland targets at the outset of a conflict; some of these targets may be of possible strategic (that is, nuclear) value to the PRC;
- A large carrier fleet with a modified role that likely emphasizes rear-area support in the early stages of a conflict, along with more traditional forward-based power projection missions after China's A2/AD-type defenses are subdued;
- A commitment to expensive, albeit selective, hardening of existing military bases in Japan and Guam, along with an expansion of temporary basing and access for U.S. forces across Northeast and Southeast Asia and in Australia;
- A large and integrated missile defense system across air, sea, and land, requiring a high degree of interoperability between U.S. and Japanese ballistic missile defense (BMD) for regional bases, across services and systems;
- An expanded C4ISR network spanning undersea, airborne, surface, and space environments, with robust connectivity and coordination with Japan;
- Robust offensive and defensive space-based kinetic and nonkinetic capabilities (including cyber and possibly space-based systems) that can work in rapid succession to "blind" Chinese ISR; and
- A high level of integration of doctrine, missions, and capabilities between the U.S. Air Force and U.S. Navy, to enable counter-A2/AD campaigns across multiple domains in operationally difficult environments.

One variation of this concept would emphasize long-range, stealth airpower over forward-based or carrier-deployed airpower. As discussed in detail in chapters 2 and 4, Chinese A2/AD-type capabilities, principally the implementation of long-range precision-guided munitions, put at risk the present U.S. conception of air and naval power, which currently relies on large aircraft carrier platforms and short-range tactical aircraft (TACAIR) for local air superiority and power projection. An alternative to such a U.S. reliance on car-

riers and TACAIR would involve the heavy use of long-range conventional precision-strike capabilities, long-range stealth bombers, and long-range stealth unmanned aerial vehicles capable of penetrating Chinese airspace. Though shifting away from a primary emphasis on aircraft carriers and TACAIR-based power projection, this new conception would in principle enable the alliance to maintain a credible level of deterrence at longer ranges, as part of the ASB concept.

According to U.S. defense officials and analysts, the purpose of such capabilities and accompanying doctrinal approaches would be to perpetuate the viability and hence the credibility of U.S. power projection and access to the global commons and to prevail in the event of any conflict involving maritime spaces. This ability to prevail in a conflict would presumably also deter China from being tempted to engage in coercion, aggression, or other actions judged threatening to stability in the Asia-Pacific region, and would reduce the perceived need to withdraw U.S. military assets from forward positions due to their growing vulnerability to missile and air attacks.

Under this strategy, regardless of the level of reliance on forward-deployed carriers or aircraft, Tokyo would probably need to significantly increase the effort and resources it would devote to defense of the home islands and disputed territories, along with various types of noncombat support for U.S. forces, while also clarifying Japan's commitment to providing necessary U.S. access to facilities. More important, this strategy would almost certainly require a high level of integration between Japan and the United States in some key areas, most notably C4ISR, as well as missile defense and antimine/antisubmarine warfare (ASW) capabilities, along with more ambitious and more frequent joint exercises in areas surrounding Japan.

In terms of specific roles and missions, Japan might be required to make significant, unprecedented contributions in a variety of areas, including:

- Operational and strategic level ISR;
- National logistics, infrastructure, and base defense and support;
- Defense acquisition rationalization;
- Defense production industrial base;
- Defensive counterair capacity;
- Cruise and ballistic missile defense;
- ASW; and
- Naval mine warfare.

Such enhanced capabilities would, in turn, likely require major changes in Japan's attitude toward military power, involving something close to the "normalization" of its force

structure and a reinterpretation of the collective defense concept to include many combat-related missions beyond its home islands. This, in turn, would likely require a considerable increase in defense spending levels.

A second operational concept related to this response that could provide a possible alternative to the ASB concept would center on a barrier/blockade strategy primarily designed to maintain a high level of deterrence against efforts by China to prevail in any conceivable coercive or combative actions undertaken both within and beyond the first island chain (including operations targeting Japan or Pacific sea lines of communication). This alternative, mentioned in chapter 4 and above as the Offshore Control strategy, would not aim to directly counter Chinese A2/AD-type capabilities; nor would it rely on deep strikes into Chinese territory. Instead, it would focus on creating a barrier to Beijing's use of the far seas and a blockade on Chinese ports that could be used to support such use, along with operations closer to the Chinese Mainland.² The barrier aspect of this orientation would draw a line at the first island chain, relying on increased deployments of Patriot missile battalions, enhanced ISR, and most likely additional basing arrangements, principally in the southwest islands of Japan, as well as the support of other Asian nations. The blockade aspect would require an extensive naval (and primarily submarine) force to implement, partially for handling interdiction of both commercial and naval vessels near China's shores, if necessary.³

From a military standpoint, a U.S. blockade and barrier effort against China would benefit from various factors, including the larger size and greater sophistication of the U.S. Navy, the vulnerability of Chinese support and response ships and planes, especially at long distances, the PLA's lack of aerial refueling capacities, and the limitations of Chinese submarine technology, training, and ability to operate around shallow straits.⁴ These capabilities would allow the United States and Japan to hold at risk efforts by Chinese naval or air forces to undertake and sustain threatening operations near Japan and beyond the first island chain. Dispersal of additional U.S. forces would also challenge the Chinese ability to threaten a limited number of U.S. bases near to the Taiwan Strait.

This strategy would require both high U.S. and high Japanese capacity and would necessitate that Japan play a large role through the provision of additional basing, the overall strengthening of bases, and the acquisition of new types of capabilities.

In addition to the capabilities listed above, Japan might also need to acquire capabilities in the following areas:

- Advanced surface and subsurface naval platforms;
- Battle group escort; and
- Ground combat maneuvering capability at the operational and strategic levels, including amphibious operations.

Even more than in the case of the ASB concept, the effective implementation of this strategy would almost certainly require Japan to become a "normal" military power, in order

to augment U.S. air and naval assets and perform many combat-related missions beyond the home islands.

Both military operational concepts described above—ASB and Offshore Control—would presumably be combined with continued efforts to deepen military-to-military and other security-related interactions between Beijing and both Tokyo and Washington, as well as broader, multilateral attempts to expand levels of both military and nonmilitary cooperation across the Western Pacific. The purpose of such interactions would ostensibly remain that of reducing strategic distrust, deepening habits of cooperation among all major Asian powers, creating a wider and clearer consensus on security norms and activities, and thereby raising barriers to unilateral or aggressive Chinese actions. At the same time, it is likely that the above-noted military dimensions of this strategy would result in an overall emphasis on strengthening relationships with U.S. allies and friends in the region over engaging Beijing on these issues, as part of an effort to enhance deterrence vis-à-vis China.

ASSESSMENT

This overall approach, if successfully implemented, would signal a clear and convincing commitment to a continued strong—indeed, superior—U.S. military capability and close set of alliance relationships as the basis for security in the Western Pacific well into the future. As a result, this strategy would likely considerably reduce, if not eliminate, Japanese fears of abandonment by the United States and could facilitate the creation of a more stable long-term regional security environment, assuming that its likely deficiencies were resolved.

On the negative side, the implementation of either of the muscular operational doctrines outlined above would likely make it much more difficult to put in place the cooperative, reassurance-focused dimensions of this strategy. Such doctrines could fuel a level of Chinese hostility and distrust that would make efforts at establishing credible, inclusive multilateral security assurances virtually meaningless. Indeed, a likely mid- to high-capacity China would almost certainly respond to the military aspects of this strategy by developing more potent, and escalatory, countermeasures. These could include less “asymmetric” capabilities, such as long-range stealth bombers, enhanced aerial refueling capacity, and aircraft carrier battle groups of a sufficient number and size to enable the PLA to project and sustain power to the first island chain (including the Japanese home islands) and well beyond. The overall result could be heightened levels of security competition, a major move toward genuine regional polarization, and a resulting increased likelihood of crises over the next fifteen to twenty years.

Moreover, such an outcome could become even more probable if no appreciable progress is made toward reducing existing tensions over the most likely sources of such crises, including disputes over territorial issues such as the Senkaku/Diaoyu Islands, energy exploration in the East China Sea, and foreign military activities within the EEZs of China, Japan, and other nearby nations. As suggested above, this strategy would most likely not emphasize efforts to reduce such tensions through mutual accommodation or other means. To the

contrary, it is likely that this strategy would rely more on strengthening alliance ties and relations with other Asian friends and allies than on overcoming tensions through negotiation and compromise.

This robust approach could also empower hardline leaders in Beijing, who could more easily rationalize their arguments for adopting a more assertive approach toward Japan and the region by pointing to evidence that the alliance is being utilized in an effort to contain and encircle the PRC. This would be particularly true if the Chinese Communist Party has to cope with leadership struggles and domestic unrest, as noted in chapters 2 and 5.

In addition, from a capabilities perspective, it is quite probable that the United States and Japan will lack the financial resources, technological capacity, and political willpower necessary for such an ambitious military approach, especially during the time frame examined in this study. The kinds of deeply rooted U.S. and Japanese economic and political problems outlined in chapters 3 and 4 are likely to continue for several years at least, even under the best case scenario of continued U.S. and Japanese military superiority.⁵

This could prevent the acquisition of the most costly elements of a robust force structure oriented toward the ASB concept or an Offshore Control approach, including costly new and unproven platforms such as a large number of next-generation stealth bombers, stealth unmanned aerial vehicles, conventional prompt global strike, and improved littoral combat ships. Moreover, even if ample levels of funding were to become available in the United States, as noted in chapters 4 and 5, long-standing problems in weapons development and procurement times, combined with the very significant challenges confronting interservice and United States–Japan force integration, could delay or prevent altogether the fielding of an effective force structure and supporting infrastructure capable of fully supporting the above-mentioned operational doctrines.⁶

In the absence of major catalyzing provocations or incidents, Tokyo is also unlikely to make the level of financial commitments and push the type of major political and policy changes (including prior permission for a greatly expanded level of access by U.S. forces to U.S. and Japanese bases on the home islands) likely required to support a robust operational approach. Indeed, except under the most extreme and unlikely regional scenarios, domestic political-economic constraints are likely to keep Japanese military responses focused on enhanced C4ISR, defense of the southwest islands, rear-area support, and base-hardening measures. Moreover, as discussed in chapters 3 and 5, even under conditions of a much higher level of urgency in Tokyo in response to perceived Chinese threats, doubts could very likely persist in Japan regarding both the operational realities and limits of a muscular military doctrine, and the risks of being entrapped in an antagonistic or openly confrontational relationship with China.

Finally, from a purely military perspective, even if implemented as designed, this strategy could prove to be an ineffective deterrent and might aggravate instability in a crisis. Under an ASB concept, for example, it is by no means clear that the United States could identify and target the large number of critical PLA assets (many mobile) that would need to be

struck in the early stages of a conflict. Even a barrage of cyberattacks, counterspace attacks, and inland bombing could still leave some critical C4ISR networks intact, along with many mobile missile launchers. At the same time, the United States would remain to some extent reliant on immobile aircraft shelters and runways at a few forward bases, either in Japan or Guam; static or passive defenses would not be able to guarantee the safety of these fragile assets against the sort of powerful, accurate, and sophisticated ballistic missiles China possesses. Likewise, even under a high-capacity U.S. trajectory, American aircraft carriers might remain highly vulnerable to Chinese ballistic and cruise missiles and PLAN submarines, thereby significantly reducing their utility as part of the ASB concept.

Also, though proponents argue that a robust ASB concept could create more options in a crisis; in fact, the likely need to carry out deep strikes early in a conflict could make escalation control far more problematic. The stress on early preemptive strikes against the PLA will likely compress the time available to decisionmakers in a crisis. As one defense analyst states: "As military plans become increasingly dependent on speed and escalation, and diplomacy fails to keep up, a dangerous 'use it or lose it' mentality is likely to take hold in the minds of military commanders. This risks building an automatic escalator to war into each crisis before diplomatic efforts at defusing the situation can get underway."⁷ In addition, early, conventional deep strikes against Chinese C4ISR assets in a conflict "could easily be misconstrued in Beijing as an attempt at preemptively destroying China's retaliatory nuclear options. Under intense pressure, it would be hard to limit a dramatic escalation of such a conflict—including, in the worst case, up to and beyond the nuclear threshold."⁸

The Offshore Control approach exhibits similar shortcomings. Most notably, it suffers from the reality that Chinese nationalism would be extremely inflamed by the apparent actualization of the long-held accusation that Washington is seeking to contain Beijing. Such an approach would catalyze intense, unifying sentiment against the United States, giving domestic Chinese leaders additional leeway and a mandate to take aggressive actions to counter U.S. hegemony. At a strategic level, such an explicitly containment-oriented force posture would worsen the security dilemma and probably increase the likelihood of crises and incidents at sea and between the respective air forces.

Moreover, the level of Japanese militarization likely required under this approach would deeply trouble Beijing, increasing threat perceptions and potentially destabilizing political and diplomatic relations, with likely second-order effects throughout the region. Indeed, measures to reassure Beijing while deterring aggression would be fraught with the difficulty of establishing credibility and stability.

In addition, a naval blockade may fail to accomplish its objective and result in knock-on effects to global energy markets with potential economic and political consequences. The threat of a military embargo or blockade would likely trigger open and expansive hostilities. Moreover, China could potentially draw from domestic and pipeline supply sources to fuel its essential military and commercial needs to thwart a blockade.⁹

Given that this approach would leave the core systems undergirding Chinese A2/AD-type capabilities intact, China could take asymmetric retaliatory actions elsewhere, mining

ports and bases, launching missile strikes on regional targets, targeting allied replenishment ships with submarines, or even using nuclear weapons.

A blockade could also damage U.S. diplomatic and political relations with several Asian nations (not with China alone) and create enormous global economic distortions. Depending on the origins of the conflict, the United States could receive vigorous protests from regional states and even isolation from the international community. The refusal or inability of third-party nations to comply to the terms of a blockade or to provide resources to support it, could, at best, require the United States to expend still-greater resources to intercept commercial ships and, at worst, see U.S. ships sink non-Chinese vessels in diplomatically costly engagements.

Executing a distant blockade would entail a number of additional challenges, including handling captured ships and managing uncooperative ones, along with identifying and blocking ships headed for China, given that third parties could undertake transshipments of oil. Finally, the blockaded area could potentially be sidestepped with other, longer transit routes. Naval blockades are typically most effective as part of a set of attacks and may be ill suited to a limited offensive engagement.¹⁰

Strategic Approach 2: Conditional Offense/Defense

The second possible strategic approach would entail a more conditional and balanced offense/defense-oriented strategy to preserve key military advantages, involving incremental changes in current doctrine, more limited United States–Japan alliance ties, and a more equal emphasis on deterrence and reassurance in relations with China.

This strategy, born largely of an anticipation of long-term economic and political constraints and concerns and a greater attention—in both Washington and Tokyo—to the potentially destabilizing aspects of the strategy described above, would involve the creation of a less ambitious operational doctrine focused on (1) preserving alliance advantages in a more limited number of areas; and (2) neutralizing those Chinese A2/AD-type capabilities located *outside* the Chinese Mainland and perhaps along China’s *coastline*, not in the vast interior.

Under this strategy, the level of operational integration with Japan would be marginally less and the attention paid to reassuring China marginally more than in the strategic approach described above. In particular, this strategy would place a greater emphasis on efforts to (1) reassure China that increased U.S. and Japanese capabilities will not be used to threaten vital PRC interests (for example, regarding Taiwan); and (2) integrate China more fully into regionwide multilateral structures and dialogues and adopt a variety of confidence-building measures designed to reduce mutual strategic distrust.

The operational military core of this strategy would include a less integrated and networked force structure that is much less reliant on penetrating strikes and thus less oriented toward the early, total destruction of China’s A2/AD-type C4ISR infrastructure in a conflict. Although the United States would field select capabilities tailored to disrupt

and destroy antiaccess weapons, much of the existing U.S. and Japanese force structure would remain largely unaltered under this approach, although the quantity and quality of many systems would increase significantly. Although integration in doctrine, missions, and capabilities between services would increase, it would probably not improve to the level envisioned under most variants of the ASB concept. This approach would also include a very heavy reliance on both active and passive air defenses for U.S. and Japanese naval and ground-based assets and a continued heavy dependence on land- and sea-based TACAIR (rather than long-range, deep-strike, or unmanned systems), cruise missiles, and sophisticated ISR and cyber capabilities.¹¹

The doctrine guiding the use of this force structure would require the ability to survive initial air and missile attacks and then operate effectively from forward bases that remain exposed, perhaps indefinitely, to such threats, in order to conduct highly punishing kinetic and nonkinetic attacks on Chinese A2/AD-type assets operating offshore, along China's maritime periphery, and in cyberspace and outer space. To ensure the effectiveness of such attacks, however, Washington might also need to withdraw some of its key assets (such as major missile-armed surface combatants) outside Chinese air and missile ranges early in a conflict. To some extent, under this approach, the United States could face a difficult trade-off between maintaining the security of vital power projection platforms, such as carriers and their tactical aircraft, and sustaining intense operations deep within the first island chain, in areas densely populated by Chinese antiaccess platforms.

As with the robust forward presence strategy described above, under this more moderate operational approach, Tokyo would still need to increase the effort and resources it would devote to the defense of its home islands and disputed territories and various types of noncombat support for U.S. forces, as well as provide increased U.S. access to Japanese facilities. However, this strategy would likely envision a lower level of integration between U.S. and Japanese forces in many key areas, including C4ISR, as well as a clearer division of labor between a Japanese focus on rear-area support and the defense of the home islands, and a U.S. focus on combat missions beyond Japanese territory. Hence, many of the unprecedented Japanese roles and missions postulated under the first strategy described above would likely not emerge under this approach.

As suggested above, this approach would likely be combined with increased efforts to deepen military-to-military relations with Beijing (in bilateral, trilateral, and regional venues) and strengthen broader areas of nonmilitary cooperation among all three powers and across the region—for example, with regard to such issues as transnational crime, terrorism, and disaster preparation and relief. This would largely amount to the continuation of long-standing efforts to expand potential cooperative agreements among Asian states.

ASSESSMENT

When compared with the robust forward presence strategy, this overall approach would probably prove more affordable, less provocative, and less likely to require major, unprec-

edented increases and expansions in the level and function of Japanese (and to some extent U.S.) military capabilities and missions over the next fifteen to twenty years.

Although still financially ambitious, unlike the approach described above, this option would not rely on greatly increased levels of resources and a transformation in Japan's approach to its security; nor would it necessarily require doctrines predicated on early, deep strikes into Chinese territory or muscular blockades and barriers designed to prevent Chinese power projection. Thus, this approach would probably place the United States and Japan in a better position to sustain a more economically viable and politically realistic level of deterrence and perhaps a greater capacity to control escalation in a crisis, especially if both countries only manage to attain mid-capacity levels of development at best, while China sustains a high-capacity level of military development. Such an imbalance would likely generate significant pressure on Tokyo and Washington to adopt an alternative to such robust operational strategies as the ASB or Offshore Control concepts.

This approach would also likely reduce concerns in Japan over entrapment presented by the strategy described above, given its lessened reliance on force and infrastructure integration in many areas. In addition, it might reassure, to some extent, those in Japan and elsewhere who fear growing regional polarization and an increasingly hostile and dangerous Sino-U.S. relationship deriving from the interaction between a preemptive-oriented A2/AD-type strategy and a deep-strike-oriented, counter-A2/AD strategy. The increased emphasis on bilateral and multilateral cooperative security actions, combined with the lessened reliance on deep-strike capabilities, could also offer the prospect of reducing the incentives and abilities of all sides to engage in competitive security behavior over the long term.

Despite such probable advantages, this approach would not eliminate the arguably increasing threat perceptions and other dangers that would likely result from the major increases in capability and presence on both sides associated with this approach (discussed in some detail in the previous chapter, particularly in the description of Scenario 2, "Limited Conflict"). The U.S. force structure posited in this approach would still be primarily oriented toward offensive power projection capabilities that are vulnerable to antiaccess weapons, which could potentially require the United States to consider preemptive or escatory measures to ensure their security in the event of an actual conflict. Indeed, it would likely only be possible to avoid such measures if U.S. forces could achieve their operational objective of neutralizing China's A2/AD-type capabilities by limiting the targets of their attacks to Chinese anti-air batteries, missile launchers, and over-the-horizon radar systems near the coast. To some analysts, this is a highly questionable assumption, given the fact that many of Beijing's key radars, C4ISR assets, and even some missile batteries are located far inland.¹² As a result, restrictions against striking targets deep on the Chinese Mainland could clash with the operational realities of countering certain antiaccess types of capabilities that would otherwise threaten key U.S. assets within the first island chain.

In addition, though the United States would probably preserve its technological edge in some key areas through the application of more lethal or longer-range capabilities (for

example, long-range cruise missiles, sophisticated ISR, and cyberattack), it would probably struggle to achieve the same goals operationally in other areas (for example, ASW within China's littoral waters) against a potentially dense network of antiaccess capabilities, given fundamental, enduring physical constraints and the low level of integration posited under this approach.

Hence, the overall credibility of alliance deterrence might suffer under this strategy, unless such deficiencies were compensated by significant reductions in tensions through more effective security assurances. Although doubtless difficult to achieve, such assurances would probably be more feasible with this strategy than under the approach described above, largely due to its arguably less provocative and escalatory consequences.

A strategy based on active BMD measures would face its own limitations. If the United States were to try and counter the Chinese antiship ballistic missile (ASBM) and CSS-6 threat by buying more SM-3s, China could undercut such efforts by investing in decoys and countermeasures, and by simply increasing its production of missile systems. Additional U.S. investment in expanded BMD systems at some point would serve only to "thin the herd," if China were to outpace the United States and Japan in terms of relative missile quantities.¹³

Finally, this approach could generate Japanese fears of abandonment over time, given the lower level of U.S. and Japanese C4ISR and force integration envisioned in this strategic approach, and the continued pressures on U.S. forces to operate as much as possible beyond the range of Chinese air and missile attacks.

Strategic Approach 3: Defensive Balancing

The third strategic approach would focus on a more limited offensive, primarily defensive force posture and doctrine, with a greater reliance on lower visibility, rear-deployed forces.

This strategy, perhaps favored by those most concerned about the negative aspects of the two approaches described above, would involve a very significant change in current U.S. defense doctrine, force posture, and political arrangements in the Western Pacific. It would entail a shift away from efforts to sustain existing military advantages and freedom of action throughout the first island chain via offense-oriented, forward presence-based military strategies and alliance-centered political strategies and toward a more genuinely balanced regional power structure based on defense-oriented, asymmetric strategies and greater efforts to defuse the likely sources of future crises through mutual accommodation and meaningful multilateral security structures.

Underlying this approach is the assumption that China will continue to place a high priority, over the next fifteen to twenty years and possibly beyond, on avoiding the kinds of aggressive military actions that could threaten its overall development goals. As a result, Washington would not need to achieve the level of escalation dominance in high-technology warfare envisioned by the two strategies described above in order to dissuade Beijing from engaging in destabilizing behavior toward Tokyo or other nearby powers.

This strategy would focus on a less ambitious goal: to increase Chinese uncertainties about risks and outcomes through an emphasis on a variety of limited military measures and more extensive political interactions. Also implicit in this approach would be the recognition that attempting to secure traditional levels of operational access for power projection against China's antiaccess network would force the alliance to bear unacceptably high risks and costs, both in terms of regional instability that could result from an accelerated arms race and in uncontrolled escalation that could erupt during a crisis.

The operational military core of this strategy would therefore rely less than the strategies described above on offensive strike capabilities and more on defensive, area denial architectures, involving systems designed to deflect attacks and mete out punishment at levels at least equal and ideally superior to those of which the PLA is capable. The military doctrine associated with this strategy would focus on successfully surviving initial PLA attacks in relevant domains and then responding with limited attacks on relatively nearby PLA weapons platforms and cyber capabilities. The capabilities associated with this doctrine would include multiple platforms capable of standoff precision strikes against coastal and offshore PLA or paramilitary assets.

This approach would entail substantial revisions to the extant U.S. force structure of carrier groups and short-range tactical aircraft supported by forward bases. Instead, the United States would shift to a more dispersed, multilayered forward presence, with capabilities positioned according to their survivability and effectiveness vis-à-vis China's web of antiaccess weapons. Stealthier, more survivable capabilities, including a larger contingent of submarines, small and mid-size surface ships, and long-range drones, each of which would be equipped with significant numbers of standoff weapons, would operate within the inner reaches of the first island chain. A smaller number of carrier groups and their air wings would operate at extended range, although they could be surged into the theater in the event that key power projection capabilities, such as large sorties of short-range fighters, were deemed sufficiently necessary to justify the risks of operating in an antiaccess environment. Preconditions for this approach would include the forward pre-positioning of resources, prior Japanese assurances of a very high level of U.S. access in a crisis, and a significant reliance on early warning and rapid response.

The foremost articulation of this military approach is the Mutual Denial Strategy (also known as "Mutually Denied Battlespace Strategy" or "Mutual A2/AD Concept"). This approach, mentioned in chapter 4, would rely primarily on U.S. maritime and some air capabilities—especially attack submarines and long-range antiship cruise missiles, long-range air-to-air missiles, and sophisticated decoys—to create an effective A2/AD deterrent against Chinese attempts to threaten Japan, establish sea control over surrounding waters within the first island chain, or seize and hold disputed territory. Rather than targeting China's A2/AD capabilities through the use of either deep penetrating attacks or more limited offensive actions against air, maritime, and coastal A2/AD assets, this approach would focus on destroying at sea whatever significant offensive air and maritime capabilities Beijing might deploy against Japanese and allied interests in a severe crisis or conflict, as

well as China's commercial shipping.¹⁴ In addition, this approach would not only avoid any attacks on mainland targets, at whatever range inland, but also greatly reduce the reliance on both BMD systems and forward-deployed TACAIR based in Japan, since both types of systems would be regarded as highly vulnerable to Chinese missile attacks.

In the increasingly important realms of space and cyber warfare, this strategy would place a strong emphasis on engaging China and international partners in the difficult but necessary process of defining norms of behavior, tackling issues of attribution, and establishing "rules of engagement" for responding to attacks. Although the United States would also shore up its defensive and retaliatory capabilities, it would focus primarily on using common interests—for instance, cooperation in addressing nonstate cybercrime—to introduce positive-sum dynamics into these unfamiliar domains.

Under this strategy, the level of operational integration among U.S. military services and with Japan would be somewhat less than under the strategies described above, but would still include improved coordination in antisubmarine warfare and ISR. Japan would still confront a growing need to heighten military integration with the United States and provide alternative basing sites (especially for submarines), possibly along its eastern seaboard, to permit the dispersal of alliance forces.

Relative to the strategies described above, Japanese fears of entrapment could be significantly mitigated by a focus on defensive missions and reductions in the most vulnerable elements of the U.S. forward presence. For one, Japan would not have to commit to offensively oriented doctrines associated with those approaches, limiting the chances of uncontrolled escalation against diffuse targets that could tax its limited military forces. At the same time, scaling back and dispersing U.S. tactical fighters to Guam or other regional sites would most likely result in a smaller footprint for bases in Japan. The move could potentially defuse some local opposition to expanded basing and access agreements, enabling the dispersal of alliance forces and logistical nodes along Japan's eastern seaboard that would reduce the impact of enemy missile strikes.

In the operational arena, Tokyo would focus its efforts on making the home islands as safe as possible from missile and air attacks while coordinating with Washington those systems designed to detect and track Chinese military assets in the areas surrounding Japan. This approach would most likely require a high level of domain awareness and ISR integration between the allies, as the United States would place a premium on obtaining early notice of any threat that would require it to bring forces into the theater. The operational requirements of these early warning systems could potentially interfere with the political objectives of U.S. regional strategy, such as reducing frictions over maritime surveillance within China's EEZ.

In the political arena, this strategy would place a stronger emphasis than the two strategies described above on achieving credible Sino-alliance and regionwide mutual security assurances, especially with regard to those Chinese sovereignty and territorial concerns that play a critical role in sustaining strategic distrust—for example, the Taiwan issue, territorial and resource disputes in the East China and South China seas, and the military use

of EEZs and international waters along China's coastline.¹⁵ It might also involve broader efforts to create new integrative conceptual frameworks, such as the concept of a Pacific community advocated by analysts such as Henry Kissinger.¹⁶

Finally, in addition to its increased reliance on confidence-building measures and cooperative security measures, this approach would also require a long-term intra-alliance and regionwide political and diplomatic transition strategy to provide adequate levels of reassurance to Japan and other Asian nations as the United States moved toward a more limited deterrence and balancing strategy and force structure.

ASSESSMENT

Relative to the strategic approaches described above (especially the robust forward presence strategy), this overall approach would require less in the way of major, unprecedented increases in the level and function of U.S. military capabilities and missions over the next fifteen to twenty years, with the exception of submarines, standoff systems, and integrated ISR.

Moreover, if the above-mentioned assumptions about China's preference for avoiding confrontational behavior continue to hold true, this strategy would arguably place the United States and Japan in a better position to sustain genuinely credible deterrence and avert political-military crises over the next fifteen to twenty years, especially if both countries only manage to attain mid-capacity levels of development at best, and China sustains a high-capacity level of development. Under such conditions, Tokyo and Washington could rely less on maintaining dominance and offensive operations across domains and more on creating a limited and flexible force that could pose uncertainties for China if it attempts to use its offensive maritime capabilities within or beyond the first island chain. In addition, even if the United States possessed a high level of capacity, this approach would almost certainly not prove as escalatory in a crisis or conflict, nor as provocative in peacetime, as either the ASB concept or the Offshore Control approaches. And it would almost certainly cost much less.

In the long term, this approach would arguably be most conducive to establishing stable, cooperative relationships between China, the United States, and Japan, although its impact on the threat perceptions and behavior of other regional actors would be more uncertain. To the extent that this approach would ease Chinese fears of an alliance-led effort to contain or encircle the PRC, it might do less to empower hardline leaders in Beijing advocating a more assertive approach toward Japan and the region. Conversely, Japan and other U.S. partners in the region would be particularly wary of any shifts in the U.S. forward presence that could affect American security guarantees. Perceptions of a deteriorating threat environment could accelerate an inter-Asian arms race that could undermine otherwise positive dynamics within the Sino-alliance relationship, or lead Beijing to undertake potentially provocative efforts to "test" allied will and resolve.

This strategy would thus present several significant issues of concern for Japan, the United States, and perhaps other Asian nations. It would likely present a higher level of

uncertainty and risk in maintaining deterrence. Under this strategy, the United States could not intervene in the ways in which it has traditionally been accustomed to doing, and it would not attempt to develop the capabilities to disable Chinese C4ISR or missiles at the outset of a conflict. Moreover, ceding some strategic space to China along its maritime periphery would likely constrain U.S. options in a crisis. That said, it is quite possible that such concessions might prove necessary in any event, even under a high-capability scenario for the United States, given the likely continued development of China's maritime and missile capabilities.

For the United States, such a strategy would arguably require paradigm shifts in its defense bureaucracy, doctrine, and technology. Although service parochialism could present an obstacle to such reforms, even sincere efforts to adapt the U.S. Navy and U.S. Air Force to a changed regional order and new U.S. force posture could require painful, extended reassessments of their missions and roles. Innovating new doctrines in light of significant political and military constraints could be another challenge, given that offensively oriented approaches for projecting power and maintaining clear dominance across domains have been refined through an iterative process stretching back to World War II. And in shifting to an untested force structure that could place a higher emphasis on unmanned systems and defenses, this approach would utilize technologies and capabilities that are relatively immature, or that have been tested only against weaker adversaries in uncontested environments.

This strategy would assume that greater absolute levels of Chinese capability and increased relative gains vis-à-vis the alliance (compared with the other approaches) would not result in substantial changes in Chinese military thinking, especially threat perceptions and thresholds for using military force to coerce regional actors. As explained in chapter 2, Chinese military strategy as presently conceived is largely reactive and defensive, and an allied adoption of this defensive balancing approach might be more amenable to a preservation of that Chinese stance. However, unless effectively countered through careful diplomacy and other means, a possible perception that U.S. power in the region is undergoing a relative decline could embolden nationalists advocating a greater Chinese leadership role in Asia and a more offensive employment of PLA assets.¹⁷ Such possible shifts in Chinese military doctrine toward a more aggressive regional stance seeking a greater sphere of influence might severely complicate or undermine U.S. efforts to ensure balance through political and diplomatic means, especially during the last years of the time frame examined in this study.

Although this strategy, taken as a whole, could significantly reduce the likelihood of a high-end military engagement between the United States and China, Washington would have to contend with greater operational limits in the event of an actual conflict. Making inland targets "off-limits" in at least the early stages of a conflict (or perhaps throughout a conflict) would create the very real possibility that networks, launchers, and production facilities for theater missiles would continue to threaten the United States and Japan. Stand-off weapons would be less effective at hitting mobile or shielded assets, making it unlikely that U.S. strikes could replicate the intensity of sustained, deep-strike campaigns envisioned in more aggressive operational concepts. However, as indicated above, these types of limita-

tions might exist even if the United States had the resources and will to adopt the first or second strategic approaches outlined above.

In addition, this strategy could greatly aggravate Japanese fears of abandonment, depending on its level of reliance on rear-area deployments. Low-visibility platforms such as submarines or drones would not convey the physical or psychological presence of carriers and more traditional power projection platforms, a change that could shape regional perceptions for the worse if unaccompanied by vigorous diplomacy. Moreover, the shift from power projection and predominance at close quarters to a more defensive U.S. posture could force Japan to assume greater responsibility for air and sea operations in its immediate periphery, a potentially highly challenging task. The establishment of high levels of integrated ISR systems with Washington could also prove too expensive and politically unacceptable in Tokyo.

Furthermore, the alliance would likely face challenges in sequencing changes to strategy or force posture in consultation with other Asian states. In reducing its reliance on relatively vulnerable forward bases in Japan, the United States would be confronted with the difficult task of persuading its other regional allies and partners to accede to agreements establishing operational facilities, rotational deployments, and logistical arrangements. Such efforts could entail years of diplomacy and expensive inducements, with resulting agreements subject to shifts in domestic politics.

Finally, this strategy might ultimately depend for its success to a significant degree on the effectiveness of efforts to reduce strategic distrust through the above-outlined mutual security assurances. To be successful, such actions would likely require some degree of mutual accommodation and a significant adjustment on all sides of existing policies toward territorial and other issues. This could prove extremely challenging, albeit perhaps less so than under the two strategic approaches described above; as noted, their common emphasis on maintaining a high level of military advantage would likely reduce incentives to reach such accommodations.

FINAL THOUGHTS

This study has sought to provide an integrated, strategic net assessment analysis of the likely capabilities and foreign/defense policy orientation of the United States–Japan alliance relative to those of China over the coming fifteen to twenty years, in an effort to evaluate the potential implications of China’s rise for the security environment in Northeast Asia and the Western Pacific. Although the authors have analyzed the relative likelihood and merits of different possible alliance responses to this changing security environment, this net assessment is not principally intended to advance a definitive proposal with regard to U.S. or Japanese strategic and military planning in the Western Pacific. As noted in the introduction, its primary purpose is to evaluate the changing security environment resulting primarily from China’s growing capabilities and presence, to assess the possible evolution of

this environment over time in relation to Japan and the alliance, and to identify and evaluate the consequences of various possible political-military policy responses.

In devising and assessing these responses, this study has not assumed that the principal purpose of the United States–Japan alliance is or should be to compete with China, or that Washington and Tokyo are locked into an inevitable, zero-sum contest of military advantage with Beijing. Rather than maintain a dedicated focus on how the alliance should prepare for a worst case contingency vis-à-vis China, this report has attempted to assess the relative probabilities and risks of multiple scenarios that feature varying levels of Chinese cooperation and coercion. Indeed, as discussed above, the most likely potential challenge to the alliance over the next fifteen to twenty years does not involve full-scale military conflict between China and Japan or the United States originating, for example, from Chinese efforts to expel Washington from the region. Instead, it derives from Beijing's growing power to influence or resolve disputes with Tokyo in its favor short of military attack, particularly with respect to contested territories and maritime resources in the East China Sea. If Beijing wields its expanding capacity in such a manner, it not only could steadily erode Japanese security interests in these disputes but also could trigger destabilizing incidents and crises.

This study suggests that the United States and Japan must develop a policy response to China's expanding military capacity in the Western Pacific that simultaneously (1) maximizes the chances of creating a stable, long-term, political-military posture by maintaining the right balance between deterrence and reassurance toward Beijing; (2) minimizes the likelihood and disruptive impact of future political-military crises; and (3) is politically, economically, and militarily acceptable to the elites and populations in both countries. This will require policymakers to grapple with the concerns identified in this study on a diplomatic and strategic level as well as a defense planning level, recognizing the interconnectedness of military and political choices and consequences.

Admittedly, there are no "silver bullets" in regional or alliance strategies that can single-handedly deliver a stable military or political balance at minimal cost to all parties involved. As the preceding analysis clearly indicates, each of the broad conceivable responses to this daunting challenge will likely require painful trade-offs and, in some cases, the adoption of radically new ways of thinking about the roles and missions of both the U.S. and Japanese militaries. In particular, policymakers could find their efforts complicated by limits on the ability of Japan or other nations in the Asia-Pacific region to advance substantive security cooperation or embark on major security enhancements, unwillingness in the U.S. military to alter doctrinal assumptions in operating in the Western Pacific, and China's own suspicions of security agreements that might constrain the use of its growing capabilities. Indeed, any strategy that includes vigorous political or diplomatic efforts to reach critical understandings over vital security interests will necessarily require a high tolerance for uncertainty and even failure. Moreover, even the most conservative, status-quo-oriented approaches will probably require a considerably greater level of national economic capacity and alliance agreement and coordination than presently exists and might conceivably emerge in

the United States and Japan over the next fifteen to twenty years, barring major paradigm-shifting events.

Given the uncertainties and risks associated with the future evolution of the China-Japan-U.S. security environment, all three of these approaches could encounter serious obstacles to implementation. As a result, decisionmakers in both Tokyo and Washington will probably be tempted to avoid making many of the hard choices required over the next fifteen to twenty years (especially for the robust forward presence and defensive balancing approaches) and opt for some variation of “business as usual,” involving only marginally greater levels of U.S. presence and virtually no significant change in allied and regionwide policies and political relations. However, considering current and probable future economic, military, and political trends and events in China, Japan, and the United States, such conservative status quo policies and strategies are unlikely to remain capable of ensuring a stable security environment conducive to U.S. and Japanese interests over the long term.

Thus, one of the most significant challenges confronting Washington and Tokyo will be to grapple with the question of what type of long-term distribution of military power and deployment pattern in the Western Pacific they can accept. Hopefully, this study has shown the need for policy communities in both the United States and Japan to undertake a serious reassessment of such first-order issues and develop an appropriate long-term strategy in response. Without such an effort, the chance that all sides could blunder into a major crisis over the next fifteen to twenty years—or, worse yet, that Japan, the alliance, and the region as a whole could face serious and escalating instability—is only likely to increase over time.

NOTES

CHAPTER 1

1. As Derek Mitchell states: “For decades, it has been axiomatic among American and most East Asian strategists that the U.S. military presence in East Asia has served an essential role in preserving regional stability.” Derek Mitchell, “Reduce, Maintain, Enhance: U.S. Force Structure Changes in the Asia-Pacific Region,” in “The United States and Southeast Asia,” in *America’s Role in Asia: Asian and American Views* (San Francisco: Asia Foundation, 2008), 159. That such presence basically equates to military predominance in the Western Pacific in specific naval and air capabilities was largely confirmed by many current and former senior U.S. officials whom Michael Swaine interviewed in 2008 for his book *America’s Challenge: Engaging a Rising China in the Twenty-First Century* (Washington, D.C.: Carnegie Endowment for International Peace, 2011).
2. Chinese analysts do not use the term “antiaccess and area denial” to describe the capabilities that the PLA is acquiring in this realm; they most often employ the term “counterintervention” instead. As indicated below, this reflects the fact that such capabilities are primary being developed as deterrent measures, to complicate the ability of U.S. forces to intervene in a crisis over Taiwan or other territorial disputes along Beijing’s maritime periphery.
3. Ronald R. Fogleman, “Theater Ballistic Missile Defense,” *Joint Forces Quarterly*, August 1995, www.fas.org/spp/eprint/1909.pdf.
4. Office of the Secretary of Defense, *Annual Report to Congress on the Military Power of the People’s Republic of China for 2008*, www.defense.gov/pubs/pdfs/China_Military_Report_08.pdf.
5. *Ibid.*, 37.
6. This region is generally understood to include the Kuril Islands, Japan, the Ryukyu Islands, Taiwan, the Philippines and Indonesia, thus containing much of the Yellow Sea, the East China Sea, and the South China Sea.
7. Office of the Secretary of Defense, *Annual Report to Congress on the Military Power of the People’s Republic of China for 2009*, 18, www.scribd.com/doc/55149029/China-Military-Power-Report-2009.

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8. It is essential to recognize that, during the past fifteen years, both Washington and Japan have arguably deepened their commitment to strengthening positive relations with China while avoiding more intense levels of security competition, in order to address a growing array of regional and global problems and issues that require close trilateral and multilateral cooperation. In other words, Sino-U.S.-Japanese military developments are taking place within a larger context that requires increasingly sophisticated strategies for balancing the “engagement” and “hedging” elements of U.S. and Japanese policy toward China. This challenge will only increase over time.
9. For an excellent short history of developing an office of net assessment within the Office of the Secretary of Defense, see Phillip A. Karber, “Net Assessment & Strategy Development for the Secretary of Defense: Future Implications from Early Formulations,” Institute of International Law & Politics, Georgetown University, August 15, 2008, <http://lsgs.georgetown.edu/faculty/research/NA&SD%20for%20SecDef.pdf>.
10. Generally, net assessments have fallen into one of two categories: regional (for example, the military balance in Europe, the military balance in Northeast Asia) or functional (the strategic nuclear balance, command and control, power projection, and the like).
11. Two of the best are by Barry Watts. See Barry Watts, “A Net Assessment of Training and Education for Combat as a Source of Sustainable Advantage,” Contract DASW 01-02-D-0014-0052, Center for Strategic and Budgetary Assessments, Washington, D.C., September 19, 2006. See also Barry D. Watts, *The Military Use of Space: A Diagnostic Assessment* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2001). In addition, Anthony Cordesman has completed a number of net assessments and was the director of a very interesting “dynamic net assessment” project on the Middle East for the Center for Strategic and International Studies. However, the approach described here is generally very different from that used by Cordesman. Other net assessments using very different approaches include Peter Chalk, Angel Rabasa, William Rosenau, and Leanne Piggott, *The Evolving Terrorist Threat to Southeast Asia*, RAND Corporation, 2009, www.rand.org/pubs/monographs/2009/RAND_MG846.pdf.
12. Eliot A. Cohen, “Net Assessment: An American Approach,” *Jaffee Center for Strategic Studies Memorandum*, no. 29 (April 1990): 4.
13. Stephen Peter Rosen, “Net Assessment as an Analytical Concept,” in *On Not Confusing Ourselves: Essays on National Security Strategy in Honor of Albert & Roberta Wohlstetter*, edited by Andrew W. Marshall, J. J. Martin, and Henry S. Rowen (Boulder, Colo.: Westview Press, 1991), 165.
14. U.S. Department of Defense, “Director of Net Assessment,” Directive 5011.11, December 9, 2009, 1–4, www.fso.org/irp/doddir/dod/d5111_11.pdf.
15. Actually, there is something of an epistemological debate within net assessment on the usefulness of a standardized structure. Cohen appears to argue that all assessments contain five elements: how to think about the balance, trends, concepts of operations, asymmetries, and scenarios; see Cohen, “Net Assessment: An American Approach,” 13–19. Phillip Karber also appears to believe that assessments have a common structure, but he uses different elements than Cohen. His sections include measurements, estimates, analysis, balancing, and victory; see Phillip A. Karber, “Net Assessment & Strategy Development for the Secretary of Defense: Future Implications from Early Formulations,” Institute of International Law & Politics, Georgetown University, <http://lsgs.georgetown.edu/faculty/research/NA&SD%20for%20SecDef.pdf>, especially 62–68. Barry Watts also appears to use something of a template in his assessments, though they include sections on how to think about the problem, trends bearing on the problem, asymmetries and uncertainties, and emerging problems and opportunities. See, for example, Watts, “A Net Assessment.” For this assessment, however, neither these, nor any of the other templates that have been employed in the literature, are perfectly compatible. So, while we intend to be informed by the approaches advocated by Karber, Cohen and Watts, we generally agree with Rosen, Bracken, and others that net assessment is more of an “intellectual approach” than a methodology.
16. Rosen, “Net Assessment,” 290.
17. Paul Bracken, “Net Assessment: A Practical Guide,” *Parameters* 36, no. 1 (Spring 2006): 91.
18. In this sense, the use of the word “competitions” in this study is intended to encompass related and evolving military capabilities between potential opponents (in this case China and Japan, and China and the United States–Japan alliance) within specific domains, regardless of how deliberately interactive and adversarial each competition might be.

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19. Jeffrey McKittrick makes an important point by noting, “In terms of ‘Strategic Interactions,’ one must be careful not to couch the net assessments in terms of ‘anticipated reactions of opponents.’ Often, opponents take actions that are not reactions to our defense policies, but are driven by other factors—third parties, geography, the desires of senior decision makers, organizational cultures, national or organizational objectives, etc.” Jeffrey McKittrick, “Adding to Net Assessment,” *Parameters* 36, no. 2 (Summer 2006): 118.
20. Bracken, “Net Assessment,” 94.
21. See “The Competitive Strategies Concept: Giving the U.S. a Battlefield Edge,” Backgrounder, Heritage Foundation, April 6, 1989, 4, http://s3.amazonaws.com/thf_media/1989/pdf/bg698.pdf.
22. See Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2012*, 22, www.defense.gov/pubs/pdfs/2012_CMPR_Final.pdf; and “Aircraft Carrier Project,” GlobalSecurity.org, www.globalsecurity.org/military/world/china/cv.htm.
23. Rosen, “Net Assessment,” 294.
24. Bracken, “Net Assessment,” 96.
25. Cohen, “Net Assessment,” 15.
26. Rosen, “Net Assessment,” 295.
27. Cited by Cohen, “Net Assessment,” 16.
28. *Ibid.*, 17.
29. This is not to suggest that asymmetries can be sustained forever. As Cohen notes, “Asymmetries change over time. New generations of weaponry may increase or decrease the quality of soldiers required to operate them”; Cohen, “Net Assessment,” 17.
30. Watts, “A Net Assessment.” See also Watts, *The Military Use of Space*.
31. Or “One bad general is worth two good ones;” or “If I must make war, I prefer it to be against a coalition.”
32. See chapter 3, on Japan, for a more in-depth discussion of this issue.

CHAPTER 2

1. Some of the material in this section draws from Michael D. Swaine, *America’s Challenge: Engaging a Rising China in the Twenty-First Century* (Washington, D.C.: Carnegie Endowment for International Peace, 2011), especially chapters 1 and 4.
2. For general statements of these basic goals, see Michael D. Swaine and Ashley J. Tellis, *Interpreting China’s Grand Strategy: Past, Present, and Future* (Santa Monica, Calif.: RAND Corporation, 2000). For a clear official statement of China’s emphasis on stability in particular, see “Resolutely Carry Out the Lofty Mission Entrusted by the Party and the People—Warmly Celebrating the 82nd Anniversary of the Founding of the Chinese People’s Liberation Army,” editorial in *Jiefangjun Bao Online*, August 1, 2009. See also Wang Yizhou, “China’s Diplomacy: Ten Features,” *Contemporary International Relations* 19, no. 1 (January–February 2009): 45–64; and Wang Yizhou, “Mianxiang ershiyishiji de zhongguo waijiao: Sanzhong xuqiu de xunqiu jiqi pingheng” (Chinese Diplomacy in the Twenty-First Century: Achieving and Balancing Three Needs), *Zhanlue yu Guanli* (Strategy and Management), no. 6 (1999): 18–27. In the 1999 source, Wang identifies three basic requirements or objectives for China’s foreign and security policies during the twenty-first century: development; sovereignty; and responsibility (that is, becoming a superpower).
3. For example, see “Hu Jintao zai di er lun Zhong-Mei Zhanlue yu Jingji Duihua kaimu shi shang de zhici” (Address by Hu Jintao at the Opening Session of the Second Round of the U.S.-China Strategic and Economic

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- Dialogue), Xinhua, May 24, 2010, <http://politics.people.com.cn/GB/1024/11678677.html>; Li Keqiang, "The World Should Not Fear a Growing China," *Financial Times*, January 9, 2011; and Dai Bingguo, "Stick to the Path of Peaceful Development," *Beijing Review*, December 21, 2010. Dai Bingguo writes: "The objective of China's development boils down to one sentence: to build a harmonious society at home and help build a harmonious world abroad."
4. Xiao Ren and Travis Tanner, "Roundtable: Chinese Foreign Policy and Domestic Decisionmaking," *Asia Policy*, no. 10 (July 2010): 43–101.
 5. See Michael D. Swaine, "China: Exploiting a Strategic Opening," in *Strategic Asia 2004–05: Confronting Terrorism in the Pursuit of Power*, edited by Ashley J. Tellis and Michael Wills (Seattle: National Bureau of Asian Research, 2004), 67–101. The New Security Concept stresses the principles of state sovereignty, nonintervention in a country's internal affairs, mutually beneficial economic contacts, "and the importance of the United Nations in establishing world norms and as a check against unilateralism and power politics."
 6. "China's Peaceful Development," white paper, Information Office of the State Council, People's Republic of China, September 2011, Beijing, http://news.xinhuanet.com/english2010/china/2011-09/06/c_131102329.htm; 中华人民共和国国务院新闻办公室,《中国的和平发展》白皮书, September 2011, http://news.xinhuanet.com/politics/2011-09/06/c_121982103.htm. For the first public articulation of this definition of core interests, see State Councilor Dai Bingguo, closing remarks for U.S.-China Strategic and Economic Dialogue, Washington, D.C., July 28, 2009, www.state.gov/secretary/rm/2009a/july/126599.htm; "Shou Lun Zhongmei Jingji Duihua: Chu shang yue qiu wai zhuyao wenti jun yi tan ji" (First Round of China-U.S. Economic Dialogue: Everything Was Discussed Except Landing on the Moon), Zhongguo Xinwen Wang, July 29, 2009, www.chinanews.com.cn/gn/news/2009/07-29/1794984.shtml. See also Michael D. Swaine, "China's Assertive Behavior, Part One—On 'Core Interests,'" *China Leadership Monitor*, no. 34 (Winter 2011), <http://media.hoover.org/sites/default/files/documents/CLM34MS.pdf>.
 7. See Michael D. Swaine and M. Taylor Fravel, "China's Assertive Behavior, Part Two—The Maritime Periphery," *China Leadership Monitor*, no. 35 (Summer 2011), <http://media.hoover.org/sites/default/files/documents/CLM35MS.pdf>.
 8. M. Taylor Fravel, "International Relations Theory and China's Rise: Assessing China's Potential for Territorial Expansion," *International Studies Review* 12, no. 4 (December 2010): 505–53; M. Taylor Fravel, "China, Rising Power and Expansion: Can Conquest Pay?" 2008, unpublished manuscript, Massachusetts Institute of Technology.
 9. Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2009* (Washington, D.C.: U.S. Government Printing Office, 2009), www.defense.gov/pubs/pdfs/China_Military_Power_Report_2009.pdf.
 10. Jeffrey A. Bader, *Obama and China's Rise: An Insider's Account of America's Asia Strategy* (Washington, D.C.: Brookings Institution Press, 2012); "China, Russia Begin Joint Naval Exercises," Xinhua, April 22, 2012, http://news.xinhuanet.com/english/video/2012-04/22/c_131543922.htm; "China, Thailand Conduct Anti-Terrorism Maritime Exercise," *China Daily*, May 26, 2012, www.chinadaily.com.cn/china/2012-05/25/content_15391488.htm.
 11. M. Taylor Fravel, "China's Strategy in the South China Sea," *Contemporary Southeast Asia* 33, no. 3 (2011): 292–319; Swaine and Fravel, "China's Assertive Behavior, Part Two."
 12. Dai, "Stick to the Path."
 13. See Office of the Secretary of Defense (OSD), *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2011* (Washington, D.C.: U.S. Government Printing Office, 2011), www.defense.gov/pubs/pdfs/2011_cmp_r_final.pdf. In his essay, Dai Bingguo wrote of this quotation, "Some people misinterpret the Chinese idiom 'keep a low profile and make due contributions.' They take China's announcement of a peaceful development path as a smokescreen for its real intention before it gets strong enough. This is groundless suspicion. That Chinese idiom was quoted from Comrade Deng Xiaoping's remarks from late 1980s to early 1990s, saying that China should keep modest and prudent, not serve as others' leader or a standard bearer and not seek expansion or hegemony. This is consistent with the idea of the path of peaceful development." Dai, "Stick to the Path."

14. Some scholars and analysts—including structural and offensive realists, power transition theorists, and advocates of a more robust strategy for containing China—argue that China’s ambitions and intentions will grow along with its national power, and that it will thus inevitably engage in a contest for supremacy with the United States, seeking to eject U.S. forces from the region and establish hegemony in the Asia-Pacific region (possibly without engaging in any actual kinetic conflict). See, for example, Aaron Friedberg, *A Contest for Supremacy: China, America, and the Struggle for Mastery in Asia* (New York: W. W. Norton, 2011). However, as other scholars and analysts have countered, some of the key variables that are most likely to affect China’s future path are the decisions made by other powers in the region, particularly including the United States and Japan. See Jonathan Kirshner, “The Tragedy of Offensive Realism: Classical Realism and the Rise of China,” *European Journal of International Relations* 20, no. 10 (October 2010): 1–23; Fravel, “International Relations Theory”; Michael D. Swaine, “Enough Tough Talk on China,” *National Interest*, September 26, 2011, <http://nationalinterest.org/commentary/enough-tough-talk-china-5934>.
15. Chinese armed forces include the People’s Liberation Army, the People’s Armed Police, and the reserves/militia.
16. Information Office of the State Council, People’s Republic of China, *China’s National Defense in 2010*, March 2011, www.chinadaily.com.cn/cndy/2011-04/01/content_12260278.htm (full-text PDF available at http://merln.ndu.edu/whitepapers/China_English2010.pdf).
17. For the purported Chinese text of Hu’s December 2004 speech, see Hu Jintao, “Renqing Xinshiji Xinjieduan Wojun Lishi Shiming” (See Clearly Our Military’s Historic Missions in the New Period of the New Century), speech given to China’s Central Military Commission, Beijing, December 24, 2004, <http://gfjy.jxnews.com.cn/system/2010/04/16/011353408.shtml>. Also see *China’s National Defense in 2010*. It is important to note that such doctrinal shifts may take some time to be fully integrated into PLA operational training at the unit level. As Shambaugh cautions, “No matter how dynamic and adaptable doctrine is in a given military, it still takes a long time to translate doctrinal innovation into actual strategy and tactical changes in training and on the battlefield. In the U.S. military, it normally takes seven or eight years for significant doctrinal change to penetrate to the unit level of the armed forces. For the PLA, it is undoubtedly longer.” David Shambaugh, “Doctrine and Training,” in *Modernizing China’s Military: Progress, Problems, and Prospects* (Berkeley: University of California Press, 2002), chapter 3, 56–107.
18. As Ken Allen points out, the PLA does not have a term for doctrine. It discusses theory, which, for all practical purposes is equivalent to doctrine. Personal correspondence with the authors, October 25, 2012.
19. See Nan Li, “The PLA’s Evolving Warfighting Doctrine, Strategy and Tactics, 1985–95: A Chinese Perspective,” *China Quarterly*, no. 146 (Special Issue: China’s Military in Transition), June 1996.
20. Two notable examples are Beijing’s unprecedented deployment of warships to the Gulf of Aden and Horn of Africa to participate with other navies in an international effort to combat maritime piracy, along with its operations to evacuate Chinese nationals from Libya in early 2011. These undertakings mark a significant step forward in the PLA’s ability to conduct sustained military operations relatively far from China’s shores.
21. Dennis C. Blair, “Military Power Projection in Asia,” in *Strategic Asia 2008–09: Challenges and Choices*, edited by Ashley J. Tellis, Mercy Kuo, and Andrew Marble (Seattle: National Bureau of Asian Research, 2008), 390–420.
22. Andrew Krepinovich Jr., “The Pentagon’s Wasting Assets: The Eroding Foundations of American Power,” *Foreign Affairs* 88, no. 4 (July–August 2009): 18–33; Roger Cliff, Mark Burles, Michael S. Chase, Derek Eaton, and Kevin L. Pollpeter, *Entering the Dragon’s Lair: Chinese Antiaccess Strategies and Their Implications for the United States* (Santa Monica, Calif.: RAND Corporation, 2007). The RAND authors identify several of the PLA’s “strategic principles for defeating a technologically superior adversary,” including avoiding direct confrontation, seizing the initiative early, surprise, preemption, key-point strikes, concentrated attack, achieving information superiority, raising the costs of conflict, limited strategic aims, and modern military capabilities.
23. See Information Office of the State Council, People’s Republic of China, *China’s National Defense in 2000*, October 16, 2000, www.fas.org/nuke/guide/china/doctrine/cnd0010/china-001016wp2.htm; *China’s National Defense in 2010*; Dennis Blasko, *The Chinese Army Today: Tradition and Transformation for the 21st Century*, 2nd ed. (New York: Routledge, 2012), 256 n9. See also Peng Guangqian and Yao Youzhi, eds., *The Science of Military Strategy* (Beijing: Military Science Publishing House, 2005), 459. This AMS publication describes active defense as “the essential feature of China’s military strategy” and “the keystone of the theory of China’s strategic guidance.”

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24. "Warfighting and strategic deterrence are two major basic functions of the armed forces.... The objective of strategic deterrence is to contain the outbreak of war or to limit the scope and the escalation of war, with a view to curbing the war, and its strategic objective is attained by non-fighting means or fighting a small war." Peng and Yao, *Science of Military Strategy*, 213.
25. Peng and Yao, *Science of Military Strategy*, 224, 470. Dennis Blasko describes this text as probably "China's most important contribution to increased transparency about its military intentions in the past decade," after its publication of its defense white papers, its invitations to foreign observers to witness PLA exercises, and its joint training exercises with foreign militaries. Quotations from the AMS text in this report come from the English translation published in 2005.
26. Michael D. Swaine and Zhang Tuosheng with Danielle F. S. Cohen, eds. *Managing Sino-American Crises: Case Studies and Analysis* (Washington, D.C.: Carnegie Endowment for International Peace, 2006). Also see Mark Burles and Abram N. Shulsky, *Patterns in China's Use of Force: Evidence from History and Doctrinal Writings* (Santa Monica, Calif: RAND Corporation, 2000); Shu Guang Zhang, *Deterrence and Strategic Culture: Chinese-American Confrontations, 1949-1958* (Ithaca, N.Y.: Cornell University Press, 1993), 279-80; and Allen Whiting, *The Chinese Calculus of Deterrence: India and Indochina* (Ann Arbor: University of Michigan Press, 1975).
27. Peng and Yao, *Science of Military Strategy*, 216-17. See also Blasko, *Chinese Army Today*, 121-24; Dennis J. Blasko, "Misreading Chinese Military Strategy and Intentions," unpublished manuscript; and Dennis J. Blasko, "Military Parades Demonstrate Chinese Concept of Deterrence," *China Brief* 9, no. 8 (April 16, 2009).
28. As China's 2010 defense white paper asserts, "China unswervingly maintains its fine cultural traditions and its belief in valuing peace above all else, advocating the settlement of disputes through peaceful means, prudence on the issue of war, and the strategy of 'attacking only after being attacked.'" *China's National Defense in 2010*.
29. See Blasko, *Chinese Army Today*, 120.
30. See OSD, *Annual Report to Congress ... 2011*, 25.
31. Michael P. Flaherty, "Red Wings Ascendant: The Chinese Air Force Contribution to Antiaccess," *Joint Force Quarterly* 60, no. 1 (2011): 95-101.
32. Peng and Yao, *Science of Military Strategy*, 460-61.
33. *Ibid.*, 461.
34. We are indebted to Dennis Blasko for these observations. The "strategic frontier" encompasses the full range of competitive areas or boundaries implied by the notion of comprehensive national strength, including land, maritime, and outer space frontiers, as well as more abstract strategic realms related to China's economic and technological development. For an article pointing to ASCEL as an analogue to A2/AD strategy, see Anton Lee Wishik II, "An Anti-Access Approximation: The PLA's Active Strategic Counterattacks on Exterior Lines," *China Security*, no. 19 (2011): 37-48, www.chinasecurity.us/images/stories/AntonWishik.pdf. Though this article drew some attention as substantiating evidence for A2/AD within PLA doctrine when it was published in 2011, the sources drawn upon have been extant since 2001, and the analysis takes ASCEL somewhat out of the context of active defense, of which it is an integral part. It remains a rough approximation for antiaccess/area denial, which is a Western way of describing a host of emerging Chinese capabilities. See further discussion below in note 47.
35. This section draws from Swaine and Zhang, *Managing Sino-American Crises*.
36. Wang Jisi and Xu Hui, "Pattern of Sino-American Crises: A Chinese Perspective," in *Managing Sino-American Crises*, ed. Swaine and Zhang, chapter 3. This set of guidelines is reflected by Mao's statement: "Despite the enemy strategically and take it seriously tactically." Wang and Hui point out that Mao used this strategy vis-à-vis the United States during the wars in Korea and Vietnam, and the first two Taiwan Straits crises in the 1950s. That is, in general, he issued strong rhetoric but took cautious actions.
37. Alistair Iain Johnston, "China's Militarized Interstate Dispute Behavior 1949-1992: A First Cut at the Data," *China Quarterly*, no. 153 (March 1998). Johnston concludes that, during the Cold War, China was more prone to disputes than most other major powers except the United States, and tended to resort to higher levels of violence in disputes. The largest portion of Chinese dispute behavior involved territorial issues and the consolidation of

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long-standing territorial claims. He speculates that, if China does not face challenges to its territorial integrity and has sufficient international status, it may actually be less likely to become involved in disputes. However, once it becomes involved in a dispute, China will tend to escalate to a relatively high level of force.

38. Some analysts have observed that the strong need to show resolve has led Chinese leaders in the past to discount the military and economic costs involved in employing force, unless such costs clearly threaten regime stability. For example, see Mark Burles and Abram N. Shulsky, *Patterns in China's Use of Force: Evidence from History and Doctrinal Writings* (Santa Monica, Calif.: RAND Corporation, 2000).
39. Allen Whiting, *The Chinese Calculus of Deterrence: India and Indochina* (Ann Arbor: University of Michigan Press, 1975), 205, discusses the Chinese use of military force to deter and prepare for possible action. Examples include Chinese actions before the Korean War intervention, regarding India in 1962, and in Vietnam in 1965–1968.
40. Whiting, *Chinese Calculus of Deterrence*; Burles and Shulsky, *Patterns in China's Use of Force*, 31, 41–42; Johnston, “China’s Militarized Interstate Dispute Behavior,” 19–20. Shulsky states that in crises of the 1950s through the 1960s, China at times sought to establish a *fait accompli* through quick and decisive action, and to force the adversary to risk significant escalation to reinstate the status quo ante. However, Johnston suggests that China is not more likely to undertake such risky international behavior during times of international crisis.
41. Burles and Shulsky, *Patterns in China's Use of Force*, 41. Shulsky argues that China’s past use of force against a stronger power or the client of a stronger power suggests several tactics: “[First,] use of surprise to create psychological shock; [second,] inflicting casualties to create political pressure on the opponent; [third,] creation of tension to divide the opposing alliance or to create political problems for an opponent; [fourth,] creation of a *fait accompli*, presenting the opponent with a choice between acquiescence and escalation.”
42. Moreover, as reiterated by Chinese participants in a 2004 conference on crisis management convened in Beijing, this willingness to use force when facing a superior power derived, in turn, partly from a sense of vulnerability and weakness. It also derived from the absence of other credible means to communicate resolve and to exert leverage in a crisis. See Swaine and Zhang, *Managing Sino-American Crises*.
43. See Alastair Iain Johnston, *Cultural Realism: Strategic Culture and Grand Strategy in Chinese History* (Princeton, N.J.: Princeton University Press, 1995); and Alastair Iain Johnston, “Cultural Realism and Strategy in Maoist China,” in *The Culture of National Security: Norms and Identity in World Politics*, edited by Peter J. Katzenstein (New York: Columbia University Press, 1996), 216–70.
44. According to Chinese analysts, several factors caused this change in approach. These include the passing of the revolutionary generation of Chinese leaders (who were arguably more militant in their outlook toward foreign policy issues and less constrained by domestic factors), the existence of a greater number of nonmilitary levers of influence in crisis management, and the emergence of a new generation of leaders committed to the pursuit of stable and cooperative relations with other powers, as an essential precondition for continued economic growth and domestic stability.
45. Psychological warfare is defined as efforts to undermine an enemy’s ability to conduct combat operations through psychological activities aimed at deterring, shocking, and demoralizing enemy military personnel and supporting civilian populations. Media warfare aims at influencing domestic and international public opinion to build public and international support for China’s military actions and to dissuade an adversary from pursuing policies viewed as adverse to China’s interests. Legal warfare stresses the use of international and domestic laws to elicit international support and manage possible political repercussions of China’s military actions. The concept was first approved by the Chinese Communist Party’s Central Committee and the Central Military Commission in 2003. See “Chinese PLA Focusing on Media, Psychological, and Legal Warfare Training,” *Wen Wei Po* (Internet Version), October 23, 2004, summarized in “Highlights: Chinese PLA’s Military Theories, Informationization Efforts,” China-FBIS Report, November 5, 2004, OSC CPP20041204000013; Blasko, *Chinese Army Today*, 202–203; OSD, *Annual Report to Congress ... 2011*, 26; Eric C. Anderson and Jeffrey G. Engstrom, “Capabilities of the Chinese People’s Liberation Army to Carry Out Military Action in the Event of a Regional Military Conflict,” Science Applications International Corporation, March 2009, prepared for U.S.-China Economic and Security Review Commission, www.uscc.gov/researchpapers/2009/SAIC%20—%20PLA%20Military%20Capabilities%20—%20Final%20Report%2002June2009.pdf; and “PRC Book Excerpt: ‘Under Informatized Conditions: Legal Warfare,’” Military Science Press, May 1, 2007, OSC CPP20090410623001. See also OSD, *Annual Report to Congress ... 2011*; and Bryan Krekel (Northrup Grumman Corporation), “Capability of the People’s Republic of China to Conduct Cyber Warfare and Computer Network,” report prepared for the U.S.-China Economic and

Security Review Commission, October 9, 2009, www.uscc.gov/researchpapers/2009/NorthropGrumman_PRC_Cyber_Paper_FINAL_Approved%20Report_16Oct2009.pdf.

46. It is important to note that “while we in the United States frequently refer to China as having an antiaccess strategy, the Chinese military does not think in those terms.... The Chinese term for their approach to this broader challenge is ‘using inferiority to defeat superiority’ (以劣胜优).” Roger Cliff, “Anti-Access Measures in Chinese Defense Strategy,” RAND Corporation, testimony before the U.S. China Economic and Security Review Commission, January 27, 2010, www.uscc.gov/hearings/2011hearings/transcripts/11_01_27_trans/cliff_testimony.pdf. For example, for a Chinese view on the issue, see Wang Haiyun, “Zhuanjia: ‘Nanhai shi Zhongguo hexinliyi bingfei Zhongguo guanfang biaotai,” *Dongfang Zaobao*, October 13, 2010, http://news.xinhuanet.com/mil/2010-10/13/c_12652720.htm. Wang (a former Chinese military attaché to Russia and vice-president of the Chinese Society for the Study of the History of Sino-Russian Relations) writes, “During a recent visit to an American academic institution, I heard an American scholar discuss China’s so-called ‘anti-access strategy.’ ... First of all, China has never adopted an ‘anti-access strategy.’ ... China does not now have and will never implement a so-called ‘anti-access strategy’ in its surrounding waters, and it has never and will never seek to surround itself with a sphere of influence” (authors’ translation). Nonetheless, as Michael Flaherty explains, “While China has never officially acknowledged an antiaccess strategy, the Chinese concept of active defense as well as recently modernized PLAAF capabilities, doctrine, and campaign planning have predisposed the PLAAF toward this approach in its role of defending China’s sovereignty and territorial integrity.” Flaherty, “Red Wings Ascendant.” In other words, the PLA’s long-standing doctrine of “active defense” (jiji fangyu, 积极防御), particularly after incorporating lessons learned from the Gulf War about the nature of “limited war under high-technology conditions” (*gao jishu tiaojian xia de jubu zhanzheng*, 高技术条件下的局部战争) has led the Chinese to pursue an approach that Western analysts identify as antiaccess/area denial (A2/AD). See also Nan Li, “PLA’s Evolving Warfighting Doctrine.”
47. See Robert F. Willard, Statement Before the House Armed Services Committee on U.S. Pacific Command Posture, March 23, 2010, http://armedservices.house.gov/pdfs/FC032510/Willard_Testimony032510.pdf; Blair, “Annual Threat Assessment”; Cliff, “Anti-Access Measures in Chinese Defense Strategy”; Nan Li, “The Evolution of China’s Naval Strategy and Capabilities: From ‘Near Coast’ and ‘Near Seas’ to ‘Far Seas,’” *Asian Security* 5 (May 2009): 144–69; “China’s Role in Asia: Access and Anti-Access,” executive summary of conference hosted by National Defense University’s Center for Technology and National Security Policy and Institute for National Strategic Studies, Washington, D.C., July 24–25, 2008, www.ndu.edu/CTNSP/docUploaded//TFX_China%20in%20Asia%20July%202008%20conf%20rep%20OPEN.pdf; David M. Finkelstein, “China’s National Military Strategy: An Overview of the ‘Military Strategic Guidelines,’” *Asia Policy*, no. 4 (July 2007): 67–72; Bates Gill, *Rising Star: China’s New Security Diplomacy* (Washington, D.C.: Brookings Institution Press, 2007); Cliff et al., *Entering the Dragon’s Lair*; OSD, *Annual Report to Congress ... 2011*; and Mark Cozad, “China’s Regional Power Projection: Prospects for Future Missions in the South and East China Seas,” in *Beyond the Strait: PLA Missions Other Than Taiwan*, edited by Roy Kamphausen, David Lai, and Andrew Scobell (Seattle: National Bureau of Asian Research, 2008), 287–326. See also Michael McDevitt, “Asian Military Modernisation: Key Areas of Concern—Address to the IISS-JIIA Tokyo Conference,” *Adelphi Series* 48, nos. 400 and 401, (October 2008): 125–32. According to McDevitt, China’s objective behind military modernization is to “keep U.S. naval power as far away from China as possible in case of conflict.”
48. For example, Rear Admiral Zhang Huachen, deputy commander of the East Sea Fleet, made comments along these lines in 2010: “With our naval strategy changing now, we are going from coastal defense to far sea defense.... With the expansion of the country’s economic interests, the navy wants to better protect the country’s transportation routes and the safety of our major sea lanes.... In order to achieve this, the Chinese Navy needs to develop along the lines of bigger vessels and with more comprehensive capabilities.” (现在是海军战略发生变化, 由近海防御向远海防卫方向转变 ... 随着国家经济利益的拓展, 海军如果想要更好的维护国家交通线, 主要航道的安全, 就必须要向大型化, 综合化的方向发展.) “Donghai jiandu fusing: Wo haijun xu xiang daxinghua zonghehua fazhan” (East Sea Fleet Deputy Commander: Navy Must Expand Large-Scale Integration), *Xinhua*, March 9, 2010, http://news.xinhuanet.com/mil/2010-03/09/content_13129335.htm. See also Feng Zhichao, “Power Projection Capability: Its Making and Extension Amid Deep Fusion,” *Jiefangjun Bao Online*, February 2, 2012, OSC CPP20120202787014; Li Yu, “Contemporary Strategic Power Projection Capability: How Can the Arm of the Nation Be Stretched and Moved Back Agilely?” *Jiefangjun Bao Online*, August 26, 2010, OSC CPP20100826702001; OSD, *Annual Report to Congress ... 2011*, 61; Kamphausen, Lai, and Scobell, *Beyond the Strait*; Nan Li, “Evolution of China’s Naval Strategy.”
49. For example, see Gu Wei-Jun, “Need to Break Through China’s Rigid Thinking: It’s Unavoidable That China Will Use Military Forces Abroad” (Xu tupo jianghua siwei, zhongguo weilai haiwai yong bing bu ke bimian), *Huanqiu Shibao*, July 1, 2010, <http://mil.huanqiu.com/Exclusive/2010-07/895638.html>. AMS scholar Gu Weijun

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says that China needs to break through the old ossified thinking that China should not deploy forces abroad or have bases abroad and suggests there should be more research on this issue. He gives five reasons for having the capacity to deploy forces abroad: (1) protecting China's territory and sovereignty in the Yellow, East and South seas; (2) protecting and extracting Chinese expatriates abroad; (3) counterterrorism activities abroad (for example, striking at East Turkistan lairs); (4) deterrence patrols in order to express concern and indignation at some event that threatens China's interests; and (5) influencing/shaping some strategic situations by setting up military bases abroad.

50. See Andrew Erickson, "Assessing the New U.S. Maritime Strategy: A Window into Chinese Thinking," *Naval War College Review* 61, no. 4 (Autumn 2008): 35–71.
51. The November 2009 U.S.-China joint statement issued during President Barack Obama's trip to China stated the following: "China welcomes the United States as an Asia-Pacific nation that contributes to peace, stability and prosperity in the region." U.S.-China Joint Statement, November 17, 2009, Beijing, www.whitehouse.gov/the-press-office/us-china-joint-statement. The inclusion of this statement was hailed as a major success, because, as Bonnie Glaser explains, "the last time a Chinese leader had commented on the subject was when former President Jiang Zemin told President Bush in October 2001 that China viewed the U.S. presence in the region as stabilizing and did not seek to expel U.S. military forces from the region." Bonnie Glaser, "Obama-Hu Summit: Success or Disappointment?" *Comparative Connections* 11, no. 4 (January 2010), http://csis.org/files/publication/0904qus_china.pdf. This language was reiterated in the January 2011 Sino-U.S. joint statement. See U.S.-China Joint Statement, January 19, 2011, Washington, D.C., www.whitehouse.gov/the-press-office/2011/01/19/us-china-joint-statement. Similarly, in March 2012, the PRC ambassador to the Philippines, Ma Keqing, stated that "the Pacific is large enough for the U.S. and China. We hope that the U.S. will take a constructive role to make this region more peaceful and stable." Quoted in "Pacific Big Enough for All of Us, Says China," Agence France-Presse, March 15, 2012, <http://news.yahoo.com/pacific-big-enough-us-says-china-130542790.html>.
52. "Foreign Ministry Spokesperson Liu Weimin's Regular Press Conference on May 31, 2012"; Le Yucheng, Chinese assistant foreign minister, "The Rapid Development of China's Diplomacy in a Volatile World," address at the Seminar on China's Diplomacy in 2011 and Its Prospect, December 18, 2011, www.fmprc.gov.cn/eng/wjz/zygy/gyhd/t890675.htm; and "Foreign Ministry Spokesperson Liu Weimin's Regular Press Conference on November 14, 2011."
53. Fan Xiaojun, "The Futenma Issue: Implications for U.S.-Japan Alliance," *Contemporary International Relations* 20, no. 3 (May-June 2010); Yang Yang, "The Adjustment of Japan-U.S. Alliance and the Strategic Options for Chinese Foreign Policy," *International Strategic Studies* 90, no. 2 (2008).
54. Lian Degui, "Where Are Japan-U.S. Relations Heading?" *Foreign Affairs Journal*, no. 95 (Spring 2010); Shen Qiang, "How to Assess Obama Administration's New Geo-Strategy Toward Asia," *Foreign Affairs Journal*, no. 98 (Winter 2010).
55. The arguably growing influence of Chinese public opinion on PRC foreign policy toward Japan and the alliance is discussed in some detail below.
56. See "Defense Ministry's Regular Press Conference in November, 2011," Ministry of National Defense of the People's Republic of China, November 30, 2011, www.mod.gov.cn/affair/2011-11/30/content_4347180.htm. For nonauthoritative sources, see Michael D. Swaine, "Chinese Leadership and Elite Responses to the U.S. Pacific Pivot," *China Leadership Monitor*, no. 38 (Summer 2012), <http://media.hoover.org/sites/default/files/documents/CLM38MS.pdf>.
57. "Remarks by Assistant Foreign Minister Le Yucheng at the Symposium on the Issue of Diaoyu Dao," Diaoyutai State Guesthouse, September 14, 2012, www.fmprc.gov.cn/eng/zxxx/t969558.htm; Chu Shulong, "The Security Challenges in Northeast Asia: A Chinese View," in *East Asian Security: Two Views* (Washington, D.C.: Strategic Studies Institute, 2007), www.strategicstudiesinstitute.army.mil/pdf/files/pub800.pdf; Sun Jianhong, "Japan's 'Defense Program Outline' Hollows Out the Peace Constitution," *Liaowang*, December 27, 2010, OSC CPP20110107787011; Li Qi, "Tendency for Japan to Use North Korean Nuclear Issue to Expand Military Strength," *Dangdai Shijie*, August 5, 2009, OSC CPP20090827671008; Li Demu, "Indo-Japanese Joint Military Exercises; Each Is Making Its Own Calculations," *Zhongguo Qingnian Bao*, October 21, 2011, OSC CPP20111021787008; Liu Jianguong, "Review on and Prospect for Sino-Japanese Relations in 2008," *Foreign Affairs Journal*, no. 91 (Spring 2009); and "'Focus Today' on Japan's Decision to Relax Ban on Weapons Exports," *CCTV-4*, December 28, 2011, OSC CPP20111229003001.

58. "Remarks by Assistant Foreign Minister Le Yucheng at the Symposium on the Issue of Diaoyu Dao," Diaoyutai State Guesthouse, September 14, 2012, www.fmprc.gov.cn/eng/zxxx/t969558.htm; Chu Shulong, "The Security Challenges in Northeast Asia: A Chinese View," in *East Asian Security: Two Views*, Strategic Studies Institute, November 2007, www.strategicstudiesinstitute.army.mil/pdffiles/pub800.pdf; Yang Yang, "The Adjustment of Japan-U.S. Alliance and the Strategic Options for Chinese Foreign Policy," *International Strategic Studies* 90, no. 2 (2008); Lin Limin, "Chaos and Change in Symbiosis: The World in 2010," translated by Ma Zongshi, *Contemporary International Relations* 21, no. 2 (March-April 2011), www.cicir.ac.cn/english/ArticleView.aspx?nid=2294; Duan Tingzhi and Feng Liang, "Japan: Targeting China, North Korea, and Others as Strategic Threats," *Shijie Zhishi*, November 16, 2011, OSC CPP20120312671001.
59. Fan Xiaoju, "Futenma Issue"; Zhang Lili, "Adopting the Right Approach," *China Daily Online*, August 11, 2010, OSC CPP20100811968023; Xu Haiyan, "Strategic and Reciprocal Relations' and Japan's National Strategic Options," *Heping Yu Fazhan*, August 1, 2008, OSC CPP20081103671003; Le Shaoyan, "A Dangerous Move," Xinhua Domestic Service, April 28, 2007, OSC CPP20070428045004, and "Japan Enacts Referendum Bill on Constitution Revision," Xinhua, May 14, 2007, OSC CPP20070514042016.
60. "Remarks by Assistant Foreign Minister Le Yucheng," September 14, 2012; "Remarks by Assistant Foreign Minister Le Yucheng at Symposium Marking the 40th Anniversary of the Normalization of Relations Between China and Japan," St. Regis Hotel, September 28, 2012, www.fmprc.gov.cn/eng/zxxx/t975066.htm; "Scholar: Yoshihiko Noda Returns Home From a Rewarding Journey in China," *Ming Pao Online*, December 27, 2011, OSC CPP20111227705017; "Analysis': China Pulls Japan Out of Export Lull," Xinhua, January 27, 2011, OSC CPP20110127968212; Fu Junwen, "Post-Earthquake Sino-Japanese Economic and Trade Ties Continue to Forge Ahead," *Guoji Shangbao Online*, January 17, 2011, OSC CPP20120125308001; Liu Jiangyong, "Sino-Japanese Relations: Swelling Waves and the Way to Deal With Them," *Shijie Zhishi*, January 16, 2011, OSC CPP20110214671003; Liu Zan, "Situation of Sino-Japanese Ties Unlikely to Change," Xinhua Domestic Service, September 14, 2009, OSC CPP20090914066010; and Cui Liru and Liu Junhong, "Building China-Japan Relations in the New Era: From Thinking to Action," translated by Ma Zongshi, *Contemporary International Relations* 17, no. 6 (November-December 2007): 1-7.
61. Lian Degui, "Where Are Japan-U.S. Relations Heading?"; Xu Haiyan, "Strategic and Reciprocal Relations and Japan's National Strategic Options," *Heping Yu Fazhan*, August 1, 2008, OSC CPP20081103671003.
62. Yang Bojiang, "Ties with Japan Important," *China Daily Online*, August 16, 2010, OSC CPP20100816968040; Huang Dahui, "Changing East Asia and the United States: The Forum on East Asian Cooperation 2007 Conference Summary," *Xiandai Guoji Guanxi*, October 1, 2007, OSC CPP20080115590001; Lin Limin, "World Geopolitics and China's Choices," *Contemporary International Relations* 20, no. 3 (May-June 2010); Xu Haiyan, "Strategic and Reciprocal Relations' and Japan's National Strategic Options," *Heping Yu Fazhan*, August 1, 2008, OSC CPP20081103671003.
63. See the section on "Public Opinion" for more on this subject. See Huang Dahui's comments in Guo Qiang, "Thousands Protest Across China and Japan as Nationalistic Sentiment Rises," *Global Times*, October 18, 2010, OSC CPP20101018722002.
64. As indicated above, such policies do not necessarily require that China become the indisputably dominant military power in East Asia. At this point, China's strategy is a largely defensive one, designed to avert adverse outcomes and increase China's leverage in many specific policy areas relating to its maritime periphery.
65. "Fifth-generation" is used here in the Western sense of the term; the PLA employs a different way of classifying fighter jets and actually describes its fledgling stealth fighters as "fourth-generation." See National Air and Space Intelligence Center, *People's Liberation Army Air Force 2010*, August 1, 2010, www.au.af.mil/au/awc/awcgate/nasic/pla_af_2010.pdf.
66. Andrew S. Erickson, "Beijing's Aerospace Revolution: Short Range Opportunities, Long-Range Challenges," in *Chinese Aerospace Power: Evolving Maritime Roles*, edited by Andrew S. Erickson and Lyle J. Goldstein (Annapolis, Md.: U.S. Naval Institute Press, 2011), 14-15.
67. Lyle Goldstein, "Beijing Confronts Long-Standing Weakness in Anti-Submarine Warfare," *China Brief* 11, no. 4, (July 29, 2011).

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68. OSD, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2012* (Washington, D.C.: U.S. Government Printing Office, 2012), www.defense.gov/pubs/pdfs/2012_CMPR_Final.pdf.
69. Andrew S. Erickson, Lyle Goldstein, and William S. Murray, "Chinese Mine Warfare: An Assassin's Mace Capability," *China Maritime Studies*, no. 3 (June 2009), www.nwc.navy.mil/Research---Gaming/China-Maritime-Studies-Institute/Publications/documents/CMS3_Mine-Warfare.aspx; U.S. Office of Naval Intelligence, *The People's Liberation Army Navy: A Modern Navy with Chinese Characteristics*, August 2009, www.fas.org/irp/agency/oni/pla-navy.pdf; and Scott C. Truver, "Taking Mines Seriously: Mine Warfare in China's Near Seas," *Naval War College Review* 65, no. 2 (Spring 2012), www.usnwc.edu/getattachment/19669a3b-6795-406c-8924-106d7a5adb93/Taking-Mines-Seriously--Mine-Warfare-in-China-s-Ne. As for defensive mine countermeasures, China has five classes of mine countermeasure vehicles, with 28 in active service and 68 in reserve, along with 50 additional vessels that can be utilized for a minesweeping function. See *Jane's Underwater Warfare Systems*, April 20, 2011, <http://articles.janes.com/articles/Janes-Underwater-Warfare-Systems/Mine-warfare-forces-China.html>.
70. Authors' personal correspondence with Bill Murray, associate professor at the Naval War College.
71. Reports offer differing assessments of the DF-21D's range, with the *China Daily* and unofficial *Global Times* claiming a range of 1,800 to 2,800 kilometers, while the 2012 Pentagon report on the Chinese military stated that the range "exceeds 1,500 km."
72. National Defense Report, Republic of China, http://2011mndreport.mnd.gov.tw/en/pdf/100report_english.pdf, 71; Yoichi Kato, "U.S. Commander Says China Aims to Be A 'Global Military' Power," *Asahi Shimbun*, December 28, 2010 (text of interview available at www.china-defense-mashup.com/us-commander-says-china-aims-to-be-a-global-military-power.html); Andrew Erickson and Gabe Collins, "China Deploys World's First Long-Range, Land-Based 'Carrier Killer': DF-21D Anti-Ship Ballistic Missile (ASBM) Reaches 'Initial Operational Capability' (IOC)," *China SignPost* (洞察中国), no. 14 (December 26, 2010), www.chinasignpost.com/wp-content/uploads/2010/12/China_SignPost_14_ASBM_IOC_2010-12-26.pdf.
73. Kato, "U.S. Commander Says China Aims to Be A 'Global Military' Power." In his interview with Kato, Adm. Willard stated, "The anti-ship ballistic missile system in China has undergone extensive testing. An analogy using a Western term would be 'initial operational capability,' whereby it has—I think China would perceive that it has—an operational capability now, but they continue to develop it. It will continue to undergo testing, I would imagine, for several more years.... We have not seen an over-water test of the entire system." See also Erickson and Collins, "China Deploys World's First Long-Range, Land-Based 'Carrier Killer'"; and Andrew Erickson, "China's Anti-Ship Ballistic Missile (ASBM) Reaches Equivalent of 'Initial Operational Capability' (IOC)—Where It's Going and What It Means," *China SignPost* (洞察中国), July 12, 2011. More speculative estimates, including one from Taiwan's intelligence chief, suggested that China had already deployed up to a dozen missiles, although the status of requisite sensory and targeting systems remains unknown. Jimmy Chuang, "New Dongfeng Missile a Severe Threat to Taiwan: NSB Director," *Want China Times*, March 17, 2011, www.wantchinatimes.com/news-subclass-cnt.aspx?id=20110317000124&cid=1101. See also Harry Kazianis, "Is Hype Over China's New Super-Missile Overblown?" *Diplomat*, July 4, 2012, <http://thediplomat.com/flashpoints-blog/2012/07/04/is-hype-over-chinas-new-super-missile-overblown>.
74. See OSD, *Annual Report to Congress ... 2011*; Andrew Erickson, "Global Times Claims Chinese Conventional Ballistic Missile with 4,000 Km Range (Sufficient to Strike Guam) 'Ready for Service' by 2015 & DF-21D is 'Already Deployed in the Army,'" *China SignPost*, February 18, 2011, www.andrewerickson.com/2011/02/global-times-claims-chinese-conventional-ballistic-missile-with-4000-km-range-sufficient-to-strike-guam-%E2%80%9Cready-for-service%E2%80%9D-by-2015-df-21d-is-%E2%80%9Calready-deployed-in-the-army. The 2011 OSD report stated that "China's ballistic missile force is acquiring conventional medium-range and intermediate-range ballistic missiles, extending the distance from which it can threaten other countries with conventional precision or near-precision strikes." This assertion regarding intermediate-range conventional ballistic missiles was notably omitted from the 2012 report, however. See page 7 of OSD, *Annual Report to Congress ... 2012*.
75. Commander John Patch, U.S. Navy (Retired), "A Thoroughbred Ship-Killer," *Proceedings Magazine* 136/4/1, 286 (April 2010), www.usni.org/magazines/proceedings/2010-04/thoroughbred-ship-killer.
76. U.S. Office of Naval Intelligence, *People's Liberation Army Navy*.

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77. Conversation with an American expert on the PLA Navy. The U.S. Department of Defense classifies 23 of 53 PLA frigates as modern (two Jiangkai, seven Jiangkai-II, four Jiangwei-I, ten Jiangwei-II) and 11 out of 26 destroyers as modern (four Sovremenny; two Luyang, two Luyang-II, one Luhai, two Luzhou). Joseph Carrigan, "Aging Tigers, Mighty Dragons: China's Bifurcated Surface Fleet," *China Brief* 10, no. 19 (September 24, 2010); *Jane's Fighting Ships 2010–2011*; International Institute for Strategic Studies (IISS), *The Military Balance 2012* (London: IISS, 2012); OSD, *Annual Report to Congress ... 2011*; U.S. Office of Naval Intelligence, *People's Liberation Army Navy*.
78. See www.china-defense.com/smf/index.php?topic=6101.280. This source derives its estimates from photos taken at shipyards and bases. Thanks to Bill Murray for providing this update.
79. See OSD, *Annual Report to Congress... 2011*, 74; Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, Congressional Research Service, March 23, 2012, www.fas.org/sgp/crs/row/RL33153.pdf, 38; *Jane's Fighting Ships 2010–2011*; IISS, *Military Balance 2012*.
80. Richard A. Bitzinger and Paul T. Mitchell, "China's New Aircraft Carrier: Shape of Things to Come?" *RSIS Commentary*, no. 74/2011 (May 6, 2011), www.rsis.edu.sg/publications/Perspective/RSIS0742011.pdf.
81. Ross Babbage, "Australia's Strategic Edge in 2030," Kokoda Foundation, February 2011, www.kokodafoundation.org/Resources/Documents/KP15StrategicEdge.pdf. See also OSD, *Annual Report to Congress ... 2011*, 74. The 2011 Pentagon report states: "China could begin construction of a fully indigenous carrier in 2011, which could achieve operational capability after 2015. China likely will build multiple aircraft carriers with support ships over the next decade."
82. There are numerous obstacles China will have to overcome on its path to deploying fully equipped multiple aircraft carrier battle groups. First of all, before the PLA is able to deploy an operational carrier, it will need to obtain or develop substantial numbers of carrier-based aircraft. So far, Chinese efforts to buy up to 50 Russian carrier-capable Su-33s have met with difficulty, as Russia has balked over alleged Chinese intellectual property rights infringements. The Russian MiG-29K is an alternative option, but Russian officials have denied they would ever offer this option to Beijing (having already outfitted the Indian Navy with this model). Wendell Minnick, "MiG-29K for China Dismissed at Aero India," *Defense News*, February 10, 2011, www.defensenews.com/story.php?i=5675101. The PRC is testing an indigenously developed carrier-based aircraft, the J-15 (which is allegedly based on a Su-33 prototype obtained from Ukraine), which some observers suggest may become operational by 2014. However, it is unclear whether the J-15 or any other indigenous carrier-based aircraft would be able to enter serial production early enough to fully equip multiple carrier battle groups by 2030. Gabe Collins and Andrew Erickson, "'Flying Shark' Gaining Altitude: How Might New J-15 Strike Fighter Improve China's Maritime Air Warfare Ability?" *China SignPost* (洞察中国), no. 38 (June 8, 2011), www.chinasignpost.com/2011/06/flying-shark%E2%80%9D-gaining-altitude-how-might-new-j-15-strike-fighter-improve-china%E2%80%99s-maritime-air-warfare-ability.

Similarly, China would also need to construct or reassign a variety of supporting surface ships to these carrier battle groups, improve its antisubmarine warfare capability, and develop more aircraft and helicopters capable of advanced airborne early warning and control (AEW&C) and electronic warfare, all of which will take substantial time and resources. Collins and Erickson, "'Flying Shark' Gaining Altitude"; Garth Hekler, "Chinese Early-Warning Aircraft, Electronic Warfare, and Maritime C4ISR," in *Chinese Aerospace Power*, ed. Erickson and Goldstein, 130–50. Perhaps even more important, it is also highly doubtful that the Chinese will have the operational experience by 2030 to enable them to sustain multiple carrier battle groups and effectively utilize them at a level comparable to the U.S. Navy, given the immense complexities of operating an aircraft carrier and its attendant battle group.

Observers also note that China's carriers will likely involve far less complexity than those of the United States. For example, the PLAN will almost certainly model its carriers' aircraft launch mechanisms after the "ski jump" (or STOBAR) method of the Varyag, rather than the more advanced catapult (or CATOBAR) methods of American carriers. Such a design will greatly restrict the number and type of aircraft Chinese carriers can host, the sortie rate it can sustain, and the distance to which it can project power. For example, while a STOBAR carrier could launch certain fighter aircraft, it would likely be unable to launch tankers, bombers, or transport aircraft, which would preclude it from serving as a platform for long-range strike missions. Nan Li and Christopher Weuve, "Chinese Aircraft Carrier Development: The Next Phase," in *Chinese Aerospace Power*, ed. Erickson and Goldstein, 209–24.

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83. Patch, "Thoroughbred Ship-Killer." Another possible future growth area for the PLAN's capabilities is unmanned underwater vehicles. The PLAN has reportedly developed an unmanned undersea vehicle (UUV) for hunting and destroying mines, and it may be interested in using UUVs for assisting in naval reconnaissance. Andrew S. Erickson and Michael S. Chase, "Informatization and the Chinese People's Liberation Army Navy," in *The Chinese Navy: Expanding Capabilities, Evolving Roles*, edited by Phillip C. Saunders, Christopher Yung, Michael Swaine, and Andrew Nien-Dzu Yang (Washington, D.C.: National Defense University Press, 2011); Richard D. Fisher Jr., "Robot Wars: China's Weapons Research Gains Pace," *Jane's Intelligence Review*, September 2010. However, other observers—for example, Bill Murray of the Naval War College—have expressed skepticism that UUVs will be a practical element of the Chinese force structure within the time frame of this study, given the enormous difficulties of operating UUVs and the lack of advantages they provide over other technologies (personal correspondence with the authors).
84. Bernard Cole, "China's Naval Modernization: Cause for Storm Warnings?" presentation given at National Defense University's 2010 Pacific Symposium, Washington, D.C., June 16, 2010.
85. See Captain Bernard D. Cole, U.S. Navy (Retired), "Drawing Lines at Sea," *Proceedings Magazine* 137/11/1, 305 (November 2011), www.usni.org/magazines/proceedings/2011-11/drawing-lines-sea.
86. Oriana Skylar Mastro and Mark Stokes, *Airpower Trends in Northeast Asia: Implications for Japan and the U.S.-Japan Alliance* (Arlington, Va.: Project 2049 Institute, 2011), http://project2049.net/documents/MASTRO_STOKES_JAPAN_AIRPOWER_PAPER.pdf.
87. Roger Cliff, "The Development of China's Air Force Capabilities," testimony presented before the U.S.-China Economic and Security Review Commission on May 20, 2010; IISS, *Military Balance 2012*.
88. *Jane's All the World's Aircraft 2011–2012*.
89. IISS, *Military Balance 2012*.
90. Roger Cliff, "Chinese Military Aviation Capabilities, Doctrine, and Missions," in *Chinese Aerospace Power*, ed. Erickson and Goldstein, 243–54.
91. IISS, *Military Balance 2012*; *Jane's All the World's Aircraft 2011–2012*; Cliff, "Chinese Military Aviation Capabilities."
92. *Jane's All the World's Aircraft 2011–2012*; OSD, *Annual Report to Congress... 2011*.
93. Over the past decade, the aviation division of the PLA Navy has begun to perform more integrated training with the naval division, including surface combatants and submarines. The emphasis in this joint training has moved from oppositional training between the different units to coordinated training where they work together to achieve a mission. Some of this training has involved combat scenarios at sea that have involved air-naval power projection. Kevin Lanzit and David Chen, "Integrating Aerial Platforms for Maritime Strike," in *Chinese Aerospace Power*, ed. Erickson and Goldstein, 255–74.
94. Gabe Collins, Michael McGauvran, and Timothy White, "Trends in Chinese Aerial Refueling," in *Chinese Aerospace Power*, ed. Erickson and Goldstein, 193–208.
95. Collins, McGauvran, and White, "Trends in Chinese Aerial Refueling"; Flaherty, "Red Wings Ascendant."
96. Lanzit and Chen, "Aerial Platforms."
97. Flaherty, "Red Wings Ascendant."
98. The authors are grateful to Taylor Fravel for his comments on this point. See also Hekler, "Early-Warning Aircraft"; Richard D. Fisher Jr., "Maritime Employment of PLA Unmanned Aerial Vehicles," in *Chinese Aerospace Power*, ed. Erickson and Goldstein, 108–29.
99. See James C. Bussert, "Chinese Navy Employs UAV Assets," *Signal Magazine Online*, April 2012, www.afcea.org/content/?q=node/2918; Fisher, "Maritime Employment"; and Major Darin L. Gaub, "The Children of Aphrodite: The Proliferation and Threat of Unmanned Aerial Vehicles in the Twenty-First Century," monograph

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published by School of Advanced Military Studies, U.S. Army Command and General Staff College, 2011, www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA546414.

100. Mastro and Stokes, *Air Power Trends*.
101. Collins and Erickson, "Flying Shark' Gaining Altitude."
102. Andrew Erickson and Gabe Collins, "Taking Off: Implications of China's Second Stealth Fighter Test Flight," China Real Time Report, *Wall Street Journal*, November 3, 2012, <http://blogs.wsj.com/chinareal-time/2012/11/03/taking-off-implications-of-chinas-second-stealth-fighter-test-flight>; Christopher Bodeen, "China J-31 Stealth Fighter Plane Prototype Tested Near Shenyang," *Huffington Post*, November 1, 2012, www.huffingtonpost.com/2012/11/01/china-j31-stealth-fighter_n_2056364.html?
103. The U.S. intelligence community estimates that the J-20 will reach initial operational capability by 2018, while PLAAF Deputy Commander Gen. He Weirong has suggested the aircraft may become operational between 2017 and 2019. Cited by Gabe Collins and Andrew Erickson, "China's New Project 718/J-20 Fighter: Development Outlook and Strategic Implications," *China SignPost*, no. 18 (January 17, 2011), www.chinasignpost.com/2011/01/china%E2%80%99s-new-project-718j-20-fighter-development-outlook-and-strategic-implications. Ross Babbage of the Kokoda Foundation suggests that China will likely begin mass production of the J-20 between 2020 and 2025. Babbage, "Australia's Strategic Edge in 2030." Offering an even more ambitious estimate, Gabe Collins and Andrew Erickson suggest that if past and current trends continue, both the J-20 and the J-31 could achieve initial operational capability *before* 2018. They suggest that production of the J-20 could begin as early as 2014, at which time China could afford to produce as many as 20 fighters per year. Collins and Erickson, "China's New Project 718/J-20 Fighter."
104. Cliff, "Chinese Military Aviation Capabilities"; OSD, *Annual Report to Congress ... 2011*; Tai Ming Cheung, "The J-20 Fighter Aircraft and the State of China's Defense Science, Technology, and Innovation Potential," Policy Brief 17, Study of Innovation and Technology in China, January 2011, <http://igcc.ucsd.edu/research/security/SITC/SITCpolicybrief17.pdf>; Gabe Collins and Andrew Erickson, "Jet Engine Development in China: Indigenous High-Performance Turbofans Are a Final Step Toward Fully Independent Fighter Production," *China SignPost*, no. 39 (June 26, 2011); Andrew Erickson and Gabe Collins, "Double Vision: Making Sense of China's Second 'Stealth' Fighter Prototype," China Real Time Report, *Wall Street Journal*, September 18, 2012, <http://blogs.wsj.com/chinarealtime/2012/09/18/double-vision-making-sense-of-chinas-second-stealth-fighter-prototype>. As Erickson and Collins (2012) write, "Stealthiness depends not only on geometry but also on radar-absorbent coatings on exterior surfaces, particularly the leading edges of wings and other reflective points. This 'sensitive skin' degrades constantly and has to be maintained vigilantly to retain its effectiveness, but China lacks experience with such 'defense dermatology.'"
105. See, for example, William S. Murray, "Revisiting Taiwan's Defense Strategy," *Naval War College Review* 61, no. 3 (Summer 2008), www.usnwc.edu/getattachment/ae650b06-a5e4-4b64-b4fd-2bcc8665c399/Revisiting-Taiwan-s-Defense-Strategy---William-S--.
106. Ken Allen, personal correspondence with the authors, October 25, 2012.
107. Cliff, "Chinese Military Aviation Capabilities."
108. OSD, *Annual Report to Congress ... 2011*.
109. *Ibid.*; Blasko, *Chinese Army Today*. For a discussion of the advantages in a modular brigade approach in the context of the U.S. Army, see Richard L. Kugler, "Case Study in Army Transformation: Creating Modular Forces," *Case Studies in National Security Transformation*, no. 14 (April 2008), www.ndu.edu/CTNSP/docUploaded/Case%2014%20Army%20Transformation%20Creating%20Modular%20Forces.pdf.
110. Dennis Blasko estimates that the PLA possesses between 700 and 800 rotary-wing airframes in total (500 in the PLA and around 100 each in the PLAN and PLAAF), with the majority of the new helicopters entering service from the Mi-17 series imported from Russia. These would be most relevant for inserting force in a Taiwan-related contingency, as well as for military operations other than war. See Dennis Blasko, "Chinese Helicopter Development: Missions, Roles, and Maritime Implications," in *Chinese Aerospace Power*, ed. Erickson and Goldstein, 154-76.

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111. OSD, *Annual Report to Congress ... 2011*. In 2010, China successfully intercepted a MRBM in midflight, using the SC-19 missile, which had previously been used as a payload booster for its 2007 ASAT test. U.S. intelligence has speculated that the 2007 test may have been conducted in part to further China's BMD capabilities. Thus, there is evidently a significant connection between China's antisatellite and antimissile capabilities. Tim Ross and Holly Watt, "WikiLeaks: U.S. vs China in Battle of the Anti-Satellite Space Weapons," *Telegraph*, February 2, 2011, www.telegraph.co.uk/news/worldnews/wikileaks/8299491/WikiLeaks-US-vs-China-in-battle-of-the-anti-satellite-space-weapons.html.
112. Eric Hagt and Matthew Durnin, "Space, China's Tactical Frontier," *Journal of Strategic Studies* 34, no. 5 (2011), www.tandfonline.com/doi/full/10.1080/01402390.2011.610660. Hagt and Durnin write: "Although China still has a long way to go before it has continuous, real-time tactical coverage, even of a regional maritime environment, it now has frequent and dependable coverage of stationary targets and at least a basic ability to identify, track, and target vessels at sea."
113. Testimony presented at "The Dragon's New Eyes: China's Space-Based Surveillance Capabilities, Doctrine, Strategy, and Implications," November 9, 2011.
114. See "Dongfanghong 4," *Dragon in Space*, May 26, 2012, www.dragoninspace.com/communications/dfh4.aspx.
115. OSD, *Annual Report to Congress ... 2012*; David Lague, "New Satellites to Extend China's Military Reach," Reuters, December 29, 2011, www.reuters.com/article/2011/12/29/us-china-military-idUSTRE7BS0AM20111229; Andrew Erickson, "Satellites Support Growing PLA Maritime Monitoring and Targeting Capabilities," *China Brief* 11, no. 3 (February 10, 2011), [www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=37490&tx_ttnews\[backPid\]=517](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=37490&tx_ttnews[backPid]=517).
116. OSD, *Annual Report to Congress ... 2012*; Xin Dingding, "Satellite Launch Completes Network," *China Daily*, July 27, 2012, www.chinadaily.com.cn/china/2012-07/27/content_15622172.htm.
117. Authors' personal correspondence with Bill Murray. See also Eric Hagt, "Integrating China's New Aerospace Power in the Maritime Realm," in *Chinese Aerospace Power*, ed. Erickson and Goldstein, 391.
118. OSD, *Annual Report to Congress ... 2012*; Eric Hagt and Matthew Durnin, "Space, China's Tactical Frontier," *Journal of Strategic Studies* 34, no. 5, 2011, www.tandfonline.com/doi/full/10.1080/01402390.2011.610660; Matthew Durnin, "China Adds a Spyglass in Space, Hints at More to Come," China Real Time Report, *Wall Street Journal*, November 11, 2011, <http://blogs.wsj.com/chinarealtime/2011/11/11/china-adds-a-spyglass-in-space-hints-at-more-to-come>.
119. China's current OTHR systems can locate targets with a tracking error of 20 to 40 kilometers, which would only satisfy the bare minimum required for an ASBM to strike a stationary carrier; other missiles with smaller attack radii would require more precise ISR. See Eric Hagt and Matthew Durnin, "China's Anti-Ship Ballistic Missile: Developments and Missing Links," *Naval War College Review* 62, no. 4 (Autumn 2009): 87–115. www.chinasecurity.us/pdfs/others/Hagt&Durnin.pdf; Carlo Kopp, "Advances in PLA C4ISR Capabilities," *China Brief* 10, no. 4 (February 18, 2010).
120. Kopp, "Advances in PLA C4ISR Capabilities"; also see "Tropospheric Scatter Communications Systems," *Air Power Australia*, 2010, www.ausairpower.net/APA-Troposcatter-Systems.html#mozTocId738115.
121. Desmond Ball, "Assessing China's ASAT Program," Nautilus Institute for Security and Sustainability, 2007, www.nautilus.org/publications/essays/apsnet/reports/2007/0714s-ball.
122. Ibid.
123. "China Jamming Test Sparks U.S. Satellite Concerns," Reuters, May 10, 2006, www.usatoday.com/tech/news/2006-10-05-satellite-laser_x.htm.
124. Michael E. O'Hanlon, "Balancing U.S. Security Interests in Space," in *Toward a Theory of Spacepower: Selected Essays*, edited by Charles D. Lutes and Peter L. Hays (Washington, D.C.: Institute for National Strategic Studies at National Defense University, 2011), www.ndu.edu/press/lib/pdf/spacepower/spacepower.pdf; *Weapons Systems Technology Information Analysis Center* 3, no. 2, <http://wstiac.alionscience.com/pdf/Vol3Num2.pdf>.

125. James Mulvenon, "PLA Computer Network Operations: Scenarios, Doctrine, Organizations, and Capability," in *Beyond the Strait*, ed. Kamphausen, Lai, and Scobell.
126. Bryan Krekel, Patton Adams, and George Bakos, *Occupying the Information High Ground: Chinese Capabilities for Computer Network Operations and Cyber Espionage*, prepared for U.S.-China Economic and Security Review Commission by Northrop Grumman Corp, March 7, 2012, www.uscc.gov/RFP/2012/USCC%20Report_Chinese_CapabilitiesforComputer_NetworkOperationsandCyberEspionage.pdf.
127. Hans M. Kristensen and Robert S. Norris, "Chinese Nuclear Forces, 2011," *Bulletin of the Atomic Scientists* 67, no. 81 (November 2011), <http://bos.sagepub.com/content/67/6/81.full.pdf+html>.
128. Ronald L. Burgess, "Annual Threat Assessment," statement before the Senate Armed Services Committee, February 16, 2012, www.armed-services.senate.gov/statemnt/2012/02%20February/Burgess%2002-16-12.pdf.
129. U.S. Department of Defense, "Military and Security Developments Involving the People's Republic of China 2011," 2011, www.defense.gov/pubs/pdfs/2011_cmpr_final.pdf.
130. The Pentagon's most recent report on China's military modernization notes that it is "uncertain" when the JL-2 missile will become fully operational. Members of the Defense Intelligence Agency have suggested that the JL-2 could reach initial operational capability as early as 2014, although previous estimates (not necessarily by the Defense Intelligence Agency) may have overestimated the pace of the JL-2's development. See Burgess, "Annual Threat Assessment"; and Shannon N. Kile, Philip Schell, and Hans M. Kristensen, "Chinese Nuclear Forces," published in the 2012 edition of the *SIPRI Yearbook*, www.sipri.org/yearbook/2012/files/SIPRIYBc07sV.pdf.
131. Mark A. Stokes, "China's Nuclear Warhead Storage and Handling System," Project 2049, March 12, 2010, http://project2049.net/documents/chinas_nuclear_warhead_storage_and_handling_system.pdf; Gregory Kulacki, "Chickens Talking with Ducks: The U.S. Chinese Nuclear Dialogue," *Arms Control Today* (Arms Control Association), October 2011, www.armscontrol.org/act/2011_10/U.S._Chinese_Nuclear_Dialogue#6.
132. China's three most recent defense white papers—addressing developments in 2010, 2008, and 2006—reiterate, in explicit and categorical terms, its commitment to the no-first-use policy. See *China's National Defense in 2010*; Information Office of the State Council, People's Republic of China, *China's National Defense in 2008*, January 2009, http://english.gov.cn/official/2009-01/20/content_1210227.htm (full-text PDF available at www.fas.org/programs/ssp/nukes/2008DefenseWhitePaper_Jan2009.pdf); Information Office of the State Council, People's Republic of China, *China's National Defense in 2006*, December 2006, www.china.org.cn/english/features/book/194421.htm (full-text PDF available at www.oss.net/dynamaster/file_archive/070102/afdd85e6782a64d-afd3f49ea6bfb9f/2006%20White%20Paper%20on%20PRC%20National%20Defense.pdf). No less important is the fact that Chinese governmental and nongovernmental participants in numerous Track II dialogues have reaffirmed both the leadership's commitment to no first use, as well as the persistence of a deeply rooted aversion to a more expansive and offensively oriented role for China's nuclear weapons (for example, one that would entail a transition toward a limited deterrence posture). This is not to say that the no-first-use policy has not been debated, sometimes fiercely, within unofficial circles, but rather that these debates do not signal any fundamental shifts in China's no-first-use policy and restrictive nuclear doctrine, both of which date back to Mao's era. See Jonathan Holslag, "China's Deterrence Paradox: Explaining China's Minimal Deterrence Strategy," *Handbook of Nuclear Proliferation* (London: Routledge, 2011), www.vub.ac.be/biccs/site/assets/files/Jonathan%20misc/Nuclear.pdf; Conference on "U.S.-China Strategic Nuclear Dynamics: Introduction and Key Findings" Beijing, June 9–10, 2008, http://csis.org/files/media/csis/pubs/081015_intro_and_key_findings.pdf; "Conference on U.S.-China Strategic Nuclear Dynamics: Summary of Key Findings" Beijing, June 20–21, 2006, http://csis.org/files/media/csis/events/060620_china_nuclear_report.pdf.
133. Indeed, Chinese leaders seem to remain highly skeptical of the merits of fielding additional nuclear weapons. For the most part, Chinese civilian and military leaders appear to believe that engaging in an arms race to displace the United States' commanding position in the nuclear domain would be neither prudent nor desirable. In the eyes of many Chinese analysts, nuclear weapons offer relatively little in the way of asymmetric advantages to exploit against the United States. This assessment does not appear to extend to the cyber and space domains, where China is fielding a range of capabilities that could act as force multipliers for its antiaccess arsenal. See David C. Gompert and Philip G. Saunders, "Paradox of Power: Sino-American Strategic Restraint in an Age of Vulnerability," National Defense University, www.ndu.edu/press/paradox-of-power-ch7.html.

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134. It is worth noting, however, that China may not be fully committed to developing a full range of BMD or ASAT capabilities—Chinese experts suggest that China is more focused on preparing for specific scenarios that might arise in Taiwan or the South China Sea, and ensuring that it has the latent technological capacity to respond to threats against its nuclear forces. See Lora Saalman, “China and the U.S. Nuclear Posture Review,” Carnegie Papers, Carnegie-Tsinghua Center for Global Policy, February 2011, http://carnegieendowment.org/files/china_posture_review.pdf.
135. Philip Saunders, “China’s Nuclear Forces and Strategy,” testimony before U.S.-China Economic and Security Review Commission, March 26, 2012, www.uscc.gov/hearings/2012hearings/written_testimonies/12_3_26/saunders.pdf.
136. For an overview of issues related to China’s nuclear doctrine, strategy, and decisionmaking, see M. Taylor Fravel and Evan S. Medeiros, “China’s Search for Assured Retaliation,” *International Security* 35, no. 2 (Fall 2010): 48–87, www.mitpressjournals.org/doi/pdf/10.1162/ISEC_a_00016.
137. *China’s National Defense in 2010*; Kevin Pollpeter, “Chapter 5: Towards an Integrative C4ISR System: Informationization and Joint Operations in the People’s Liberation Army,” in *The PLA at Home and Abroad: Assessing the Operational Capabilities of China’s Military*, edited by Roy Kamphausen, David Lai, and Andrew Scobell (Seattle: National Bureau of Asian Research, 2009), 193–235; and “JFJB Roundup on PLA’s Training Fervors to Raise ‘System of Systems’ Capability,” *Jiefangjun Bao Online*, August 7, 2010, OSC CPP20100807706012.
138. Pollpeter, “Towards an Integrative C4ISR System.”
139. The PLA also often speaks of “coordination” in conjunction with command and control, a more U.S.-oriented formulation.
140. Ibid.; “PLA Seeks to Overhaul Training Cycle by 2015,” Open Source Center Analysis, October 19, 2011, CPF20110120554001.
141. Lanzit and Chen, “Aerial Platforms”; Raul Pedrozo, “Beijing’s Coastal Real Estate: A History of Chinese Naval Aggression,” *Foreign Affairs*, November 15, 2010, www.foreignaffairs.com/articles/67007/raul-pedrozo/beijings-coastal-real-estate.
142. Pollpeter, “Towards an Integrative C4ISR System.”
143. *China’s National Defense in 2010*; *China’s National Defense in 2008*.
144. Kevin McCauley, “PLA Developing Joint Operations Capability (Part One): Joint Task Force Experimentation,” *China Brief* 11, no. 9 (May 20, 2011); Shambaugh, “Doctrine and Training.” Shambaugh cautions, “No matter how dynamic and adaptable doctrine is in a given military, it still takes a long time to translate doctrinal innovation into actual strategy and tactical changes in training and on the battlefield. In the U.S. military, it normally takes seven or eight years for significant doctrinal change to penetrate to the unit level of the armed forces. For the PLA, it is undoubtedly longer.”
145. “PLA Seeks to Overhaul Training Cycle by 2015,” Open Source Center Analysis, October 19, 2011, CPF20110120554001.
146. Remarks by Vivek Arora, “Rebalancing Growth in Asia: Economic Dimensions for China,” Carnegie Endowment for International Peace, March 9, 2011, www.carnegieendowment.org/events/?fa=eventDetail&id=3183; Kevin Brown and Justine Lau, “Chinese Demand Drives Regional Recovery,” *Financial Times*, January 7, 2010; Pieter Bottelier, “China: Ahead of the Pack,” *International Economic Bulletin* (Carnegie Endowment for International Peace), January 2010.
147. World Bank, “China Quarterly Update: April 2012,” April 2012; remarks by Markus Rodlauer and Stephen Roach, “China’s Economic Slowdown and Its Policy Implications,” event at Carnegie Endowment for International Peace, September 27, 2012.
148. International Monetary Fund, *People’s Republic of China: Financial System Stability Assessment*, IMF Country Report 11/321 (Washington, D.C.: International Monetary Fund, 2011), www.imf.org/external/pubs/ft/scr/2011/cr11321.pdf.

149. Estimates of China's debt-to-GDP ratio vary widely. The official government figure is 20 percent of GDP. However, when considering a broader range of liabilities, many analysts peg debt at 70 percent of GDP. As Minxin Pei writes, "Once local government debts, costs of re-capitalizing state-owned banks, bonds issued by state-owned banks, and railway bonds are included, China's total debt amounts to 70 to 80 percent of GDP, roughly the level of public debt in the United States and the United Kingdom." Taking into account such liabilities as pension commitments, Victor Shih suggests that the ratio could be as high as 150 percent. Minxin Pei, "China's Ticking Debt Bomb," *Diplomat*, July 5, 2011, <http://the-diplomat.com/2011/07/05/china%E2%80%99s-ticking-debt-bomb>; Nicholas Borst, "Chinese Local Government Debt Primer," blog post, Peterson Institute of International Economics, August 9, 2011, www.piie.com/blogs/china/?p=1. See also Michael Pettis, "China's Explosive Debt Growth Can't Continue Much Longer," *Business Insider*, January 24, 2012, www.carnegieendowment.org/2012/01/24/china-s-explosive-debt-growth-can-t-continue-much-longer/972u; and Andrew Erickson and Gabe Collins, "China's S-Curve Trajectory: Structural Factors Will Likely Slow the Growth of China's Economy and Comprehensive National power," *China SignPost*, no. 44 (August 15, 2011), www.chinasignpost.com/2011/08/china%E2%80%99s-s-curve-trajectory-structural-factors-will-likely-slow-the-growth-of-china%E2%80%99s-economy-and-comprehensive-national-power.
150. For an overview of different arguments about Chinese imbalances, see Matthew Plowright, "China: The Road to Rebalancing," *Emerging Markets*, March 5, 2011, www.emergingmarkets.org/Article/2816264/CHINA-The-road-to-rebalancing.html. See also Vivek B. Arora and Roberto Cardarelli, *Rebalancing Growth in Asia: Economic Dimensions for China* (Washington, D.C.: International Monetary Fund, 2011); Michael Pettis, *The Contentious Debate Over China's Economic Transition*, Policy Outlook (Washington, D.C.: Carnegie Endowment for International Peace, 2011), http://carnegieendowment.org/files/china_econ_transition.pdf; Robert Zoellick, "The Big Questions China Still Has to Answer," *Financial Times*, September 1, 2011, www.ft.com/intl/cms/s/0/df766246-d332-11e0-9ba8-00144feab49a.html#axzz1XsEWTwIV.
151. Adam Segal, "Chinese Technology Policy and American Innovation," testimony prepared for the U.S.-China Economic and Security Review Commission, June 15, 2011, www.cfr.org/china/chinese-technology-policy-american-innovation/p25295. Segal states, "Overall, the Chinese approach is likely to be counterproductive. It is difficult to drive innovation with a top-down technology policy that picks national champions and critical technologies, and fails to protect intellectual property. Most important, the software of innovation—the social, political, and cultural institutions and understandings that help move ideas from lab to marketplace—remain undeveloped." See also Alan Wheatley, "Avoiding the Middle Income Trap," *New York Times*, October 25, 2010, www.nytimes.com/2010/10/26/business/global/26inside.html.

In a slightly more nuanced portrayal of the innovation issue, Dan Breznitz argues, "China excels in different kinds of process or manufacturing innovation. This includes design for manufacturing, organization of production, sourcing and logistics.... This is production innovation. China does innovate. In novel-product innovation, China is very weak. There's no way around it. The central government is the main antagonist in the process. The political economic institutions and system in China make it so entrepreneurs can't make profit by developing novel innovation. But this same system makes process and second-generation innovation very profitable and successful." Breznitz thus concludes, "Over the next 15 years, we think that China's model is not just sustainable, but that China's power will actually grow. I don't think China needs to worry about indigenous innovation right now." Quoted by David Barboza, "Moving Up the Value Chain," *Economix Blog*, *New York Times*, August 4, 2011, <http://economix.blogs.nytimes.com/2011/08/04/moving-china-up-the-value-chain>.

152. Michael Pettis argues that if China fails to implement these reforms (a likely scenario), it could enter a prolonged period of economic stagnation similar to that of Japan during its post-1980s "lost decades." See Michael Pettis, *China Faces a Difficult Economic Transition*, Carnegie Commentary, (Washington, D.C.: Carnegie Endowment for International Peace, 2010), www.carnegieendowment.org/publications/index.cfm?fa=view&id=41431; Michael Pettis, "Is China Turning Japanese?" *Foreign Policy*, August 19, 2010; Michael Pettis, "Chinese Consumption and the Japanese 'Sorpasso,'" *China Financial Markets*, August 10, 2010, www.carnegieendowment.org/publications/index.cfm?fa=view&id=41397.
153. Eurasia Group, "China's Great Rebalancing Act," August 2011, <http://eurasiagroup.net/item-files/China's%20Great%20Rebalancing%20Act/China%20Rebalancing.pdf>; Janamitra Devan, Micah Rowland, and Jonathan Woetzel, "A Consumer Paradigm for China," *McKinsey Quarterly*, no. 4 (August 2009): 36–49. Devan, Rowland, and Woetzel outline different possible trajectories for Chinese consumption rates over the next fifteen years, based on a base case (no new action to raise consumption), a policy case (full implementation of proconsumption measures announced by that point), and a stretch case (a push beyond the current agenda to implement broad changes in the economy's structure). In the base case, China's consumption would rise to 39 percent of GDP, a gain of just

3 percentage points above the current level. In the policy scenario, consumption could account for as much as 45 percent of GDP, still well below levels in other major economies. If China's leaders committed themselves to the more aggressive program of comprehensive reform envisioned in the stretch scenario, however, they could raise private consumption above 50 percent of GDP by 2025. The last trajectory would bring China's consumption rate into line with those in the developed nations of Europe and Asia.

154. See remarks by Stephen Roach, "China's Economic Slowdown and Its Policy Implications," event at Carnegie Endowment for International Peace, September 27, 2012; Pieter Bottelier, "Discussion on the U.S. Debts Crisis' Impact on the Global Economy," interview at Johns Hopkins School of Advanced and International Studies, Washington, D.C., July 27, 2011, www.chinausfocus.com/uncategorized/pieter-bottelier-the-message-sent-to-the-world-about-us%E2%80%99s-ability-to-anchor-the-global-economy-through-the-debt-crisis; Stephen Roach. "To Grow Sustainably, China Must Move Away from Its Export Focus," *Economist*, April 17, 2011, www.economist.com/economics/by-invitation/guest-contributions/grow_sustainably_china_must_move_away_its_export_focus; Yukon Huang, "Misinterpreting China's Growth," *Wall Street Journal*, August 25, 2011, <http://online.wsj.com/article/SB10001424053111904875404576527752538019060.html>.
155. Prime Sarmiento, "China's 12th Five-Year Plan Seen to Boost Domestic Consumption," Xinhua, March 3, 2011, http://news.xinhuanet.com/english2010/china/2011-03/03/c_13760001.htm; Shen Hong and Aaron Back, "China Stresses Stability Amid Further Growth," *Wall Street Journal*, March 6, 2010.
156. Joseph Casey and Katherine Koleski. "Backgrounder: China's Twelfth Five-Year Plan," U.S.-China Economic and Security Review Commission, June 24, 2011, www.uscc.gov/researchpapers/2011/12th-FiveYearPlan_062811.pdf. Casey and Koleski note that the Twelfth Five-Year Plan ratchets up R&D funding from 1.75 percent to 2.2 percent of GDP: "Development and a move up the value chain sits at the heart of the 12th FYP." They express optimism about the likelihood of Chinese success in this arena, pointing to the success of the Eleventh Five-Year Plan, which identified clean energy technology as a target industry for innovation. As a result, Chinese companies are now leading the world in solar and wind power.
157. See remarks by Pieter Bottelier, "Rebalancing Growth in Asia: Economic Dimensions for China," event at Carnegie Endowment for International Peace, March 9, 2011, www.carnegieendowment.org/events/?fa=eventDetail&id=3183; Sam Jones, Alexandra Stevenson, and Robert Cookson, "Bulls and Bears Battle Over China's 'Miracle,'" *Financial Times*, October 15, 2010, www.ft.com/cms/s/0/de86f09a-d882-11df-8e05-00144feabdc0.html; Albert Keidel, "Imbalances Are Overstated," *China Economic Quarterly* 13, no. 4 (December 2009); Keith Bradsher, "In Downturn, China Sees Path to Growth," *New York Times*, March 16, 2009, www.nytimes.com/2009/03/17/business/worldbusiness/17compete.html?_r=1&hp; Albert Keidel, "Reversing the Global Slowdown," *Far Eastern Economic Review*, November 13, 2008, www.feer.com/economics/2008/november/Reversing-the-Global-Slowdown; Albert Keidel, "China and the Global Financial Crisis," based on a luncheon speech delivered at meeting of U.S.-China Business Council, Washington, D.C., October 16, 2008; Nipa Piboontanasawat and Kevin Hamlin, "China's Economy to Recover Strongly, Central Bank Adviser Says," Bloomberg, March 25, 2009, www.bloomberg.com/apps/news?pid=20601080&sid=amFhSMVmyUUA&refer=asia; Zhiwu Chen, "Economic Crisis Could Push Reform in China," *YaleGlobal*, November 12, 2008, <http://yale-global.yale.edu/display.article?id=11596>.
158. See remarks by Stephen Roach, "China's Economic Slowdown and Its Policy Implications," event at Carnegie Endowment for International Peace, September 27, 2012; Yukon Huang, "The Myth of China's Unbalanced Growth," *Financial Times*, June 14, 2011, <http://blogs.ft.com/the-a-list/2011/06/14/the-myth-of-chinas-unbalanced-growth>; and Keidel, "Imbalances Are Overstated."
159. See Yukon Huang, "Misinterpreting China's Growth," *Wall Street Journal*, August 25, 2011, <http://online.wsj.com/article/SB10001424053111904875404576527752538019060.html>. Huang writes, "It is almost certain that the official numbers [for consumption] understate reality. On the other hand, estimates of the share of investment in GDP are too high.... Overall, GDP might be 10–15% higher; the true consumption-to-GDP ratio may be 40–45% and investment 35–40%. Yes, these ratios are still extreme compared to other countries. But they are not that unusual given China's economic structure and its stage of development.... The flawed data explain about half of the difference, but the rest is admittedly due to Beijing's policies." See also Qing Wang and Steven Zhang, "China's Under-Consumption Over-Stated," Morgan Stanley Global Economic Forum, September 15, 2009, www.morganstanley.com/views/gef/archive/2009/20090915-Tue.html#anchore2873f99-a1f4-11de-b417-0db96b986471. The authors state, "While the domestic dimension of China's under-consumption—namely consumption growth having lagged investment and export growth in China—is a valid observation, the absolute level of growth of China's personal consumption is remarkably strong in a global context."

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160. "Interview with Li Shantong on Prospects for PRC Economic Growth to 2030," *China Economic Times (Zhongguo Jingji Shibao)*, July 8, 2011, OSC CPP20110708308001.
161. World Bank and Development Research Center of the State Council, People's Republic of China, *China 2030: Building a Modern, Harmonious, and Creative High-Income Society*, Conference Edition (Washington, D.C.: World Bank, 2012), www.worldbank.org/content/dam/Worldbank/document/China-2030-complete.pdf; Economist Intelligence Unit, *Country Report: China*, August 2012, www.businesswithoutborders.com/files/2012/04/EIU_China_Country_Report_April_2012.pdf; Pieter Bottelier, "Discussion on the U.S. Debts Crisis' Impact on the Global Economy," interview at Paul H. Nitze School of Advanced and International Studies at Johns Hopkins University, Washington, D.C., July 27, 2011, www.chinausfocus.com/uncategorized/pieter-bottelier-the-message-sent-to-the-world-about-us%E2%80%99s-ability-to-anchor-the-global-economy-through-the-debt-crisis; Bottelier, quoted by Matthew Plowright, "China: The Road to Rebalancing," *Emerging Markets*, March 5, 2011, www.emergingmarkets.org/Article/2816264/CHINA-The-road-to-rebalancing.html. Bottelier is an economist and China studies professor at the Paul H. Nitze School of of Advanced International Studies.
162. Kevin Lim, "'Meaningful Probability' of a China Hard Landing: Roubini," Reuters, June 13, 2011, www.reuters.com/article/2011/06/13/us-roubini-idUSTRE75C1OF20110613; Ian Dreyer, "China's Coming Era of Slower Growth: Are Western Economies Prepared?" East Asia Forum, July 2, 2011, www.eastasiaforum.org/2011/07/02/chinas-coming-era-of-slower-growth-are-western-economies-prepared/; David J. Lynch, "China Growth Rate Seen Less Than 5% by 2016 in Global Poll," Bloomberg, September 29, 2011, www.businessweek.com/news/2011-09-29/china-growth-rate-seen-less-than-5-by-2016-in-global-poll.html. See also Erickson and Collins, "China's S-Curve Trajectory."
163. Michael Pettis, "A Slowdown Is Good for China and the World," *Financial Times*, July 23, 2012, www.ft.com/intl/cms/s/0/fa0b3eba-d4ad-11e1-bb88-00144feabd0.html#axzz27ndT2Ze3; Michael Pettis, "China's Economy Is Headed for a Slowdown," *Wall Street Journal*, August 10, 2011, <http://online.wsj.com/article/SB1000142405311904140604576498353661884930.html>.
164. See Jack Goldstone, "The Coming Chinese Collapse," *Foreign Policy*, no. 99 (Summer 1995): 35–52; Gordon G. Chang, *The Coming Collapse of China* (New York: Random House, 2001); Joe Studwell, *The China Dream: The Quest for the Last Great Untapped Market on Earth* (London: Profile Books, 2002); and David Barboza, "Contrarian Investor Sees Economic Crash in China" (article about James Chanos), *New York Times*, January 7, 2010, www.nytimes.com/2010/01/08/business/global/08chanos.html.
165. China's official 2012 defense budget, announced at the National People's Congress in March 2012, was about 670 billion yuan (\$106.4 billion), an 11.2 percent increase in real terms over 2011. "China's Defense Budget to Grow 11.2 Pct in 2012: Spokesman," Xinhua, March 4, 2012, http://news.xinhuanet.com/english/china/2012-03/04/c_131445012.htm. For official numbers, see "China's Defense Budget to Grow 12.7 pct in 2011: Spokesman," Xinhua, March 4, 2011, http://news.xinhuanet.com/english2010/china/2011-03/04/c_13761030.html; and "China's Defense Spending to Increase 7.5% in 2010: Draft Budget," Xinhua, March 5, 2010, http://news.xinhuanet.com/english2010/china/2010-03/05/c_13198036.htm.

For SIPRI data on 2010 and 2011, see <http://milexdata.sipri.org>. SIPRI's estimate for PRC military expenditures was calculated using a methodology developed by Shaoguang Wang of the China University of Hong Kong in a 1999 study; it incorporates elements of defense spending that are not figured into China's official numbers but are generally included in national defense budget totals. For more information, see SIPRI, "Sources and Methods for SIPRI Military Expenditure Data," www.sipri.org/databases/milex/sources_methods. See also SIPRI, Military Expenditures Database, <http://milexdata.sipri.org>. The SIPRI figures for 2011 and 2010 are reported in constant 2010 U.S. dollars. See also Sam Perlo Freeman, Julian Cooper, Olawale Ismail, Elisabeth Skons, and Carina Solmirano, *SIPRI Yearbook 2011: Armaments, Disarmament and International Security* (Stockholm: SIPRI, 2011), 159–61, www.sipri.org/yearbook/2011/files/SIPRIYB1104-04A-04B.pdf. For the Pentagon's estimate for 2011 Chinese defense spending, see OSD, *Annual Report to Congress ... 2012*. For its estimate for 2010 spending, see OSD, *Annual Report to Congress ... 2011*. It is unclear what methodology the Pentagon used in calculating this estimated range. IISS's estimate includes spending on items such as foreign weapons purchases, R&D, and the People's Armed Police, in addition to the PRC's official defense expenditures. IISS, *Military Balance 2012*, chapter 6, "Asia," 215.

The SIPRI, IISS, and Department of Defense estimates are all ultimately just educated guesses, in large part because of a lack of transparency in the Chinese military budget, along with different methods of calculating exchange rates. As the United States–China Policy Foundation has stated, "We do not yet have enough informa-

tion to make a reasonable estimate of the total amount of Chinese ‘defense-related spending.’” Dennis J. Blasko, Charles W. Freeman, Jr., Stanley A. Horowitz, Evan S. Medeiros, and James C. Mulvenon, “Defense-Related Spending in China: A Preliminary Analysis and Comparison with American Equivalents,” United States–China Policy Foundation, report based on November 2006 delegation, www.uscpf.org/v2/pdf/defensereport.pdf; Andrew S. Erickson and Adam P. Liff, “Understanding China’s Defense Budget: What It Means, and Why It Matters,” Pacific Forum CSIS, Center for Strategic and International Studies, March 9, 2011, <http://csis.org/files/publication/pac1116.pdf>.

Also, it is important to note that most countries’ defense spending includes some “off-budget” items. For example, Japan’s defense budget does not include pensions; if it did, Japanese defense expenditures would amount to 1.3 percent of GNP. The Japanese defense budget also does not include space, intelligence, and plutonium. The authors are grateful to Eric Heginbotham for his assistance in making this point.

166. Comparison between the United States and China made using SIPRI data on U.S. and PRC military expenditures in 2011 measured in nominal 2010 U.S. dollars. Of course, one must exercise caution when drawing such direct comparisons, because China’s military resources are concentrated in East Asia, while America’s are dispersed throughout the world. Nonetheless, it is sobering that even the high-end Pentagon estimate for China’s total defense spending in 2011 (\$180 billion) was merely equivalent to the 2011 budget for the U.S. Navy alone (\$179 billion). See OSD, *Annual Report to Congress ... 2012*; and U.S. Department of the Navy Office of Budget, “Highlights of the Department of the Navy FY 2011 Budget,” February 2010, www.finance.hq.navy.mil/FMB/11pres/Highlights_book.pdf, 8–3. Indeed, as is often noted, U.S. defense spending remains far ahead of that of all other powers by a wide margin—in 2010, America accounted for 43 percent of total global military spending. SIPRI, “World Military Spending Reached \$1.6 Trillion in 2010, Biggest Increase in South America, Fall in Europe According to New SIPRI Data,” April 11, 2010, www.sipri.org/media/pressreleases/milex.
167. See Eric Heginbotham and George J. Gilboy, *Chinese and Indian Strategic Behavior* (New York: Cambridge University Press, 2012), “Appendix,” 308. The IISS report also notes, “No specific PPP rate exists for the military sector, and its use for this purpose should be treated with caution. Furthermore, there is no definitive guide as to which elements of military spending should be calculated using the limited PPP rates available. The figures presented here are only intended to illustrate a range of possible outcomes depending on which input variables are used.” IISS, *Military Balance 2012*, “Part Two: Explanatory Notes,” 487.
- Other observers have argued that estimates of Chinese defense spending should be almost quadrupled to account for PPP, pointing to sources such as the International Monetary Fund, World Bank, and the U.S. Central Intelligence Agency that offer a PPP conversion factor of nearly 4.0 for calculating China’s GDP in PPP terms. However, because there is disagreement over the correct PPP conversion factor to use, and because a significant portion of China’s defense budget is subject to global market exchange rates (for example, in energy costs and weapons acquisition), this methodology is suspect. See *China’s Military Buildup: Implications for U.S. Defense Spending*, Defending Defense Project Report (Washington, D.C.: American Enterprise Institute, Heritage Foundation, and Foreign Policy Initiative, 2011), www.foreignpolicy.org/files/uploads/images/DefendingDefenseChina.pdf; and Justin Logan, “Defending Defense’s Dubious Data,” *National Interest*, March 11, 2011, <http://nationalinterest.org/blog/the-skeptics/defending-defense%E2%80%99s-dubious-data-5013>.
168. David Shambaugh, “Chapter 5: Budget and Finance,” in *Modernizing China’s Military*, 184–224.
169. For a survey of possible explanations and Chinese justifications for the dramatic increases in PRC defense spending, see Erickson and Liff, “Understanding China’s Defense Budget.” See also Shambaugh, “Chapter 5: Budget and Finance”; and Dennis Blasko, “An Analysis of China’s 2011 Defense Budget and Total Military Spending—The Great Unknown,” *China Brief* 11, no. 4 (March 10, 2011).
170. Blasko, “Analysis of China’s 2011 Defense Budget”; Dennis J. Blasko, Charles W. Freeman Jr., Stanley A. Horowitz, Evan S. Medeiros, and James C. Mulvenon, “Defense-Related Spending in China: A Preliminary Analysis and Comparison with American Equivalents,” United States–China Policy Foundation, report based on November 2006 delegation, www.uscpf.org/v2/pdf/defensereport.pdf. See also Shambaugh, “Chapter 5: Budget and Finance,” 184–224; Erickson and Liff, “Understanding China’s Defense Budget”; and Andrew Erickson, “Chinese Defense Expenditures: Implications for Naval Modernization,” *China Brief* 10, no. 8 (April 16, 2010).
171. M. Taylor Fravel, “China’s Search for Military Power,” *Washington Quarterly*, Summer 2008, 125–41. See also Erickson, “Chinese Defense Expenditures”; and “China’s Defense Budget Surges—Yet Again,” *Asia Pacific Defence Reporter*, April 8, 2011, www.asiapacificdefencereporter.com/articles/138/CHINA-S-DEFENCE-BUDGET-

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SURGES-YET-AGAIN. The latter article cites Andrei Chang as arguing that, accounting for “stealthy” off-budget items, Chinese military spending could actually increase by as much as 25 percent annually in the coming years.

172. Conversation with Yukon Huang, senior associate at the Carnegie Endowment for International Peace and former country director for China at the World Bank, March 2012.
173. Data for GDP and government expenditure from National Bureau of Statistics, People's Republic of China, *2011 Statistical Yearbook*, www.stats.gov.cn/english/statisticaldata/yearlydata. Data for defense expenditures for 1995 through 2006 were taken from *2007 Statistical Yearbook*; data for defense expenditures for 2007, 2008, 2009, and 2010 were taken from, respectively, *2008 Statistical Yearbook*, *2009 Statistical Yearbook*, *2010 Statistical Yearbook*, and *2011 Statistical Yearbook*.
174. In the short to medium terms, *Jane's Defense Budgets* projects that spending on the Army will decrease as a share of the budget (from 33 percent in 2010 to 30 percent in 2015), while funding for the PLA Navy and the PLA Air Force will increase (from 32 and 30 percent of the budget in 2010 to 34 and 31 percent in 2015, respectively). This report also argues that China is unlikely to drastically alter the way funds are allocated among different categories of spending (that is, procurement, R&D, personnel, operations and management), though there will likely be a slight decline in the share going to personnel as the number of active-duty personnel continues to decline. “China's Defense Budget,” *Jane's Defense Budgets*, April 21, 2011. See also Joseph Y. Lin, “China Focuses on ‘Far-Sea Defense,’” *Asia Times*, July 9, 2010, www.atimes.com/atimes/China/LG09Ad02.html. This article cites Xu Guangyu, a retired PLA major general, as predicting that, although the PLA would indeed likely shift funding away from the Army and toward the Navy and Air Force, it would not likely implement any drastic changes.
175. Although Beijing is likely to narrow the gap between PRC and U.S. military spending, China's purchasing power parity advantage in military spending is likely to diminish as its currency appreciates, its domestic inflation rates outpace those of America, and its GDP continues to converge with that of the United States.
176. Business Monitor International Ltd., “China Defence & Security Report: Q3 2011 Market Overview,” *BMI Defence & Security Report*, July 2011. See also Cheung, “The J-20 Fighter Aircraft.”
177. To a much lesser extent, China has also relied upon France, Switzerland, Ukraine, the United Kingdom, and Israel for weapons acquisition. For data and detailed information on China's international arms imports over the years, refer to the SIPRI Arms Transfers Database, <http://armstrade.sipri.org/armstrade/page/values.php>. See also Cheung, “J-20 Fighter Aircraft”; OSD, *Annual Report to Congress ... 2011*; Business Monitor International Ltd., “China Defence & Security Report: Q3 2011 Market Overview,” *BMI Defence & Security Report*, July 2011; Bates Gill and Taeho Kim, *China's Arms Acquisitions from Abroad: A Quest for 'Superb and Secret Weapons'*, SIPRI Research Report 11 (Oxford: Oxford University Press, 1995), <http://books.sipri.org/files/RR/SIPRIRR11.pdf>.
178. Data from SIPRI Arms Transfers Database, <http://armstrade.sipri.org/armstrade/page/values.php>. Business Monitor International Ltd., “China Defence & Security Report: Q3 2011 Market Overview.” This report suggests that observers within Taiwan believe Russia may have made a secret deal with China, transferring technology for AEW&C systems. David Lague, “Chinese Submarine Fleet Is Growing, Analysts Say,” *New York Times*, December 5, 2008, www.nytimes.com/2008/02/25/world/asia/25iht-25submarine.10349022.html. This report suggests that experts believe “the designs of the newest Chinese [Jin-class] submarines show evidence of technical assistance from Russia.” See also Peter J. Brown, “U.S. Satellites Shadow China's Submarines,” *Asia Times Online*, May 13, 2010, www.atimes.com/atimes/China/LE13Ad01.html.
179. See John Pomfret, “Military Strength Eludes China, Which Looks Overseas for Arms,” *Washington Post*, December 25, 2010, www.washingtonpost.com/wp-dyn/content/article/2010/12/24/AR2010122402788.html?hpid=topnews. Pomfret recounts the tension and mutual suspicion that developed in 2004 between Russia and China after China allegedly copied the design of Su-27 fighter jets it bought from Russia under contract, and Russia allegedly agreed to a contract for military transport planes that it was unable to fulfill.
180. Wendell Minnick, “China's AVIC Comes of Age,” *Defense News*, July 25, 2011; Business Monitor International Ltd., “China Defence & Security Report: Q3 2011 Market Overview.”
181. In his report delivered to the Seventeenth Party Congress, Chinese president Hu Jintao stated, “We must establish sound systems of weapons and equipment research and manufacturing ... and combine military efforts with civilian support, build the armed forces through diligence and thrift, and blaze a path of development with Chinese

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characteristics featuring military and civilian integration.” Hu Jintao, “Hold High the Great Banner of Socialism with Chinese Characteristics and Strive for New Victories in Building a Moderately Prosperous Society in All Respects,” Report to the Seventeenth National Congress of the Communist Party of China, October 15, 2007, http://news.xinhuanet.com/english/2007-10/24/content_6938749.htm. Hu’s speech was also cited in OSD, *Annual Report to Congress ... 2011*.

182. *China’s National Defense in 2010*; Tai Ming Cheung, “The Remaking of the Chinese Defense Industry and the Rise of the Dual-Use Economy,” testimony before the U.S.-China Economic and Security Review Commission Hearing on China’s Proliferation and the Impact of Trade Policy on Defense Industries in the United States and China, July 13, 2007, www.uscc.gov/hearings/2007hearings/transcripts/july_12_13/taimingcheung.pdf. Cheung explains that Beijing is pursuing “a two-pronged approach” in its efforts to modernize its defense industries: (1) “the internal re-engineering of the defense industry that focuses on breaking down bureaucratic barriers and paring back the role of the state in conjunction with the nurturing of a more competitively minded and entrepreneurial institutional culture ...”; (2) the realignment “of the defense industry and [its] integrat[ion] into the civilian economy to form a dual-use technological and industrial base that serves both military and civilian needs.” Indeed, many of these efforts have been pursued in part out of recognition of the need to support innovation by private sector defense companies. However, China’s defense sector is still dominated by state-owned enterprises. See also Cheung, “J-20 Fighter Aircraft”; OSD, *Annual Report to Congress ... 2011*; “China Issues S&T Development Guidelines,” Xinhua, February 9, 2006, reporting on “China’s National Medium- and Long-Term Program for Science and Technology Development,” www.gov.cn/english/2006-02/09/content_183426.htm; Micah Springut, Stephen Schlaikjer, and David Chen (CENTRA Technology, Inc.), “China’s Program for Science and Technology Modernization: Implications for American Competitiveness,” report prepared for U.S.-China Economic and Security Review Commission, January 2011, www.uscc.gov/researchpapers/2011/USCC_REPORT_China’s_Program_forScience_and_Technology_Modernization.pdf; Richard A. Bitzinger, “Reforming China’s Defense Industry: Progress in Spite of Itself?” *Korean Journal of Defense Analysis* 19, no. 3 (Fall 2007): 99–118; and Evan S. Medeiros, Roger Cliff, Keith Crane, and James C. Mulvenon, *A New Direction for China’s Defense Industry* (Santa Monica, Calif.: RAND Corporation, 2005).
183. OSD, *Annual Report to Congress ... 2011*. The Pentagon explains in this report, “Key areas where China continues to rely most heavily on foreign technologies include: guidance and control systems, engine technology, and enabling technologies such as precision machine tools, advanced diagnostic and forensic equipment, applications and processes essential to rapid prototyping, and computer-assisted design/manufacturing. China often pursues these foreign technologies for the purpose of reverse engineering or to supplement indigenous military modernization efforts.” See also Wendell Minnick, “China Reveals New AMRAAM,” *Defense News*, May 23, 2011.
184. Tai Ming Cheung, an expert on PRC defense industries, observes that “China’s present approach appears to be the selective targeting of a few critical areas for accelerated development while the rest of the defense economy pursues a more moderate pace of transformation.” Cheung suggests that the J-20 may be an example of just such a priority area. Cheung, “J-20 Fighter Aircraft.”
185. OSD, *Annual Report to Congress ... 2011*.
186. Cheung, “J-20 Fighter Aircraft.” See also OSD, *Annual Report to Congress ... 2011*. This Pentagon report observes that China has in fact become a world leader in missile production and shipbuilding.
187. Ibid.
188. Ibid.
189. Ibid.
190. Collins and Erickson, “Jet Engine Development in China”; Fisher, “Robot Wars”; OSD, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2010* (Washington, D.C.: U.S. Government Printing Office, 2010), www.defense.gov/pubs/pdfs/2010_cmpr_final.pdf.
191. Cheung, “J-20 Fighter Aircraft”; OSD, *Annual Report to Congress ... 2010*.
192. Collins and Erickson, “Jet Engine Development in China.”
193. OSD, *Annual Report to Congress ... 2010*.

194. Cheung, "J-20 Fighter Aircraft."
195. OSD, *Annual Report to Congress ... 2011*. See also "12th Five Year Plan of the People's Republic of China," National People's Congress, March 2011, English translation from the Delegation of the European Union in China http://cbi.typepad.com/china_direct/2011/05/chinas-twelfth-five-new-plan-the-full-english-version.html; and Springut, Schlaikjer, and Chen, "China's Program for Science and Technology Modernization."
196. Tai Ming Cheung, "The Changing Dynamics Behind China's Rise as a Military Technological Power," Policy Brief 16, Study of Innovation and Technology in China, December 2010, <http://igcc.ucsd.edu/research/security/SITC/SITCpolicybrief16.pdf>; Cheung, "J-20 Fighter Aircraft." In the latter article, Cheung writes, "More advanced forms of innovation, especially disruptive approaches that would lead to important defense technological advances, are likely to be beyond China's reach for the near to medium term, although there may be exceptions in select high-priority areas that enjoy access to ample funding, foreign knowledge and technologies, and leadership support."
197. Tai Ming Cheung, "China's Emergence as a Defense Technological Power: Introduction," *Journal of Strategic Studies* 34, no. 3 (June 2011), 295–97; abstract available at www.tandfonline.com/doi/pdf/10.1080/01402390.2011.583155.
198. See Swaine, *America's Challenge*, "Chapter 8: Human Rights and Democracy Promotion." André Laliberté and Marc Lanteigne, eds., *The Chinese Party-State in the Twenty-First Century: Adaptation and the Reinvention of Legitimacy* (New York: Routledge, 2007); Suisheng Zhao, ed., *Debating Political Reform in China* (Armonk, N.Y.: M. E. Sharpe, 2006); Bruce Gilley, *China's Democratic Future: How It Will Happen and Where It Will Lead* (New York: Columbia University Press, 2004); Leong H. Liew and Shaoguang Wang, eds., *Nationalism, Democracy, and National Integration in China* (London: RoutledgeCurzon, 2004); Yijiang Ding, *Chinese Democracy After Tiananmen* (New York: Columbia University Press, 2002); Marina Svensson, *Debating Human Rights in China: A Conceptual and Political History* (Lanham, Md.: Rowman & Littlefield, 2002); and Ming Wan, *Human Rights in Chinese Foreign Relations: Defining and Defending National Interests* (Philadelphia: University of Pennsylvania Press, 2001).
199. Yukon Huang, "China's Conflict between Economic and Political Liberalization," *SAIS Review of International Affairs*, forthcoming; Yangqi Tong and Shaohua Lei, "Large-Scale Mass Incidents and Government Responses in China," *International Journal of China Studies* 1, no 2 (2010): 487–508; Jae Ho Chung, Hongyi Lai, and Ming Xia, "Mounting Challenges to Governance in China: Surveying Collective Protestors, Religious Sects and Criminal Organizations," *China Journal*, no. 56 (July 2006); and Thomas Lum, *Human Rights in China and U.S. Policy*, Congressional Research Service, July 18, 2011, esp. 6, 27–28, www.fas.org/sgp/crs/row/RL34729.pdf.
200. See Yukon Huang, "The Challenge for China's New Leaders," *Foreign Affairs*, March 7, 2012, www.foreignaffairs.com/articles/137316/yukon-huang/the-challenge-for-chinas-new-leaders. The Chinese government has not regularly released figures for the national Gini coefficient since 2000, when it announced that China's Gini coefficient was 0.412 (though it has released figures on the urban and rural Gini coefficients). A decade later, a 2010 *China Daily* report on comments by a National Development and Reform Commission researcher pegged the Gini coefficient at 0.47. The following year, a National Bureau of Statistics report conceded that the Gini coefficient had risen slightly from 2010 to 2011. For the past decade of data on China's rural and urban Gini coefficient, see Organization for Economic Cooperation and Development, *China in Focus: Lessons and Challenges* (Paris: Organization for Economic Cooperation and Development, 2012), 19, www.oecd.org/dataoecd/13/10/50011051.pdf. See also Chen Jia, "Country's Wealth Divide Past Warning Level," *China Daily*, May 5, 2010, www.chinadaily.com.cn/china/2010-05/12/content_9837073.htm; and Fang Xuyan and Lea Yu, "Gov't Refuses to Release Gini Coefficient," *Caixin Online*, January 18, 2012, <http://english.caixin.com/2012-01-18/100349814.html>. According to the authors of the Caixin article, a 2005 report by the China Academy of Social Sciences suggested that inequality had already reached nearly 0.47.

One group of Chinese economists estimated that the Gini coefficient had risen from 0.3043 in 1978 to 0.4624 in 2006. See Jiandong Chen, Dai Dai, Ming Pu, Wenxuan Hou, and Qiaobin Feng, *The Trend of the Gini Coefficient of China*, BWPI Working Paper 109 (Manchester: University of Manchester Brooks World Poverty Institute, 2010), www.bwpi.manchester.ac.uk/resources/Working-Papers/bwpi-wp-10910.pdf; see p. 3 of this working paper for examples of the wide-ranging differences in estimates of the Gini coefficient, and see column six ("G") of the table on p. 20 for the authors' calculations of China's Gini coefficient from 1978 through 2006. For additional alternative estimates, see C. Cindy Fan, "China's Eleventh Five-Year Plan (2006–2010): From 'Getting Rich First' to 'Common Prosperity,'" *Eurasian Geography and Economics* 47, no. 6 (2006): 713. Fan cites a number of sources for her claim that "China's Gini coefficient increased from 0.33 in 1980 to 0.37 in 1992, 0.45 in 2001, and 0.47 in 2005."

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201. The Twelfth Five-Year Guideline lays out the following objective: “Gradually raise the proportion of national income distributed to individuals, increase the proportion of wages in the primary distribution of income and reverse the trend of a widening income gap gradually.” See “China’s Twelfth Five-Year Plan (2011–2015),” English translation prepared by the Delegation of the European Union in China, May 11, 2011, “Chapter 32: Appropriately Adjust Income and Distribution,” 37, http://cbi.typepad.com/china_direct/2011/05/chinas-twelfth-five-new-plan-the-full-english-version.html. See also Fan, “China’s Eleventh Five-Year Plan.”
202. World Bank and Development Research Center of the State Council, People’s Republic of China, *China 2030*, esp. 133–34; Yukon Huang, “The Challenge for China’s New Leaders,” *Foreign Affairs*, March 7, 2012, www.foreignaffairs.com/articles/137316/yukon-huang/the-challenge-for-chinas-new-leaders.
203. This decline is due in part to reforms in rural taxation and social spending, along with the relocation of various production facilities to inland regions, though some of the decline is attributable to statistical counting methods. Organization for Economic Cooperation and Development, *China in Focus*, 15–20. See also Yukon Huang, *Reinterpreting China’s Success Through the New Economic Geography*, Carnegie Paper (Washington, D.C.: Carnegie Endowment for International Peace, 2010), http://carnegieendowment.org/files/reinterpreting_china_success1.pdf; and Chen et al., *Trend of the Gini Coefficient*.
204. William de Tocqueville (author’s real name withheld), “George Orwell’s China?” *Diplomat*, February 2011. The author, a professor of economics at a Chinese university, describes a “disconnect between the government’s fixation with income inequality and what’s really been rubbing the masses the wrong way.” As he explains, “What people resent isn’t wealth, it’s privilege. By and large, your average Chinese worker admires people who have gotten rich through cleverness or hard work, because that’s what they aspire to do themselves. What bothers them, though, is the growing sense that there’s a special class of people who get to live by a different set of rules than everyone else.” A June 2008 report produced by the People’s Bank of China acknowledged that as many as 18,000 officials and state-owned enterprise employees had pilfered up to 800 billion yuan (\$123 billion U.S. dollars) since the mid-1990s. A separate report released in 2011 by the PRC’s Ministry of Land and Resources stated that it had uncovered 34,200 cases of illegal land use involving 50,000 hectares in 77 cities between 2007 and 2009. See James T. Areddy, “Report: Corrupt Chinese Officials Take \$123 Billion Overseas,” *China Real Time*, *Wall Street Journal*, June 16, 2011, <http://blogs.wsj.com/chinarealtime/2011/06/16/report-corrupt-chinese-officials-take-123-billion-overseas>; and Wang Huazhong, “Illegal Land Grabs a Growing Problem,” *China Daily*, April 20, 2011, www.chinadaily.com.cn/china/2011-04/20/content_12358886.htm.
205. For a discussion of the need for reform of compensation practices and related structural aspects of the economy, see World Bank and Development Research Center of the State Council, People’s Republic of China, *China 2030*. See also Malcolm Moore, “Chinese Railways Corruption Probe Claims Another Scalp,” *Daily Telegraph*, July 22, 2011, www.telegraph.co.uk/news/8654045/Chinese-railways-corruption-probe-claims-another-scalp.html; Victor Shih, “Corruption May Undo China’s Economic Miracle,” *Beyondbrics* blog, *Financial Times*, August 19, 2011, <http://blogs.ft.com/beyond-brics/2011/08/19/guest-post-corruption-may-undo-chinas-economic-miracle/#axzz1WSeD7Gms>; and Lai Hongyi, “High Growth Can’t Hide Problems,” *China Daily*, August 19, 2011, http://europe.chinadaily.com.cn/epaper/2011-08/19/content_13150142.htm.
206. In 2004, the Chinese government estimated that the productivity losses stemming from pollution-related illnesses, accidents, and crop damage accounted for 3.1 percent of GDP. In 2007, the World Bank estimated total environmental costs to account for 5.8 percent of China’s annual GDP, and a 2009 joint Harvard-Tsinghua University report blamed air pollution alone for health costs of 1.8 percent of GDP. He Ping, chairman of the United States-based International Fund for China’s Environment, and the economist Mun Sing Ho separately estimated in 2010 that China would need to spend between 2 and 4 percent of its annual GDP just to clean up its accumulated industrial waste. See “China Is Set to Lose 2% of GDP Cleaning Up Decades of Pollution,” *Bloomberg*, September 17, 2010, www.bloomberg.com/news/2010-09-16/china-set-to-lose-2-of-gdp-fighting-pollution-as-doing-nothing-costs-more.html; and Elizabeth Economy, “China’s Growing Water Crisis,” *World Politics Review*, August 9, 2011, www.worldpoliticsreview.com/articles/9684/chinas-growing-water-crisis.
207. “China Is Set to Lose 2% of GDP”; Economy, “China’s Growing Water Crisis.”
208. Thomas Lum, *Human Rights in China and U.S. Policy*, Congressional Research Service, July 18, 2011, www.fas.org/spp/crs/row/RL34729.pdf; Gillian Wong, “Tibet Self-Immolation Wave Among History’s Biggest,” *Huffington Post*, April 2, 2012, www.huffingtonpost.com/2012/04/02/tibet-self-immolation-wave_n_1396443.html; David Wivell, “Security Heavy in West China City Hit by Attacks,” *Associated Press*, August 2, 2011, <http://news.yahoo.com/security-heavy-west-china-city-hit-attacks-050249735.html>; Minxin Pei, “China Has Another Way

- to Defuse Ethnic Strife," *Financial Times*, June 5, 2011, www.ft.com/intl/cms/s/0/e6db53f6-8fa9-11e0-954d-001444feab49a.html#axzz1VYOlPm90; Alexander Nicoll, ed., "Ethnic Strife in Xinjiang," *Strategic Comments* 15, no. 6 (August 2009), www.iiss.org/publications/strategic-comments/past-issues/volume-15-2009/volume-15-issue-6/ethnic-strife-in-xinjiang; Murray Scot Tanner, "How China Manages Internal Security Challenges and Its Impact on PLA Missions," in *Beyond the Strait*, Kamphausen, Lai, and Scobell, eds. As Tanner describes, the PLA apparently played some limited role in quelling the Tibetan protests of 2008.
209. Feng Wang, "China's Population Destiny: The Looming Crisis," *Current History*, September 2010, 244–51, www.currenthistory.com/pdf_org_files/109_728_244.pdf. See also Julie Davanzo, Harun Dogo, and Clifford A. Grammich, *Demographic Trends, Policy Influences, and Economic Effects in China and India Through 2025*, RAND Working Paper WR-849 (Santa Monica, Calif.: RAND Corporation, 2011), www.rand.org/content/dam/rand/pubs/working_papers/2011/RAND_WR849.pdf; and Keiichiro Oizumi, "How Long Will China's Demographic Dividend Continue?" *Pacific Business and Industries* 9, no. 39 (2011).
 210. Davanzo, Dogo, and Grammich, *Demographic Trends*; Richard Jackson, "Can an Aging China Be a Rising China?" *China Business Review*, April–June 2011, www.chinabusinessreview.com/public/1104/jackson.html. For examples of China's planned investments in social safety net improvements, see "China Commits to State Pensions for All by 2015," *Want China Times*, August 19, 2011, www.wantchinatimes.com/news-subclass-cnt.aspx?cid=1503&MainCatID=15&cid=20110819000006.
 211. "Millions of Chinese Men Without Brides by 2020 Due to Gender Imbalance: Experts Warn," *Xinhua*, August 17, 2011, http://news.xinhuanet.com/english/2010/china/2011-08/17/c_131056376.htm.
 212. Yukon Huang, "China's Growing Inequality Is Undermining the Regime," *Financial Times*, March 5, 2012, <http://blogs.ft.com/the-a-list/2012/03/05/china-must-rethink-its-economic-model-to-calm-growing-social-unrest/#axzz1rfKn3nau>; Yukon Huang, "Expand Cities to Stop Dissent," *Financial Times*, April 25, 2011, www.ft.com/intl/cms/s/0/249b434a-6f70-11e0-952c-001444feabdc0.html; Yukon Huang, "The Poor Man's Consumption Fix for China," *Wall Street Journal*, January 18, 2012, <http://online.wsj.com/article/SB10001424052970204468004577164313144060338.html>.
 213. For a prediction of regime collapse, see Gordon G. Chang, *The Coming Collapse of China* (New York: Random House, 2001). For discussions of the prospects for democratic change in China, see Cheng Li, ed., *China's Changing Political Landscape: Prospects for Democracy* (Washington, D.C.: Brookings Institution Press, 2008); Cheng Li, "China in the Year 2020: Three Political Scenarios," *Asia Policy*, no. 4 (July 2007): 17–29; and Cheng Li, "The New Bipartisanship Within the Chinese Communist Party," *Orbis*, Summer 2005, 387–400; as well as Lampton's remarks in "What's Your China Fantasy?" by David M. Lampton and James Mann, *Foreign Policy*, May 15, 2007, www.foreignpolicy.com/articles/2007/05/14/whats_your_china_fantasy. For a more skeptical view of democratization, see David Shambaugh, *China's Communist Party: Atrophy and Adaptation* (Berkeley: University of California Press, 2008). Shambaugh states: "I deeply doubt that Western-style democracy is going to come to China—either as a result of elite-led tutelage or via mass demands from below. I also have serious doubts about Cheng Li's prediction that inner-party 'bipartisanship' can evolve into contested elections by rival factions. However ... this is not to rule out the possibility of the creation of competitive constituencies within a one-party system—along the lines of the Singaporean or Hong Kong models. This is consistent with a corporatist system." See also Minxin Pei, *China's Trapped Transition: The Limits of Developmental Autocracy* (Cambridge, Mass.: Harvard University Press, 2006).
 214. See Michael D. Swaine, "China's Assertive Behavior—Part Three: The Role of the Military in Foreign Policy," *China Leadership Monitor*, no. 36 (Winter 2012), <http://media.hoover.org/sites/default/files/documents/CLM36MS.pdf>; and Swaine, *America's Challenge*, chapter 8.
 215. For an articulation of the populist/elitist clique dichotomy, see Cheng Li, "One Party, Two Coalitions in China's Politics," *East Asia Forum*, August 16, 2009, www.eastasiaforum.org/2009/08/16/one-party-two-coalitions-in-chinas-politics; Cheng Li, "China's Fifth Generation: Is Diversity a Source of Strength or Weakness?" *Asia Policy*, no. 6 (July 2008). For the argument that factional dichotomies play an increasingly unimportant role in Chinese elite politics, see Alice Miller, "The 18th Central Committee Politburo: A Quixotic, Foolhardy, Rashly Speculative, but Nonetheless Ruthlessly Reasoned Projection," *China Leadership Monitor*, no. 33 (Summer 2010), <http://media.hoover.org/sites/default/files/documents/CLM33AM.pdf>; and Alice Miller, "Who Does Xi Jinping Know and How Does He Know Them?" *China Leadership Monitor*, no. 32 (Spring 2010), <http://media.hoover.org/sites/default/files/documents/CLM32AM.pdf>. See also Paul Eckert, "Special Report: Cables Show U.S. Sizing Up China's Next Leader," *Reuters*, February 17, 2011, www.reuters.com/assets/print?aid=USTRE71G5WH20110217; David Kelly, "Chinese Political Transition: Split in the Princeling

Camp?” *East Asia Forum*, March 21, 2011, www.eastasiaforum.org/2011/03/21/chinese-political-transition-split-in-the-princeling-camp; and Dominic Delany, “Xi Jinping, Factionalism, Merit, and Dealing with China’s Political Leadership,” *East Asia Forum*, June 20, 2010, www.eastasiaforum.org/2010/06/20/xi-jinping-factionalism-merit-and-dealing-with-chinas-political-leadership.

216. See “Xi’s Stance Toward Japan Still a Puzzle for Watchers,” *Asahi Shimbun*, October 20, 2010, OSC JPP20101020969001; Kosuke Takahashi, “Hatoyama to Nanjing, Hu to Hiroshima? The New Face of China-Japan Relations,” *Asia-Pacific Journal: Japan Focus*, January 18, 2010, www.japanfocus.org/-Kosuke-TAKAHASHI/3290; “Xi Jinping Joint Interviewed by Mainstream Media Journalists of Japan and South Korea in Beijing,” *China Foreign Investment Guide*, December 12, 2009, http://fdi.gov.cn/pub/FDI/tzdt/dt/t20091213_115745.htm?fclose=1.
217. Xi’s principal governing experience is as a party executive in several southern provinces, including Fujian, Zhejiang, and Shanghai. This experience in the coastal region has led Xi to value market liberalization and global economic integration. Xi also has some military experience, having served as an officer in active service as a secretary in the General Office of the Central Military Commission, possibly as a personal assistant to former PRC defense minister Geng Biao, from 1979 to 1982. His experience as a party operative in Fujian and Zhejiang also familiarized him with the military regional command system, and he has served on a series of National Defense Mobilization Committees. Also, Xi’s wife is a senior PLA nonranking civilian (*wenzhi ganbu*) and head of the PLA song and dance troupe, which would likely have exposed him to senior PLA leaders. Furthermore, he currently serves as a vice chairman of the CCP Central Military Commission. See James Mulvenon, “Xi Jinping and the Central Military Commission: Bridesmaid or Bride?” *China Leadership Monitor*, no. 34 (September 2011). We are also indebted to Dennis Blasko for some of this information on Xi’s PLA ties. See also Li, “China’s Fifth Generation”; and Cheng Li, “China’s Midterm Jockeying: Gearing Up for 2012 (Part 3: Military Leaders),” *China Leadership Monitor*, no. 33 (fall 2010), <http://media.hoover.org/sites/default/files/documents/CLM33CL.pdf>.
- Xi’s father, Xi Zhongxun, was a progressive reformer who opposed the use of military force against the Tiananmen Square protesters in 1989 and defended the reformist CCP leader Hu Yaobang. This fact, in conjunction with some of Xi’s experiences in somewhat more politically progressive regions in China, has led some observers to speculate that the younger Xi may be more sympathetic to Chinese political reform. See Eckert, “Special Report”; Jonathan Ansfield, “Xi Jinping: China’s New Boss and The ‘L’ Word,” *Newsweek*, December 22, 2007, www.thedailybeast.com/newsweek/2007/12/22/xi-jinping-china-s-new-boss-and-the-l-word.html; and Delany, “Xi Jinping.”
218. Li, “China’s Fifth Generation”; Barry Naughton, “China’s Economic Leadership after the 17th Party Congress,” *China Leadership Monitor*, no. 23 (Winter 2008); “U.S. Embassy Cables: Rising Star of Chinese Communist Party Reveals Personal Crusade Against Corruption,” *Guardian*, December 4, 2010, www.guardian.co.uk/world/us-embassy-cables-documents/100498; Cheng Li, “China’s Two Li’s: Frontrunners in the Race to Succeed Hu Jintao,” *China Leadership Monitor*, no. 22 (Fall 2007).
219. See James Mulvenon, “Xi Jinping and the Central Military Commission: Bridesmaid or Bride?” *China Leadership Monitor*, no. 34 (Winter 2011). Mulvenon writes, “Barring any evidence of Xi’s actual attitudes about the PLA or its work, therefore, it is too soon to assess the implications of Xi’s appointment for the future of party-military relations.” See also Eckert, “Special Report”; Li, “China’s Fifth Generation.”
220. OSD, *Annual Report to Congress ... 2011*.
221. Li, “China’s Midterm Jockeying (Part 3).”
222. Kerry Brown, “The Power Struggle Among China’s Elite,” *Foreign Policy*, October 14, 2010, www.foreignpolicy.com/articles/2010/10/14/the_power_struggle_among_chinas_elite; Li, “China’s Fifth Generation.”
223. Conversation with an influential Chinese scholar; Douglas H. Paal, comments at “Assessing the National People’s Congress,” event at the Carnegie Endowment for International Peace, March 21, 2012, Washington, D.C., <http://carnegieendowment.org/2012/03/21/assessing-national-people-s-congress/a2bq>; John Garnaut, “The Revenge of Wen Jiabao,” *Foreign Policy*, March 29, 2012, www.foreignpolicy.com/articles/2012/03/29/the_revenge_of_wen_jiabao.
224. See “Xi Jinping: Zhashi zuobao baochi dang de chunjie xingge xiang gongzuo (Xi Jinping: Do a solid job in all kinds of work to maintain the purity of the Party),” *Qiushi (Seeking Truth)*, March 16, 2012, <http://theory.people.com.cn/>

- GB/17406373.html; George Magnus, "China's Battle to Preserve Party Purity," *Financial Times*, March 22, 2012, www.ft.com/intl/cms/s/0/e9ba0892-72ac-11e1-ac73-00144feab49a.html#axzz1rfZPdyIO; and John Garnaut, "The Revenge of Wen Jiabao," *Foreign Policy*, March 29, 2012, www.foreignpolicy.com/articles/2012/03/29/the_revenge_of_wen_jiabao.
225. See Robert Lawrence Kuhn, "Xi Jinping Rise and Bo Xilai demise: China Will Move Forward with Reform, Slowly," March 26, 2012, www.csmonitor.com/Commentary/Opinion/2012/0326/Xi-Jinping-rise-and-Bo-Xilai-demise-China-will-move-forward-with-reform-slowly; Swaine, *America's Challenge*, chapter 8; and Kerry Brown, "Chinese Leadership: The Challenge in 2012," *East Asia Forum*, July 10, 2011, www.eastasiaforum.org/2011/07/10/chinese-leadership-the-challenge-in-2012.
226. Brown, "Chinese Leadership."
227. See Linda Jakobson and Dean Knox, *New Foreign Policy Actors in China*, SIPRI Policy Paper 26 (Stockholm: SIPRI, 2010). Also see a more detailed discussion of this dynamic at the conclusion of the following section on "Civil-Military Dynamics."
228. Much of the material in this section is drawn from Swaine, "China's Assertive Behavior—Part Three." For a general discussion of such allegedly growing PLA activism, see Li, "China's Midterm Jockeying." Li states, "The Chinese military ... remains a very important interest group in the country. The PLA's need to advance its own bureaucratic interests makes the Chinese military, collectively and on an individual basis, an influential powerbroker that may carry enormous weight in Chinese politics generally and especially in CCP leadership transitions." See also Susan L. Shirk, *China: Fragile Superpower* (Oxford: Oxford University Press, 2007), 9, 66–77. Shirk states, "The military's perspective on Japan, Taiwan, and the United States generally is more hawkish than that of civilian officials, according to interviews, and military voices constrain China's policies on these controversial issues. The PLA typically takes a tougher line on these issues than the civilian press."
229. The president and party secretary also serves as the chairman of the Central Military Commission. The slightly larger Politburo contains two military representatives (vice chairmen of the Central Military Commission), though their influence is likely diluted by the presence of the 22 other PB members. See Shambaugh, *China's Communist Party*; and Blasko, *Chinese Army Today*. Military involvement in decisionmaking was significantly greater in the 1980s and early to middle 1990s, when such senior PLA officers as Liu Huaqing and Zhang Zhen held highly influential party positions (Liu was the last PLA member of the PBSC) and enjoyed great authority as elder PLA officers charged by Deng Xiaoping with smoothing the transition of the civil-military system to the successor generation under Jiang Zemin. At that time, basic national security-related strategy and policy were determined by a national security directorate composed of the most senior civilian and military leaders involved in national security affairs. This group included individual party and military elders who, while nominally retired, nonetheless continued to exert considerable influence over basic policy decisions. See Michael D. Swaine, *The Role of the Chinese Military in National Security Policymaking* (Santa Monica, Calif.: RAND National Defense Research Institute, 1998), 14–16. That civil-military structure apparently no longer exists today. And of course, the party and military elders of that period are now gone.
230. See Shambaugh, *Modernizing China's Military*; and Shambaugh, *China's Communist Party*, 165. Shambaugh states, "If anything, the Chinese military has become more of a national military—defending the nation's and state's interests—and relatively less of a classic party-army. Recognizing this, the PLA can still be counted on to uphold the ruling position and power of the CCP and obey the national command structure—which runs directly from the CCP Politburo Standing Committee to the Party's Central Military Commission. Also for these reasons, a coup d'état is not a possibility." Also see Blasko, *Chinese Army Today*.
231. Although institutionally subordinate to the CCP Secretariat, leading small groups (LSGs) are each presided over by that PBSC member who exercises primary responsibility within the senior political leadership as a whole for the major policy sector(s) associated with the LSG. In those policy areas relating to foreign security policy, the four major LSGs are headed by the CCP general secretary: Foreign Affairs LSG, National Security LSG, Maritime Issues LSG, and Taiwan LSG. Each of these LSGs usually includes a PLA representative, in some cases the senior officer in charge of military intelligence and/or the Minister of Defense. For a general discussion of the nature and function of LSGs, see Qi Zhou, "Organization, Structure and Image in the Making of Chinese Foreign Policy since the Early 1990s" (dissertation, Johns Hopkins University, 2008).
232. See Zhou, *Organization, Structure and Image*, 109.

233. For references to such a lack of policy coordination by a well-known Chinese scholar, see Wu Xinbo, “Managing Crisis and Sustaining Peace between China and the United States,” U.S. Institute of Peace, 2008, 25, www.usip.org/files/resources/PW61_FinalApr16.pdf; and Wu Xinbo, “Understanding Chinese and U.S. Crisis Behavior,” *Washington Quarterly* 31, no. 1 (Winter 2007–2008): 72, www.twq.com/08winter/docs/08winter_wu.pdf. According to Qi Zhou (“Organization, Structure and Image,” 264–68) and discussions held by the author in China in the mid-2000s with knowledgeable individuals, in the wake of the 1999 NATO bombing of the Chinese embassy in Belgrade, a PLA-related think tank made concerted efforts with other agencies to set up “an inter-agency, crisis management-oriented ‘national security council’” under the Politburo. This effort apparently contributed to the subsequent formation of the above-mentioned National Security LSG. However, this unit has not actually become a genuine NSC-type structure nor even taken a role in the policymaking process as significant as that of the Foreign Affairs LSG.
234. As Taylor Fravel argues, vessels from these agencies are tasked by central leadership to enforce China’s rights to regulate fish stocks and oil resources in waters that Beijing claims to be under its jurisdiction, according to both official statements from the Ministry of Foreign Affairs, as well as patterns of behavior exhibited in the South China Sea. Indeed, Chinese diplomatic détente with other claimants in the disputes has led to observable alterations in rules of engagement by Fisheries Administration vessels, demonstrating that these actors adhere closely to central directives. Fravel, “China’s Strategy in the South China Sea.”
235. National Institute for Defense Studies (Japan), *NIDS China Security Report 2011* (Tokyo: National Institute for Defense Studies, 2012), www.nids.go.jp/publication/chinareport/pdf/china_report_EN_web_2011_A01.pdf; Swaine and Fravel, “China’s Assertive Behavior, Part Two”; Fravel, “China’s Strategy in the South China Sea.”
236. Alice Miller, “The Politburo Standing Committee Under Hu Jintao,” *China Leadership Monitor*, no. 35 (September 2011), <http://media.hoover.org/sites/default/files/documents/CLM35AM.pdf>.
237. See Jakobson and Knox, *New Foreign Policy Actors*, 41–46; Alastair Iain Johnston and Daniela Stockmann, “Six Hypotheses on Public Opinion and Foreign Policy in China,” unpublished manuscript, March 14, 2011.
238. See Johnston and Stockmann, “Six Hypotheses.” The six mechanisms they identify are (1) intra-elite competition, (2) social instability, (3) diplomatic bargaining, (4) punishment of bluffing, (5) normative prioritization of public opinion, and (6) transmission via influential scholar-advisers.
239. For articulations of this argument, see Hong Junbao, “Wangluo yulun yu Zhongguo de wajiao juece,” in *Zhongguo wajiao juece: Kaifang yu duoyuan de shehui yinsu fenxi*, edited by Hao Yufan and Lin Su (Beijing: CASS 2007), 124–30. See also Susan Shirk, *China: Fragile Superpower* (New York: Oxford University Press, 2007); and Jessica Chen Weiss, “Autocratic Audiences, International Bargaining, and Nationalist Protest in China,” unpublished manuscript, where she suggests that “the anti-Japanese protests of 1985 set the stage for the pro-democracy protests of 1986 and 1989, culminating in the tragic standoff on June 4, 1989.”
240. See Weiss, “Autocratic Audiences”; and Jessica Chen Weiss, “The 2005 Anti-Japanese Protests in China and the Negotiations over U.N. Security Council Expansion,” unpublished manuscript, <http://weber.ucsd.edu/~jweiss/Weiss%20-%20China%20case%20study.pdf>.
241. See Johnston and Stockmann, “Six Hypotheses.” See also Jakobson and Knox, *New Foreign Policy Actors*, 34–40.
242. See Weiss, “Autocratic Audiences”; and Weiss, “2005 Anti-Japanese Protests.”
243. Alastair Iain Johnston makes the argument, in particular, that examining data on Chinese people’s perceptions of Japanese people in comparison with their perceptions of themselves can offer a more accurate picture of Chinese opinion and policy preferences vis-à-vis Japan. As he writes, “In principle perceptions of identity difference are a good predictor of specific policy preferences; the greater the perceived difference the more likely the individual will support realpolitik-like policy preferences.” Personal correspondence: Memo from Alastair Iain Johnston to Michael Swaine, “What Does the Beijing Area Study Tell Us about Perspectives on Japan Held by the People of Beijing?” May 8, 2011.
244. The Beijing Area Study used a 100-degree feeling thermometer (0 being very cold, 50 being neutral, 100 being very warm) to survey Chinese people’s feelings toward Japan in several years between 1998 and 2009. The study found that the Chinese public had neutral or slightly warm feelings toward Japan in 1998, but those feelings of amity declined over the ensuing years to about 30 degrees in 2004 (2005–2006 data were not available). Memo

from Johnston to Swaine, "What Does the Beijing Area Study Tell Us?" For separate data on opinions in 2005 and 2006 (and beyond), see the graph from the Horizon Research Consultancy Group (HRCG) in Yu Chenkang, "China-Japan Relations Vital: Poll," *China Daily*, August 12, 2011, www.chinadaily.com.cn/video/2011-08/12/content_13102080.htm. For detailed results of the HRCG poll in 2006, see "Eyes on the World, Future in Hand: Horizon 2006 Chinese Opinion Poll," Maureen and Mike Mansfield Foundation, <http://mansfieldfdn.org/program/research-education-and-communication/asian-opinion-poll-database/listofpolls/2006-polls/eyes-on-the-world-future-in-hand-horizon-2006-chinese-opinion-polls-06-19>. For other 2006 opinion polling data, see Pew Research Center Global Attitudes Project, "China's Neighbors Worry About Its Growing Military Strength," September 21, 2006, <http://pewglobal.org/files/2010/12/GAP-Asia-report-final-9-21-06.pdf>.

245. For evidence of the improvement in Chinese public opinion toward Japan in 2007 and 2008, see the following sources: Zhang Haizhou, "Chinese View Japan 'More Positively,'" *China Daily*, May 7, 2008, www.chinadaily.com.cn/china/2008-05/07/content_6666630.htm; and HRCG graph given by Yu, "China-Japan Relations Vital." As these sources demonstrate, views had improved in 2006 over 2005; however, the most notable improvements begin in 2007. For example, in the HRCG data, the share of Chinese respondents who had a favorable view toward Japan increased by 2.9 percentage points from 2005 (11.6 percent) to 2006 (14.5 percent), but went up by 8.9 percentage points in 2007 (24.4 percent), and another 13.9 percentage points over the next three years, reaching 38.3 percent in 2010. The Beijing Area Study surveys conducted in 2007 and 2009 also showed an increase of a few degrees in Chinese feelings toward Japan in 2004, though only to the mid-30s, rather than a recovery to 1998 levels. Memo from Johnston to Swaine, "What Does the Beijing Area Study Tell Us?"

For detailed data on polls in this time period, see the full results of the annual Genron NPO/*China Daily* poll conducted annually since 2005; detailed results for 2005–2009 and 2011–2012 available in Japanese at www.genron-npo.net/tbf11/index.php/日中世論調査; detailed results for 2010 available in English at http://tokyo-beijingforum.net/index.php?option=com_content&view=article&id=669:on-the-results-of-the-6th-japan-china-joint-opinion-survey&catid=141:20106&Itemid=15. See also BBC World Service/GlobeScan/PIPA, "Global Views of United States Improve While Other Countries Decline," April 18, 2010, www.worldpublicopinion.org/pipa/pipa/pdf/apr10/BBCViews_Apr10_rpt.pdf; Xinhua Oriental Outlook Weekly / Yomiuri Shimbun joint poll conducted November 2009, full results available at <http://mansfieldfdn.org/program/research-education-and-communication/asian-opinion-poll-database/listofpolls/2009-polls/yomiuri-shimbun-november-2009-japan-china-joint-public-opinion-poll-09-29>; Fergus Hanson and Andrew Shearer, "China and the World: Public Opinion and Foreign Policy," Lowy Institute China Poll 2009, http://lowyinstitute.cachefly.net/files/pubfiles/Lowy_China_Poll_2009_Web.pdf; Chicago Council on Global Affairs, *Soft Power in Asia: Results of a 2008 Multinational Survey of Public Opinion*, Christopher B. Whitney, project director, and David Shambaugh, senior project consultant (Chicago: Chicago Council on Global Affairs, 2009), www.thechicagocouncil.org/UserFiles/File/POS_Topline%20Reports/Asia%20Soft%20Power%202008/Soft%20Power%202008_full%20report.pdf; and Pew Research Center Global Attitudes Project, "The 2008 Pew Global Attitudes Survey in China," July 22, 2008, <http://pewglobal.org/files/pdf/261.pdf>. The Lowy Institute poll, conducted in August and September 2009, revealed ambivalence in Chinese public views of Japan; 51 percent of Chinese did not see Japan as a threat, while 45 percent did see it as a threat. The BBC/GlobeScan/PIPA poll, conducted from late 2009 to early 2010, found that 29 percent of Chinese felt Japan exerted a positive influence on the world, while 47 percent saw it as negative.

246. A joint Yomiuri/Xinhua poll conducted in October 2010 found highly negative views toward Japan among the Chinese public, with 79 percent of respondents viewing Japan as untrustworthy and 81 percent feeling the current state of relations was bad. This poll was conducted shortly after a bilateral Sino-Japanese dispute over a Chinese fishing boat's collision with a Japanese coast guard vessel. See "Distrust of China Soaring, Poll Finds," *Yomiuri Shimbun*, November 8, 2010, www.yomiuri.co.jp/dy/national/T101107002766.htm. In a BBC/GlobeScan/PIPA poll conducted in late 2010 and early 2011, 71 percent of Chinese viewed Japan's influence in the world as negative, while only 18 percent saw it as positive. (Meanwhile, the responses from American interviewees were the inverse; 69 percent of U.S. respondents stated that Japan exerts a positive influence in the world, while only 18 percent believe its influence is negative.) BBC World Service/GlobeScan/PIPA, "Views of U.S. Continue to Improve in 2011 BBC Country Rating Poll," March 7, 2011, www.worldpublicopinion.org/pipa/pdf/mar11/BBCValsUS_Mar11_rpt.pdf. Six months later, a Genron NPO/*China Daily* joint poll conducted in June and July 2011 also found quite negative views toward Japan among the Chinese public, with 65.9 percent of Chinese reporting that they had an unfavorable impression of Japan. See "Hinaka ryō kokumin no Tainaka, tainichikanjō wa ōkiku akka—dai 7-kai nitchū kyōdō seronchōsa kekka o kōhyō (Major Deterioration in Feelings toward China and Japan among the People of Japan and China—Results Published from 7th Joint Japan-China Opinion Poll)," Genron NPO, August 11, 2011, www.genron-npo.net/world/genre/cat119/2011.html. Notably, the joint Yomiuri/Xinhua poll conducted in October 2011 did find attitudes that were far less negative than those in the year previously, suggesting that attitudes toward Japan warmed somewhat in 2011. When asked

about Japan's trustworthiness, a majority (55 percent) of Chinese respondents indicated that they viewed Japan as very or somewhat trustworthy, while 42 percent said Japan is not very or not at all trustworthy. Yomiuri Shimbun, "Japan-China-ROK Joint Poll," November 12, 2011, 10–11, data presented in Media Analysis and Translation Teams (MATT), U.S. Embassy in Tokyo, "Attachment to Japan Media Analysis, Afternoon Edition," November 16, 2011, OSC JPP20111116054003.

However, those warmer attitudes were not evident in other surveys in ensuing months. In the annual BBC poll conducted in late 2011 through early 2012, the Chinese public reported viewing Japanese influence in the world quite negatively—with 16 percent describing it as mainly positive and 63 percent casting it as primarily negative. These numbers did not diverge widely from the numbers in the late 2010/early 2011 BBC poll. BBC World Service/GlobeScan/PIPA, "Views of Europe Slide Sharply in Global Poll, While Views of China Improve," May 10, 2012, www.globescan.com/images/images/pressreleases/bbc2012_country_ratings/2012_bbc_country%20rating%20final%20080512.pdf. Similarly, a China Daily/Genron NPO poll conducted in April and May 2012 found that 64.5 percent of Chinese had an unfavorable impression of Japan, roughly similar to the 2011 findings. "2012-Nen dai 8-kai nitchū seronchōsa (8th Japan-China Opinion Poll 2012)," Genron NPO, June 2012, <http://tokyo-beijingforum.net/index.php/survey/8th-survey>.

Then, after the emergence of renewed tensions over the Senkaku/Diaoyu Islands, another *China Daily* poll published in late 2012 revealed a strong downward shift in attitudes toward Japan, with 87 percent of Chinese expressing a negative view of Japan. "Poll reveals worsening public opinion of Japan," *China Daily*, December 27, 2012, www.chinadaily.com.cn/china/2012-12/27/content_16058382.htm.

247. Chicago Council on Global Affairs, *Soft Power in Asia*; "2008 Pew Global Attitudes Survey in China." In a 2011 Yomiuri/Xinhua poll, when respondents were asked to prioritize the first issue that would need to be resolved to improve Sino-Japanese ties, 35 percent indicated that resolving the history issue was most important, while 35 percent responded that resolution of the Senkaku/Diaoyu Islands dispute was most important. Thirteen percent of respondents selected the issue of joint development of gas resources in the East China Sea, 5 percent pointed to intellectual property rights issues, and another 11 percent responded with other answers or no answers. In the 2009 Yomiuri/Xinhua poll, historical issues were viewed as being the most important issue (36 percent), with the Senkaku/Diaoyu territorial issue second most important (29 percent), and joint development third (20 percent). Yomiuri Shimbun, "Japan-China-ROK Joint Poll"; and Xinhua/Yomiuri joint poll conducted November 2009.
248. In the 2008 Chicago Council poll, 62 percent of Chinese expressed concern that Japan's military could pose a threat to China in the future. See Chicago Council on Global Affairs, *Soft Power in Asia*. Similarly, in a Yomiuri/Xinhua Sino-Japanese opinion poll conducted in 2009, in response to the query, "Do you think Japan has walked the path of a peace loving nation since World War II over 60 years ago?" 53 percent of Chinese agreed and 44 percent disagreed, in contrast to the 92 percent of Japanese who answered in the affirmative. Xinhua/Yomiuri joint poll conducted November 2009. The Beijing Area Study found in 2004 that Chinese people viewed Japanese militarism as a major threat to Chinese security, almost on par with the threat of Taiwan independence, though when asked to choose the greatest threat to Chinese security, Japanese militarism and military power were at the bottom of a list of eight threats. Memo from Johnston to Swaine, "What Does the Beijing Area Study Tell Us? Related to these sentiments, in a 2009 poll with a question positing a range of potential threats to China, a majority of Chinese respondents (61 percent) viewed the possibility of Japanese nuclearization as a threat to Chinese security, third among the list of ten potential threats over the coming ten years. See Hanson and Shearer, "China and the World."
249. Yomiuri Shimbun, "Japan-China-ROK Joint Poll." In contrast, however, when a 2009 Lowy Institute poll asked Chinese how they would feel if a government-controlled foreign company sought to buy a controlling stake in a major Chinese company, 79 percent of Chinese opposed the venture, while only 14 percent supported it—the lowest of the five country options (which included Singapore, Canada, Australia, the United States, and Japan). See Hanson and Shearer, "China and the World."
250. Questions in the Beijing Area Study asked Chinese interview subjects to locate Chinese people, Japanese people, and American people on a 7-point scale anchored by opposite adjectives (such as peaceful/warlike; civilized/un-civilized; moral/immoral; sincere/insincere). The average difference between perceptions of the Chinese as people and the Japanese as a people over the decade from 2000 to 2009 ranged from 2.17 (in 2002) to 3.34 (in 2007). Memo from Johnston to Swaine, "What Does the Beijing Area Study Tell Us?"
251. BBC/GlobeScan/PIPA, "Views of U.S. Continue to Improve" (2011); BBC/GlobeScan/PIPA, "Global Views of United States Improve" (2010); Hanson and Shearer, "China and the World." In the 2010–2011 BBC/GlobeScan/

- PIPA poll, 33 percent of Chinese surveyed viewed U.S. influence in the world as positive, while 53 percent viewed it as negative, the highest of all 29 countries surveyed. However, this poll was conducted shortly after the September 2010 Chinese fishing boat incident and a series of diplomatic tiffs between the United States and China, at a time when China's nationalist ire was likely particularly provoked. In the previous year's poll, conducted from late 2009 to early 2010, 29 percent of Chinese respondents felt that the United States had a positive influence on the world, while 44 percent saw American influence as negative, the sixth-highest negative numbers of countries surveyed.
252. Ding Qingfen, "Friction Inevitable as Bonds Grow Stronger," *China Daily*, January 17, 2011, www.chinadaily.com.cn/cndy/2011-01/17/content_11862179.htm; Chicago Council on Global Affairs, *Soft Power in Asia*. The 2008 Chicago Council poll found that Chinese people felt strongly that Sino-U.S. trade and investment was important for the Chinese economy (an average of 7.6 on a scale of 1 to 10). In the poll cited by Ding Qingfen, 70 percent of Chinese felt that the Sino-U.S. economic relationship was both competitive and cooperative. A majority of Chinese (52.7 percent) said the Chinese government should encourage more Chinese investment in the United States. Meanwhile, 44.4 percent welcomed an increase in U.S. investment in China, while 34 percent thought it should be reduced.
 253. Pew Research Center Global Attitudes Project, "China Seen Overtaking U.S. as Global Superpower," July 13, 2011, www.pewglobal.org/files/2011/07/Pew-Global-Attitudes-Balance-of-Power-U.S.-Image-Report-FINAL-July-13-2011.pdf.
 254. Chicago Council on Global Affairs, *Soft Power in Asia*; Memo from Johnston to Swaine, "What Does the Beijing Area Study Tell Us?" The average difference in the Beijing Area Study between perceptions of Chinese as people and Americans as people over the decade from 2000 to 2009 increased from 1.8 in 2000 to just over 3 in 2009. See endnote 243 for more information on this indicator.
 255. Pew Research Center Global Attitudes Project, "China Seen Overtaking U.S."
 256. A 2010 poll by the Horizon Research Consultancy Group found that 85 percent of Chinese view the United States-Japan alliance as a threat to China: "90% of Chinese Think China-U.S. Ties Important: Survey," Xinhua, January 21, 2011, www.china.org.cn/world/Chinese_Eyes/2011-01/21/content_21793835.htm.
 257. In the 2011 Yomiuri/Xinhua poll, a majority of Chinese respondents said they would like to see cooperation among China, Japan, and South Korea in politics and diplomacy. More than 40 percent said the same for cooperation in economics and education/culture. However, only 26 percent said they wanted to see cooperation in security among these three countries. Yomiuri Shimbun, "Japan-China-ROK Joint Poll," 10-11. In a 2011 Pew Research Center poll, 36 percent of Chinese felt that the current level of cooperation between Washington and Beijing was about right, while 28 percent desired to see more bilateral cooperation. Only 11 percent felt that the two sides cooperated too much. Pew Research Center Global Attitudes Project, "China Seen Overtaking U.S." In a late 2010 poll, 91 percent of Chinese indicated that they felt Sino-U.S. relations were important, including 54 percent who feel they were *very* important: "90% of Chinese Think China-U.S. Ties Important."
 258. In an October 2011 Yomiuri/Xinhua poll, 39 percent of Chinese felt that Sino-Japanese ties would improve, 27 percent felt they would remain the same, and 29 percent believed they would deteriorate. In the same poll conducted in late 2009 (before the tensions in 2010), 53 percent of Chinese felt the bilateral relationship would improve, 31 percent thought it would stay the same, and only 11 percent thought they would worsen. Yomiuri Shimbun, "Japan-China-ROK Joint Poll"; and Xinhua/Yomiuri joint poll conducted November 2009. According to a 2010 survey conducted by *China Daily* and the Horizon Research Consultancy Group, about 60 percent of Chinese feel relations between China and the United States will remain stable in coming years, while approximately one-quarter of Chinese feel they will improve: "90% of Chinese Think China-U.S. Ties Important."
 259. See, for example, Hanson and Shearer, "China and the World," which states, "Younger Chinese (18-24 years old) were twice as likely as their elders (55 years old and older) to say the United States posed the greatest or second greatest threat [to China's security in the next 10 years]: 60% compared with 30%. For Japan the difference was 43% and 28% across the respective age groups." See also Ding, "Friction Inevitable." In the latter poll, the share of people under age 30 saying that U.S. investment in China should be reduced was 10 points higher than the percentage of the total sample holding that opinion.
 260. "90% of Chinese Think China-U.S. Ties Important."

261. For example, efforts to create strategic “space” between Washington and Tokyo will almost certainly be strongly subject to variations occurring in economic leverage or disputes, diplomatic acumen, leadership preferences, the occurrence or absence of incidents that enflame nationalist passions in China and (to a lesser extent) Japan, and of course the actions of Washington and Tokyo.
262. A key unpredictable variable that could significantly reduce the degree to which China employs the above-mentioned military capabilities in support of more assertive foreign and defense policies toward Japan would be events related to Taiwan. A change in U.S. and/or Chinese policy that resulted in a more stable military situation across the Strait and increased movement toward a cross-strait political dialogue could strengthen PRC incentives to engage in more cooperative and less competitive military modernization policies with both the United States and Japan.
263. See Fravel, “International Relations Theory”; M. Taylor Fravel, *Strong Borders, Secure Nation* (Princeton, N.J.: Princeton University Press, 2008); and Alastair Iain Johnston, “China’s Militarized Interstate Dispute Behavior, 1949–1992: A First Cut at the Data,” *China Quarterly*, no. 153 (March 1998): 1–30.
264. The latter two crises might involve the emergence of a clear U.S. policy shift in support of the permanent separation of Taiwan from China through both political and military means or the outbreak of major conflict on the Korean Peninsula that results in what are perceived by one or both sides as efforts to place the other at a long-term disadvantage.

CHAPTER 3

1. Tanaka Akihiko, *Anzen hoshō: Sengo 50-nen no mosaku* (Tokyo: Yomiuri Shimbunsha, 1997), 194–264; Richard J. Samuels, *Securing Japan* (Ithaca, N.Y.: Cornell University Press, 2007), 38–59.
2. Mike M. Mochizuki, “Japan’s Long Transition: The Politics of Recalibrating Grand Strategy,” in *Strategic Asia 2007–08*, edited by Ashley J. Tellis and Michael Wills (Seattle: National Bureau of Asian Research, 2007), 69–111; Richard J. Samuels, *Securing Japan: Tokyo’s Grand Strategy and the Future of East Asia* (Ithaca, N.Y.: Cornell University Press, 2007).
3. Yamakage Susumu, *Higashi Ajia chi-iki shugi to Nihon gaikō* (Tokyo: Nihon Kokusai Mondai Kenkyūjō, 2003); Morimoto Satoshi, ed., *Ajia Taiheiyō no takokukan anzen hoshō* (Tokyo: Nihon Kokusai Mondai Kenkyūjō, 2003).
4. National Institute for Defense Studies Japan, *East Asian Strategic Review 2011* (Tokyo: National Institute for Defense Studies Japan, 2011), 240.
5. Mike M. Mochizuki, “Japan’s Search for Strategy,” *International Security* 8, no. 3 (Winter 1983–1984): 152–79.
6. Tanaka, *Anzen hoshō*, 280–300.
7. Jeffrey Hornung, “Learning How to Sweat: Explaining the Dispatch of Japan’s Self-Defense Forces in the Gulf War and Iraq War” (PhD dissertation, George Washington University, 2009).
8. With the 1995 document, the Japanese government changed the title of the general defense planning document from the *National Defense Program Outline (NDPO)* to the *NDPG*.
9. National Institute for Defense Studies Japan, *East Asian Strategic Review 2011*, 240–41.
10. For an analysis of the new National Defense Program Guidelines, see Noboru Yamaguchi, *Deciphering the New National Defense Program Guidelines of Japan*, Policy Research Brief (Tokyo: Tokyo Foundation, 2011).
11. The authors wish to thank Eric Heginbotham for pointing this out.
12. Article 9 of Japan’s constitution is as follows: “Aspiring sincerely to an international peace based on justice and order, the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes. (2) To accomplish the aim of the preceding paragraph, land, sea, and air

forces, as well as other war potential, will never be maintained. The right of belligerency of the state will not be recognized.”

13. Jitsuo Tsuchiyama, “War Renunciation, Article 9, and Security Policy,” in *Japan in International Politics: The Foreign Policies of an Adaptive State*, edited by Thomas U. Berger, Mike M. Mochizuki, and Jitsuo Tsuchiyama (Boulder, Colo.: Lynne Rienner, 2007), 47–73; Samuels, *Securing Japan*, 45–57.
14. Japanese government statements regarding the Constitution and self-defense can be found in the following: *Bō'ei handobukku 2011* [Handbook for Defense 2011] (Tokyo: Asagumo Shimbun Sha, 2011), 642–702.
15. Ministry of Defense, *Defense of Japan 2012* (Tokyo: Ministry of Defense, 2012), 111.
16. *Ibid.*, 109.
17. *Ibid.*, 109.
18. *Bō'ei handobukku 2011*, 659–61; Maeda Tetsuo and Iijima Shigeaki, eds., *Kokkai Shingi kara bō'ei ron o yomi toku* (Tokyo: Sanseido, 2003), 71–79.
19. Ministry of Defense, *Defense of Japan 2012*, 109.
20. Nao Shimoyachi, “Japan Mulls Buying Cruise Missiles for Pre-emptive Self-Defense: Ishiba,” *Japan Times*, January 25, 2005; Ishiba Shigeru, *Kokubō* (Tokyo: Shinchosha, 2005), 157–80; Maeda and Iijima, *Kokkai Shingi kara bō'ei ron o yomi toku*, 69–71.
21. *Bō'ei handobukku 2011*, 653.
22. *Ibid.*, 654.
23. Maeda and Iijima, *Kokkai Shingi kara bō'ei ron o yomi toku*, 122–30.
24. *Ibid.*, 137, 141–42. To ensure that the JSDF's mission in a UN peacekeeping operation would not be the use of force, the government adopted five principles to govern Japanese participation: “(1) Agreement on a ceasefire shall have been reached among the parties to armed conflict. (2) Consent for conduct of UN peacekeeping operations as well as Japan's participation in such operations shall have been obtained from the host countries as well as from the parties to armed conflict. (3) The operations shall strictly maintain impartiality, and not favor any of the parties to in the armed conflict. (4) Should any of the requirements in the above-mentioned guideline cease to be satisfied, the International Peace Cooperation Corps may suspend International Peace Cooperation Assignments. Unless the requirements are satisfied again quickly, the Government of Japan may terminate the dispatch of the personnel engaged in International Peace Cooperation Assignments. (5) The use of weapons shall be within the limits judged reasonably necessary according to the circumstances.”
25. *Bō'ei handobukku 2011*, 665–71; Maeda and Iijima, *Kokkai Shingi kara bō'ei ron o yomi toku*, 117–21.
26. Ministry of Defense, *Defense of Japan 2012*, 110.
27. Such rear-area support was mandated in the 1997 U.S.-Japan Defense Cooperation Guidelines.
28. Advisory Panel on Reconstruction of the Legal Basis for Security, “Report of the Advisory Panel on Reconstruction of the Legal Basis for Security,” June 24, 2008.
29. Christopher W. Hughes, “Japan, Constitutional Reform, and Remilitarization,” in *A Time for Change? Japan's “Peace” Constitution at 65*, edited by Bryce Wakefield (Washington, D.C.: Woodrow Wilson International Center for Scholars, 2012), 36–38.
30. Paul Midford, *Rethinking Japanese Public Opinion and Security: From Pacifism to Realism?* (Stanford, Calif.: Stanford University Press, 2011).
31. “Serōchōsa—shitsumon to kaitō (April 21–22 jissai)” (Opinion Poll—Questions and Answers [Conducted April 21–22]), *Asahi Shimbun*, May 2, 2012, www.asahi.com/politics/update/0502/TKY201205020378.html.

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32. See the DPJ manifesto for the December 16, 2012 election: “Ugokasu no ha, ketsudan,” 12.
33. Jiyū Minshūtō, *Nihon Koku Kenpō Kaisei Sōan: Q & A* (Tokyo: Jiyū Minshūtō Kenpō Kaisei Suishin Honbu, October 2012).
34. This change if implemented would alter the status of the current Self-Defense Forces [*Ji'ei Tai*] into a full-fledged military in a legal sense.
35. “Over 50 percent Support Revisions to War-Renouncing Article of Constitution: Mainichi Poll,” Mainichi Daily News Online, September 15, 2012.
36. “Shūdanteki ji'eiken 8 wari ga sanseiha,” *Asahi Shimbun*, December 18, 2012, 1.
37. Richard J. Samuels, “‘New Fighting Power!’ Japan’s Growing Maritime Capabilities and East Asian Security,” *International Security* 32, no. 3 (Winter 2007–2008), 84–112.
38. National Institute for Defense Studies, Japan, *NIDS China Security Report* (Tokyo: National Institute for Defense Studies, 2011), 42–43.
39. Ministry of Defense, *Defense of Japan 2011*, 84.
40. National Institute for Defense Studies Japan, *East Asian Strategic Review 2011* (Tokyo: National Institute for Defense Studies Japan, 2011), 4–5, 126–27, 134–37; National Institute for Defense Studies Japan, *NIDS China Security Report*, 11–20.
41. Japanese strategists appear to have chosen to separate so-called gray zone competition from the broader spectrum of conflict, preferring to believe that affairs in the gray zone are intrinsically different and can be better managed. American strategists might not agree with this distinction, believing that it is without a difference.
42. National Institute for Defense Studies Japan, *NIDS China Security Report 2011*, 7–8, 13.
43. *Japan as a Rule-Promoting Power: Recommendations for Japan’s National Security Strategy in an Age of Power Shifts, Globalization, and Resource Constraints* (Tokyo: Sasakawa Peace Foundation, 2011), 51–53, 59–61.
44. Sekiya Michio, “Nichi-Bei Anpō no ima,” *Hōsō kenkyū to chōsa*, March 2011.
45. “‘Nitchūkankei warui’: Nihon 9-wari, Chūgoku 8-wari, ryōkoku de seronchōsa” (“Sino-Japanese relations bad”: 90 percent in Japan, 80 percent in China, according to opinion polls in both countries), *Asahi Shimbun*, September 23, 2012, www.asahi.com/international/update/0923/TKY201209230226.html.
46. Council on Security and Defense Capabilities in the New Era, *Japan’s Visions for Future Security and Defense Capabilities in the New Era: Toward a Peace-Creating Nation*, August 2010, 5–6, 9–10.
47. Hitoshi Tanaka, “Bridging Asia and the Pacific: Japan’s Role in Reinforcing the U.S. Pivot,” *East Asia Insights* (Japan Center for International Exchange, Tokyo), December 2011.
48. For a discussion of these concepts, see chapter 4.
49. Daisaku Sakaguchi, “Distance and Military Operations: Theoretical Background Toward Strengthening the Defense of Offshore Islands,” *NIDS Journal of Defense and Security*, no. 12 (December 2011), 105; Ōta Fumio and Yoshida Makoto, *Chūgoku no kaiyō senryaku ni dō taisho subeki ka* (Tokyo: Fuyoshobo, 2011), 136–43.
50. “The Balance of Power and the Balance of Terror,” in *The Balance of Power*, edited by Paul Seabury (San Francisco: Chandler, 1965); Robert Jervis, *The Illogic of American Nuclear Strategy* (Ithaca, N.Y.: Cornell University Press, 1984), 31.
51. Sugio Takahashi, “Kakuheiki wo meguru shōmondai to Nihon anzen hoshō: NPR-Shin START taisei, ‘kakuheiki no nai sekai’, kakudaiyokushi,” *Kaigai jijō* 58, nos. 7–8 (July–August 2010); Taku Ishikawa, “The Japan–U.S. Alliance Facing the Age of Nuclear Disarmament: From ‘Extended Deterrence’ to ‘Regional Deterrence,’” in *The New Nuclear Agenda: Prospects for U.S.–Japan Cooperation*, edited by Yuki Tatsumi (Washington, D.C.: Stimson Center, 2012), 23–39. As suggested in chapter 2, it is increasingly significant that there are gaps in our knowledge

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of Chinese nuclear strategy, doctrine, force structure, and force levels; that there is virtually no basis for U.S.-Japan nuclear discussions of any kind; there are no effective United States–Japan nuclear protocols of any kind; and that for years Japanese analysts have been asking quietly but persistently for more clarity on these subjects from the United States.

52. Recent articulations of this mixed and multilayered strategy toward China include Tokyo Foundation, “Japan’s Security Strategy Toward China: Integration, Balancing, and Deterrence in the Era of Power Shift,” October 2011; Jun Tsunekawa, “Toward a Stable Relationship between Japan and China: From a Bilateral to a Multilateral Approach,” in *China’s Shift: Global Strategy of the Rising Power*, edited by Masafumi Iida (Tokyo: National Institute for Defense Studies, 2009), 99–124; Hitoshi Tanaka, “Consolidating East Asia Cooperation: A New Role for Northeast Asia,” *East Asia Insights* 6, no. 4 (August 2011); Council on Security and Defense Capabilities in the New Era, *Japan’s Visions for Future Security and Defense Capabilities in the New Era: Toward a Peace-Creating Nation*, August 2010; and Institute for International Policy Studies, “A New Chapter in Japan–China Relations: Towards Co-Existence and Co-Development That Overcomes History,” April 2008.
53. Mike M. Mochizuki, “Japan’s Shifting Strategy Toward the Rise of China,” in *Managing the China Challenge: Global Perspectives*, edited by Quansheng Zhao and Guoli Liu (London: Routledge, 2009), 103–130.
54. For a recent articulation of this view, see Itō Kan, *Jimetsu suru Amerika teikoku: Nihon yo, dokuritsu se yo* [Self-Destruction of the American Empire: Japan, Become Independent] (Tokyo: Bungei Shunju, 2012).
55. The sections of this chapter dealing with trajectory projections of Japan Self-Defense Force capabilities, doctrines, and operating postures are based upon actual JSDF force structure and force levels, newly introduced and maturing capabilities, and the ever-present factor of Japanese civil-military relations up to the present. From this point of departure, and on the basis of alliance relations and the concept of a current JSDF cadre force already in being, the authors applied informed speculation regarding projections into the future along trajectory lines. This subsection on the basic characteristics of the JSDF is based on continuous close observation over the last twenty-five years, and on an extensive series of interviews and conversations with Japanese and American commanders, diplomats, and security analysts conducted in the course of preparing this assessment.
56. Portions of this section are drawn from Paul S. Giarra, “The Reactions of the Japan Maritime Self-Defense Force to Evolving PLA Navy Capabilities and Operations,” in *CNA Maritime Asia Project, Workshop Two: Naval Developments in Asia*, edited by Michael A. McDevitt and Catherine K. Lea, Conference Report DCP-2012-U-002417-Final (August 2012), 45–60, www.cna.org/sites/default/files/research/dcp-2012-u-002417-final.pdf.
57. See “Contents of the 2010 NDPG Part II: The Basics of Japan’s Defense Policy and Dynamic Defense Force Chapter 2, Section 2,” in *The National Defense Program Guidelines (NDPG)*, 2012, www.mod.go.jp/e/publ/w_paper/pdf/2012/21_Part2_Chapter2_Sec2.pdf. The discussion on the creation of a “Dynamic Defense Force” outlined in the 2010 NDPG centers on issues of readiness, mobility, flexibility, sustainability, and versatility, in parallel with a shift in emphasis to the southwestern frontiers of Japan. The document notes that there is a need for Japan to develop a defense system of “dynamic deterrence” in response to neighboring countries that are “modernizing their military forces and increasing their military activities.” A system of “dynamic deterrence” focuses on “operational use of the defense force.”
58. Some peacekeeping operations and combat service support missions did not survive initial political scrutiny, and never deployed. Others eventually succumbed to recall after deployment.
59. See Martin Fackler, “With Its Eye on China, Japan Builds Up Military,” *New York Times*, February 28, 2011, www.nytimes.com/2011/03/01/world/asia/01japan.html?pagewanted=all&_r=0; Martin Fackler, “Japan Plans Military Shift to Focus More on China,” *New York Times*, December 12, 2010, www.nytimes.com/2010/12/13/world/asia/13japan.html; Narushige Michishita, “Japan’s Response to Nuclear North Korea,” *Joint U.S.-Korea Academic Studies* 23 (2012): 100–112, [http://keia.org/publication/japan percentE2 percent80 percent99s-response-nuclear-north-korea](http://keia.org/publication/japan%20percentE2%20percent80%20percent99s-response-nuclear-north-korea).
60. Martin Fackler, “Japan Plans Military Shift to Focus More on China,” *New York Times*, December 12, 2010, www.nytimes.com/2010/12/13/world/asia/13japan.html. Fackler writes, “In what would be a sweeping overhaul of its cold war–era defense strategy, in December 2010 Japanese newspapers reported that Japan was about to release new military guidelines reducing its heavy armored and artillery forces pointed north toward Russia in favor of creating more mobile units that could respond to China’s growing presence near its southernmost islands. The new defense strategy called for greater integration of Japan’s armed forces with the United States military.”

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61. See Wade Boese, "Japan Embracing Missile Defense," Arms Control Association, April 2006, www.armscontrol.org/act/2006_04/JapanMissileDefense; "E-767 Airborne Warning and Control System," Global Security, www.globalsecurity.org/military/systems/aircraft/e-767.htm; and William W. Radcliffe, "Origins and Current State of Japan's Reconnaissance Satellite Program" *Studies in Intelligence* 54, no. 3 (September 2010): www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol.-54-no.-3/pdfs/Extract-Radcliffe-Japans-Recce-Satellites.pdf.
62. "E-767 Airborne Warning and Control System," Global Security, www.globalsecurity.org/military/systems/aircraft/e-767.htm.
63. This analysis of the Maritime Self-Defense Force is part of an ongoing discussion regarding capabilities, doctrines, and future capabilities that has been taking place with the JMSDF for twenty-five years.
64. Since the end of the Cold War, the U.S. Navy has at times actively opposed the development of JMSDF aircraft carriers and nuclear powered submarines. This resistance was rationalized in part because the United States was so strong in those areas, and therefore its JMSDF development was not a good use of Japanese budget resources, and would come at the expense of other needs such as bolstering less-capable JMSDF. However, two other factors played a significant role: the U.S. Navy's nuclear submarine community's reluctance to have any other Navy develop nuclear powered submarines if it could be helped; and the perhaps transitory U.S. Navy fear of angering the Chinese PLAN by what would be seen as provocative JMSDF carrier developments.
65. See James R. Holmes's description of Japanese naval assets in "The Sino-Japanese Naval War of 2012," *Foreign Policy*, August 20, 2012, www.foreignpolicy.com/articles/2012/08/20/the_sino_japanese_naval_war_of_2012.
66. The development of the JMSDF's air-capable ships is a noteworthy twenty-five-year saga of Japan's sea service overcoming political, legal, financial, and bureaucratic obstacles with single-minded purpose and a consistent operational vision.

Osumi class: Given its lack of a bow ramp, full flight deck, starboard superstructure, stern gate, and well deck, the *Osumi* landing ship tank (LST) (three of this class built and in service) is closer in general layout to a Landing Helicopter Assault ship (LHA) or Landing Helicopter Dock ship (LHD), although at 14,000 tons full load displacement and approximately 585 feet overall, it is much smaller than either of these U.S. Navy classes. It serves well, however, as an introductory flat deck ship, and plays a part in the JMSDF humanitarian assistance and disaster relief role.

Hyuga class: The follow-on *Hyuga* class helicopter destroyer (DDH) deserves its description as the first Japanese aircraft carrier built since World War II. Considerably larger than the *Osumi* class at 650 length overall (LOA) and displacing approximately 20,000 tons full load, *Hyuga* is indicative of the JMSDF emphasis on rapid evolution of its air-capable flat deck designs. *Hyuga*'s mission is antisubmarine warfare, with a secondary mission of peacekeeping and humanitarian assistance and disaster relief operations. Two of this class have been built and are in service.

"Improved" *Hyuga*: Technically *Hyuga*-class ships, the follow-on 22DDH-class ASW ships, are much larger: 815' LOA and displacing 30,000 tons full load. In aircraft carrier design, size implies both capacity and efficiency. The cleared-deck design of these ships is optimized for flexible flight deck operations. These new ships (not yet operational at this writing) are as large as the Imperial Japanese Navy's World War II fleet of (heavy) aircraft carriers, and are a political as well as a military statement. One of these ships is being built at the present, and another is planned. See Paul S. Giarra, "The Reactions of the Japan Maritime Self-Defense Force to Evolving PLA Navy Capabilities and Operations."
67. Gordon Arthur, "Submarines Gain Buoyancy in Asia-Pacific Region," *Defence Review Asia*, April 27, 2012, www.defencereviewasia.com/articles/160/SUBMARINES-GAIN-BUOYANCY-IN-ASIA-PACIFIC-REGION.
68. Paul S. Giarra, "Implications of China's Naval Modernization for the United States," U.S.-China Economic and Security Review Commission in Washington, D.C., June 11, 2009, [www.uscc.gov/hearings/2009hearings/transcripts/09_06_11_trans/June percent2011, percent202009 percent20 percent20Accepted percent20changes.doc](http://www.uscc.gov/hearings/2009hearings/transcripts/09_06_11_trans/June%20percent2011,%20percent202009%20percent20Accepted%20changes.doc).
69. The United States and Japan have also agreed to begin exercises on "Keen Sword 2013 to enhance coordination procedures and interoperability between the nations in the event of a crisis in the Asia-Pacific region." See "US and Japan begin Exercises Keen Sword 2013," *Strategic Defence Intelligence*, November 14, 2012, www.strategicdefenceintelligence.com/article/TOniz6qCptE/2012/11/14/us_and_japan_begin_exercise_keen_sword_2013.

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70. "Fixing The Empty Cell Blues," *Strategy Page*, June 14, 2010, www.strategypage.com/htmw/htsurf/articles/20100614.aspx.
71. Japan is at least partly subsumed in China's maritime salient (the triangular A2/AD battle space bounded, at a minimum, on its three points by the first island chain, and perhaps, at a maximum, by the three points of Sakhalin, Singapore, and Guam). See Paul S. Giarra, "China's Maritime Salient: Competitive Strategies on the Oceanic Front for the 21st Century," in *Competitive Strategies for the 21st Century: Theory, History, and Practice*, edited by Thomas Mahnken (Stanford, Calif.: Stanford University Press, 2012), 275–88.
72. JMSDF's non-nuclear submarines can at least act as screens for transiting U.S. carrier battle groups, operating in fixed positions in the many closed seas in the maritime salient. Significantly, Japan's Soryu class boats are much larger than the sorts of European models being exported to Asia or being built there under license. This makes them inherently capable of extended operations, and may change the way we think about so-called conventional submarines. The new Soryu class—an improved Oyashio class (with dropped-in air-independent propulsion; 4,200 tons submerged, 6,200 nautical mile range; six tubes, torpedoes, and Harpoon)—is a long-range boat, unlike many European exports essentially built for coastal defense. This class's combination of range, stealth, and weapons capacity is a significant development.
73. Until recently, Japan's national air defense command and control systems (such as JASDF's Basic Air Defense Ground Environment "BADGE" system) were incompatible with U.S. command-and-control systems, thereby precluding by technical means operationally effective and politically meaningful connectivity between JASDF and the U.S. Air Force.
74. Japan has confirmed orders for a few F-35s, and currently plans to procure a total of 42. Given the programmatic and price uncertainty surrounding the F-35 program in the United States, anything is possible as this torturous procurement plays out over time. Tokyo could cancel the procurement of the F-35 in favor of a "placeholder" aircraft such as the F/A-18, or even review the woefully inadequate number of F-35s on order, given the emergence of the PLAAF, which began testing its second fifth-generation fighter in October 2012.
75. The F-35 is inherently a penetrating bomber, and its "A" and "C" versions will be used as such by the U.S. Air Force and U.S. Navy. If Japan proceeds with its procurement, JASDF will possess a penetrating bomber capability within this time frame. Penetrating drones increasingly will proliferate throughout the U.S. force structure over the next several decades, and would be suitable for operations or staging from Japanese bases. For instance, the Northrop Grumman X-47B unmanned combat air vehicle should be on line by approximately 2020.
76. See Greg Waldron, "China Crisis Adds Urgency to Japanese Air Force Modernization," *Flightglobal*, October 8, 2012, www.flightglobal.com/news/articles/in-focus-china-crisis-adds-urgency-to-japanese-air-force-modernisation-377060.
77. See Jacoby M. Davis, "Japanese Annual Service Practice Live-Fire Exercise Observed by VIPs," *Fort Bliss Monitor*, October 24, 2012, <http://fbmonitor.com/2012/10/24/japanese-annual-service-practice-live-fire-exercise-observed-by-vips>; and "Patriot Performs Flawlessly in Japan Test Firings," PR Newswire, November 15, 2012, [www.prnewswire.com/news-releases/patriot-performs-flawlessly-in-japan-test-firings-179465451.html](http://prnewswire.com/news-releases/patriot-performs-flawlessly-in-japan-test-firings-179465451.html).
78. See full text interview of Paul Giarra in "Tough Choices Ahead for Japan's F-XX Procurement," *Japan Space Policy*, July 9, 2012, <http://japanspacepolicy.com/2012/07/09/tough-choices-for-japans-post-f-35-f-xx-procurement>.
79. See Rebecca Grant, "Countering the Missile Threat," *Air Force Magazine* 93, no. 12 (December 2010), [www.airforce-magazine.com/MagazineArchive/Pages/2010/December percent202010/1210missile.aspx](http://www.airforce-magazine.com/MagazineArchive/Pages/2010/December%202010/1210missile.aspx); and Toshi Yoshihara, "Chinese Missile Strategy and the U.S. Naval Presence in Japan: The Operational View from Beijing," *Naval War College Review* 63, no. 3 (Summer 2010), www.usnwc.edu/getattachment/69198ce2-cdc2-4b82-8f85-568f80466483/Chinese-Missile-Strategy-and-the-U-S--Naval-Presen.
80. See "Japan: Missions" January 1994, www.country-data.com/cgi-bin/query/r-7319.html.
81. See Kyle Mizokami, "Everything You Want to Know About Japan's Marines," *Japan Security Watch*, September 25, 2012, <http://jsw.newpacificinstitute.org/?p=10523>.
82. The JGSDF has been conducting amphibious warfare exercises with the U.S. Marine Corps for the past eight years at Camp Pendleton, California (Exercise IRON FIST). These bilateral exercises are expanding, and shifting

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- to Guam and Tinian. According to authoritative U.S. Marine Corps sources, the JGSDF has approximately 80 percent of the equipment necessary for amphibious operations as of October 2012, and currently is procuring its first amphibious assault vehicles. In 2007, Japan also established the Central Readiness Force (CRF) as a rapid reaction force. Based in the JGSDF, the CRF encompasses a helicopter brigade, an airborne brigade, a special operations group, and a chemical defense unit. See Evan S. Medeiros, et al., *Pacific Currents: The Responses of U.S. Allies and Security Partners in East Asia to China's Rise* (Santa Monica, Calif.: RAND, 2008), 53.
83. See John Stillion's discussion of the limitations of PAC-3 missiles in a situation of multiple, fast incoming missiles. "Fighting Under Missile Attack," *Air Force Magazine* 92, no. 8 (August 2009), www.airforce-magazine.com/MagazineArchive/Pages/2009/August/percent202009/0809fighting.aspx.
 84. A government panel that was put into place in 2009 to study Japan's defense posture reported that the outer islands should receive disproportionate placement of Japan's self-defense forces. See Kyle Mizokami, "Japan Defense Panel: Reinforce the Outer Islands," *Japan Security Watch*, July 30, 2010, <http://jsw.newpacificinstitute.org/?p=2128>.
 85. See Paul Kallender-Umezu, "Japan Passes Law Permitting Military Space Development," *Defense News*, June 22, 2012, www.defensenews.com/article/20120622/DEFREG03/306220001/Japan-Passes-Law-Permitting-Military-Space-Development.
 86. Ibid. The amendment "enables the Prime Minister's Cabinet Office to take control of the planning and budgeting of Japan's government space program. It also removes an article in a prior law governing the Japan Aerospace Exploration Agency (JAXA), the nation's equivalent to NASA, which had restricted JAXA's ability to pursue military space programs."
 87. See Ayako Mie, "Japan Woefully Vulnerable to Cyber-Attack: Security Needs More Human and Physical Resources," *Japan Times*, October 27, 2012, www.japantimes.co.jp/text/nn20121027f1.html; and "Japan Vulnerable to Cyber-Attack," News Track India, October 28, 2012, <http://newstrackindia.com/newsdetails/2012/10/28/248-Japan-vulnerable-to-cyber-attack.html>.
 88. "On October 29, 2005, the SCC directed the creation of a bilateral joint operations coordination center (BJOCC). During the North Korean missile provocations of June–July 2006, the United States and Japan exchanged information in a timely manner, including through an interim coordination facility at Yokota Air Base with JSDF liaisons. The success of this facility in ensuring that both sides had a common awareness of the evolving situation validated the importance of continuous enhancement of bilateral policy/operational coordination including through establishment of the BJOCC at Yokota Air Base." Secretary of State Condoleezza Rice, Secretary of Defense Robert M. Gates, Minister for Foreign Affairs Taro Aso, and Minister of Defense Fumio Kyuma, "Joint Statement of the Security Consultative Committee (2+2+): Alliance Transformation: Advancing United States-Japan Security and Defense Cooperation," May 1, 2007, Ministry of Foreign Affairs of Japan, www.mofa.go.jp/region/n-america/us/security/scc/joint0705.html.
 89. See "HALE UAVs Come of Age," Defense Update, 2007, http://defense-update.com/events/2007/summary/auvsi07_5hale.htm.
 90. Various Japanese forecasts; for example, Japan Center for Economic Research, *Japan's Economic Outlook 2009–2020*.
 91. Japan Center for Economic Research, "The 37th Middle-Term Economic Forecast (2010–2020)," February 2011.
 92. Japan External Trade Organization, "Japanese Trade and Investment Statistics," www.jetro.go.jp/en/reports/statistics.
 93. Nihon Seifu Kankō Kyoku, "Tōkei Happyō," www.jnto.go.jp/jpn/news/data_info_listing/index.html.
 94. Nihon Bōeki Shinkō Kikō, "Zai Ajia-Oseania Nikkei Kigyō Katsudō Jittai Chōsa (2012 Nendo Chōsa)," www.jetro.go.jp/world/asia/reports/07001149.
 95. Nicholas Eberstadt, "Demography and Japan's Future," in *Reimagining Japan: the Quest for a Future That Works*, edited by McKinsey & Company (San Francisco: VIZ Media, 2011), 82–87.

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96. See the section in chapter 2 on Beijing's economic prospects for a comprehensive review of different projections regarding Chinese economic growth.
97. Yoshimasa Hayashi and GNI Study Group, "Don't Fear Hollowing Out: Transforming into an Investment Nation Will Save Japan," *Japan Echo Web*, no. 10 (February–March 2012).
98. Japan's policies on the control of arms exports: "The Government of Japan has been dealing carefully with 'arms' exports in accordance with the Three Principles on Arms Exports (hereinafter referred to as 'the Three Principles') and their related policy in order to avoid any possible aggravation of international conflicts. Under the Three Principles, 'arms' exports to the following countries or regions shall not be permitted: (1) communist bloc countries, (2) countries subject to 'arms' exports embargo under the United Nations Security Council's resolutions, and (3) countries involved in or likely to be involved in international conflicts. The Three Principles have been the basic policy concerning Japan's 'arms' exports since they were declared at the Diet session in 1967." See the Japan Ministry of Foreign Affairs web page, www.mofa.go.jp/policy/un/disarmament/policy/index.html, for the complete text.
99. Yuki Tatsumi, *Japan's National Security Policy Infrastructure: Can Tokyo Meet Washington's Expectation?* (Washington, D.C.: Stimson Center, 2008).
100. Michael Finnegan, *Managing Unmet Expectations in the U.S.-Japan Alliance* (Seattle: National Bureau of Asian Research, 2009).

CHAPTER 4

1. Portions of this section, "Strategy and Doctrine," are adapted from Michael D. Swaine, *America's Challenge: Engaging a Rising China in the Twenty-First Century* (Washington, D.C.: Carnegie Endowment for International Peace, 2011).
2. See White House, "National Security Strategy of the United States of America," May 2010, www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf.
3. Along these lines, the 2010 National Security Strategy identifies the following as the most important American interests: the security of the United States, its citizens, and U.S. allies and partners; a strong, innovative, and growing U.S. economy in an open international economic system that promotes opportunity and prosperity; respect for universal values at home and around the world; and an international order advanced by U.S. leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges.
4. For a discussion of overall U.S. strategic objectives, see Christopher P. Twomey, "Missing Strategic Opportunity in U.S. China Policy Since 9/11," *Asian Survey* 47, no. 4 (July–August 2007). Also see Barry R. Posen, "Command of the Commons: The Military Foundation of U.S. Hegemony," *International Security* 28, no. 1 (Summer 2003). As Posen states, "Today, there is little dispute within the U.S. foreign policy elite about the fact of great U.S. power, or the wisdom of an essentially hegemonic foreign policy." See Andrew J. Bacevich, *The Limits of Power: The End of American Exceptionalism* (New York: Metropolitan Books, 2008), 40–41; and William C. Wohlforth, "The Stability of a Unipolar World," *International Security* 24, no. 1 (Summer 1999): 5–41.
5. See U.S. Department of Defense, "National Defense Strategy," June 2008, 6–14.
6. For an affirmation of this perspective, see Robert M. Gates, "America's Security Role in the Asia-Pacific," remarks delivered at the Eighth International Institute for Strategic Studies Asia Security Summit, Shangri-La Dialogue, Singapore, May 30, 2009, www.iiss.org/conferences/the-shangri-la-dialogue/shangri-la-dialogue-2009/plenary-session-speeches-2009/first-plenary-session/dr-robert-gates. Defense Secretary Gates stated: "It is hard to avoid the conclusion that few, if any, of the world's problems can be solved without the support and ideas of the nations of the Pacific Rim."
7. As Derek Mitchell states, "With the U.S. acting as security guarantor, regional states have been able to channel their resources into confidence-building and internal development rather than arms races and competing blocs." See Derek Mitchell, "Reduce, Maintain, Enhance: U.S. Force Structure Changes in the Asia-Pacific Region,"

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in *America's Role in Asia: Asian and American Views*, project chaired by Michael Armacost, J. Stapleton Roy, Han Sung-Joo, Tommy Koh, and C. Raja Mohan (San Francisco: Asia Foundation, 2008), 159.

8. Specifically, the 2007 U.S. maritime strategy stipulates that the United States will maintain the ability “to impose local sea control wherever necessary, ideally in concert with friends and allies, but by ourselves if we must” in order to defend SLOCs and maintain freedom of maneuver and access. James T. Conway, Gary Roughead, and Thad W. Allen, “A Cooperative Strategy for 21st Century Seapower,” presented at the International Seapower Symposium, Newport, R.I., October 2007, www.navy.mil/maritime/Maritimestrategy.pdf.
9. For a recent statement by a senior U.S. official of many of these interests, see Secretary of Defense Robert M. Gates, remarks at ASEAN Defense Ministers Meeting Plus, October 12, 2010, U.S. Department of Defense news transcript, www.defense.gov/Transcripts/Transcript.aspx?TranscriptID=4700.
10. For example, see Secretary of Defense Robert M. Gates, remarks at Keio University, Tokyo, January 14, 2011, www.globalsecurity.org/military/library/news/2011/01/mil-110114-dod02.htm.
11. As Derek Mitchell states: “For decades, it has been axiomatic among American and most East Asian strategists that the U.S. military presence in East Asia has served an essential role in preserving regional stability.” Mitchell, “Reduce, Maintain, Enhance,” 159. That such presence essentially equates to military predominance in specific naval and air capabilities was largely confirmed by the current and former senior officials whom the author interviewed for this study. It is also reflected in the periodic reports and strategy statements issued by the Department of Defense and the Pacific Command. Also see Donna Miles, “Keating Passes PACOM Torch to Willard,” *American Forces Press Service*, October 19, 2009, www.pacom.mil/web/Site_Pages/Media/News%20200910/20091019-ChangeOfCommand1.shtml; “U.S. Military Presence in Asia Appreciated, Says Pacific Commander,” remarks by Admiral Keating at East West Center Policy Seminar, July 22, 2009, www.eastwestcenter.org/news-center/east-west-wire/us-military-presence-in-asia-appreciated-says-pacific-commander; Ashley J. Tellis, “Preserving Hegemony: The Strategic Tasks Facing the United States,” in *Strategic Asia 2008–09: Challenges and Choices*, edited by Ashley J. Tellis, Mercy Kuo, and Andrew Marble (Seattle: National Bureau of Asian Research, 2008), 3–40; Admiral Timothy J. Keating, commander, U.S. Pacific Command, statement before the U.S. House Armed Services Committee on U.S. Pacific Command posture, March 12, 2008, www.pacom.mil/web/pacom_resources/pdf/2008%20PACOM%20HASC%20Posture%20Statement_12%20Mar%202008.pdf; “Gates Says U.S. Interest in Asia Pacific Remains Strong,” Channel News Asia, May 31, 2008, www.iiss.org/whats-new/iiss-in-the-press/press-coverage-2008/may-2008/gates-says-us-interest-in-asia-pacific-remains-strong; and Evan S. Medeiros, “Strategic Hedging and the Future of Asia-Pacific Stability,” *Washington Quarterly* 29, no. 1 (Winter 2005–2006): 145–67.
12. Moreover, many Asian leaders agree with the U.S. position that America serves as an essential guarantor of security for the region. For a recent reference to this viewpoint, see Robert Sutter, “Trust Our Resiliency,” *Asia Policy*, no. 7 (January 2009): 12–14. Sutter has conducted extensive interviews with Asian security analysts and elites in recent years. In this source, he writes: “Washington ... wants stability and in contrast with the inability or reluctance of Beijing and other powers to undertake major risks and commitments—continues the massive expenditure of, and major risks associated with, a U.S. military presence in the Asia-Pacific region. This role is broadly viewed by Asian government officials as essential in stabilizing the often uncertain security relationships among Asian governments.”
13. Jin H. Pak, “China’s Pragmatic Rise and U.S. Interests in East Asia,” *Military Review* 87, no. 6 (November–December 2007); James J. Przystup, “The United States and the Asia-Pacific Region: National Interests and Strategic Imperatives,” *Strategic Forum*, no. 239 (April 2009): 1–5; Bruce Vaughn, “U.S. Strategic and Defense Relationships in the Asia-Pacific Region,” Congressional Research Service, January 22, 2007.
14. For example, in the February 19, 2005, joint statement of the United States–Japan Joint Security Consultative Committee (JSCC) (the so-called two-plus-two meeting of foreign and defense secretaries), Tokyo and Washington specified, among many other things, that a peaceful resolution of the Taiwan situation through dialogue constituted a common strategic objective. See “Joint Statement of the U.S.-Japan Security Consultative Committee,” Ministry of Foreign Affairs of Japan, Washington, February 19, 2005, www.mofa.go.jp/region/n-america/us/security/scc/joint0502.html. The JSCC statement, along with the earlier National Defense Policy Guidelines (NDPG) of 2004, marked a clear evolution toward the identification of China—and the Taiwan situation in particular—as security concerns for the United States–Japan alliance, a process that arguably began in the mid-1990s, with the April 1996 U.S.-Japan Joint Declaration on Security and the subsequent Revised Defense Guidelines of 1997. The declaration spoke of the importance of defense cooperation between Washington and Tokyo in “situations in the areas surrounding Japan.”

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15. U.S. policies supported an active Japanese role in an expanding number of regional multilateral forums and mechanisms, including long-standing organizations such as the Asia-Pacific Economic Cooperation forum (APEC) and the Association of Southeast Asian Nations (ASEAN) Regional Forum (ARF), as well as more recent bodies such as the East Asia Summit (EAS) and ASEAN+3 (APT)—the latter of which does not include the United States. Indeed, the 1996 U.S.-Japanese Joint Declaration on Security asserted that the two states would cooperate with each other and other states to promote multilateral bodies such as ARF, while the 2004 *NDPG* stressed that the U.S. alliance should facilitate the promotion of multilateral security cooperation and dialogue.
16. See James Green, “Exercise Iron Fist Kicks Off Joining U.S. and Japanese Forces,” *DVIDS*, January 26, 2010, www.dvidshub.net/news/44474/exercise-iron-fist-kicks-off-joining-us-and-japanese-forces#.UGws3k3A-rU; Timothy Childers, “Marine, Japanese Leaders Visit USS Peleliu During Exercise Iron Fist 2012,” *Marines*, February 11, 2012, www.15thmeu.marines.mil/News/NewsArticleDisplay/tabid/8671/Article/82564/marine-japanese-leaders-visit-uss-peleliu-during-exercise-iron-fist-2012.aspx; and “GSDF to Join Marine Exercises in Guam,” *Jiji Press*, August 4, 2012, www.yomiuri.co.jp/dy/national/T120803004806.htm.
17. A bilateral extended deterrence dialogue was established in 2011 to provide a forum for regularly addressing these issues. See “Joint Statement of the U.S.-Japan Security Consultative Committee,” attended by Secretary of State Hillary Rodham Clinton, Secretary of Defense Robert M. Gates, Minister for Foreign Affairs Matsumoto, and Minister of Defense Kitazawa in Washington, D.C., June 21, 2011, www.state.gov/r/pa/prs/ps/2011/06/166597.htm. This joint statement affirmed that the alliance is “indispensable to the security of Japan and the United States, and to the peace, stability, and economic prosperity of the Asia-Pacific region in the 21st century.”
18. Office of the Press Secretary, White House, “Remarks by President Barack Obama at Suntory Hall, Tokyo, Japan,” November 14, 2009. In this address on U.S. policy in Asia, Obama stated: “America’s alliances in Asia continue to provide the bedrock of security and stability that has allowed the nations and peoples of this region to pursue opportunity and prosperity that was unimaginable at the time of my first childhood visit to Japan. And even as American troops are engaged in two wars around the world, our commitment to Japan’s security and to Asia’s security is unshakeable [applause], and it can be seen in our deployments throughout the region. Also see Yoichi Kato, “U.S. Warm to Proposal to Reaffirm Security Pact,” *Asahi Shimbun*, July 23, 2009, www.asahi.com/english/Herald-asahi/TKY200907230065.html; Kurt M. Campbell, “Press Availability in Beijing, China,” Remarks in Beijing, October 14, 2009; James B. Steinberg, “East Asia and the Pacific,” remarks at National Bureau of Asian Research Conference, “Engaging Asia 2009: Strategies for Success,” Washington, D.C., April 1, 2009, www.state.gov/s/d/2009/121564.htm.

Moreover, Japanese prime minister Taro Aso was the first foreign head of government to visit Washington after Obama took office, and Japan was the site of Hillary Clinton’s first foreign visit as secretary of state, before she headed to the 2009 ARF meeting. See also Robert M. Gates, secretary of defense, remarks at Keio University, Tokyo, January 14, 2011, www.defense.gov/Speeches/Speech.aspx?SpeechID=1529; in his remarks, Gates expressed that the United States–Japan “alliance is more necessary, more relevant, and more important than ever.” On January 18, 2013, U.S. secretary of state Hillary Clinton clearly stated that the United States opposes any attempt to alter the status quo of the Japanese administration of the Senkaku Islands. Clinton also reassured Japanese foreign minister Kishida that the U.S.-Japanese alliance remains a cornerstone of U.S. foreign policy. See Andrew Quinn, “Clinton Assures Japan on Islands, Invites Abe to U.S. in February,” *Reuters*, January 18, 2013, www.reuters.com/article/2013/01/18/us-japan-usa-idUSBRE90H1AX20130118; and Yasushi Azuma, “U.S. Against Unilateral Action to Weaken Japan’s Control on Senkakus,” *Kyodo*, January 18, 2013, <http://english.kyodonews.jp/news/2013/01/204921.html>.

19. Joint Press Conference with U.S. secretary of defense Robert M. Gates and Japanese minister of defense Toshimi Kitazawa, Tokyo, January 13, 2011, www.defense.gov/transcripts/transcript.aspx?transcriptid=4753; Sheila Smith, “Talking Strategy With Japan,” blog post, Council on Foreign Relations, January 13, 2011, <http://blogs.cfr.org/asia/2011/01/13/talking-strategy-with-japan>; Martin Fackler and Elisabeth Bumiller, “U.S. Will Defer to Japan on Moving Okinawa Base,” *New York Times*, January 13, 2011. In contrast to this more accommodating stance, in the fall of 2009, senior Obama defense officials such as Defense Secretary Robert Gates had communicated Washington’s strong desire for the Democratic Party of Japan government to follow through with the agreed-upon U.S. forces relocation agreements and to continue to exercise “leadership in meeting global security challenges.” See U.S. Department of Defense, “Joint Press Conference with Japanese Defense Minister Toshimi Kitazawa and Secretary of Defense Robert Gates,” October 21, 2009.
20. See Swaine, *America’s Challenge*. Also see Medeiros, “Strategic Hedging”; and Condoleezza Rice, “Our Asia Strategy,” *Wall Street Journal*, October 24, 2003.

21. Thomas J. Christensen, deputy assistant secretary of state for East Asian and Pacific affairs, "The State of U.S.-China Diplomacy," statement before the U.S.-China Economic and Security Review Commission, February 2, 2007. Also see Thomas J. Christensen, "China's Role in the World: Is China a Responsible Stakeholder?" remarks before the U.S.-China Economic and Security Review Commission, Washington, D.C., August 3, 2006, www.uscc.gov/hearings/2006hearings/written_testimonies/06_08_3_4wrts/06_08_3_4_christensen_thomas_statement.pdf; Condoleezza Rice, "Our Asia Strategy"; James A. Kelly, "U.S.-China Relations," testimony before the Senate Foreign Relations Committee, September 11, 2003, <http://2001-2009.state.gov/p/eap/rls/rm/2003/24004.htm>; and Colin L. Powell, "Interview on CCTV," transcript of television interview, Beijing, July 28, 2001, <http://2001-2009.state.gov/secretary/former/powell/remarks/2001/4330.htm>.
22. For one example of this argument, see Dick K. Nanto, "East Asian Regional Architecture: New Economic and Security Arrangements and U.S. Policy," Congressional Research Service Report for Congress, January 4, 2008. Nanto states: "The United States and China both envision themselves as the preeminent country in the region. Economically, the United States wants to increase access for U.S. exports and companies through the WTO, APEC, FTAs, and other agreements" (pp. 30-31). "The U.S. vision for East Asia is roughly compatible with Japan's vision" (p. 32). "China would like to see U.S. influence decrease as its influence increases. Likewise, it would like to displace Japan as the economic leader of East Asia. As such, China prefers an exclusive East Asian regional organization that would keep the United States out and diminish Japan's leadership role" (p. 31). "China's vision for East Asia conflicts with the U.S. vision" (p. 32). Also see the discussion in chapter 3.

For another example, see James A. Lyons (U.S. admiral, retired), "Countering China's Aggression: Communist Dictatorship Presents Trouble in Asia and Abroad," *Washington Times*, October 18, 2010. Lyons states, "Our message should be that the world's leading democracy will not be intimidated or bullied by another Communist threat. In addition to remaining militarily superior, the United States also can begin to organize multinational political and economic pressures that could help accelerate China's evolution from Communism. We led a similar campaign in the not-too-distant past."

23. This argument rests on two basic assumptions: first, that the United States must continue to convey both the perception and the reality that it possesses the ability to deter or defeat, through clearly superior military capabilities, any conceivable attempt by China to (1) threaten or employ force against other Asian powers deemed strategically significant by the United States; or (2) more generally undertake military actions that appear to call into question or eclipse U.S. military predominance. The second assumption flows directly from the preceding one: The capabilities of the People's Liberation Army (PLA) that are designed to reduce or eliminate China's vulnerability to America's most potent weapons systems in Asia (for example, carrier battle groups, long-range aircraft, space-based intelligence, surveillance, and reconnaissance platforms, and information warfare capabilities) convey an offensive intention behind China's strategy, and hence are not designed merely to achieve more limited deterrence objectives, such as preventing U.S. support for Taiwan independence, or to counter direct threats to the Chinese homeland. Thus, not only are "worst case" motives (for example, regional dominance) imputed to China, but also potential "worst case" military behavior (conflict), which could lead "worst case" outcomes (U.S. defeat) to be placed front and center as the standard for America's response to China's military buildup. Hence, this viewpoint implies that China's acquisition of military capabilities (again, primarily maritime, air, and space) must be neutralized by whatever means necessary, presumably short of outright war.

In some instances, such assumptions regarding Chinese intentions are reinforced by references to the authoritarian nature of the government of the PRC. Given its political makeup (and the confrontational history of Sino-American relations during much of the Cold War), the Chinese government is viewed by these advocates as essentially hostile to the United States as a democratic power, and discontent with anything less than the attainment of a position of predominance in the Asia-Pacific region. Some observers will also invoke Chinese history to support this argument, asserting that, whether democratic or not, China will seek to reestablish its alleged historical position as a hegemonic imperial power exercising control over the region.

24. Aaron L. Friedberg, "Asia Rising," *American Interest* 6, no. 3 (Winter 2009): 53-61: "If it is premature to declare engagement a failure, it is also far too early to be confident of its ultimate success. The fundamental character of the Chinese regime remains unchanged even as China grows richer and stronger, making the task of maintaining a favorable balance of power in Asia increasingly difficult and expensive. That is particularly the case in the military domain." Also see Arthur Waldron, "How Would Democracy Change China?" *Orbis* 48, no. 2 (Spring 2004): 247-61.
25. For a recent official statement of this view, see James B. Steinberg, "Administration's Vision of the U.S.-China Relationship," keynote address at the Center for a New American Security, Washington, D.C., September 24, 2009,

www.state.gov/s/d/2009/129686.htm. As Steinberg notes, “In the face of uncertainty, policymakers in any government tend to prepare for the worst to focus on the potential threat down the road, and of course, some of that is necessary. But we also have to make sure that by preparing for the worst, we don’t foreclose positive outcomes; that we leave ourselves open to the positive, and avoid the trap of self-fulfilling fears.”

26. Robert Sutter is probably the most notable proponent of this viewpoint among outside analysts. Sutter argues that “recent U.S. difficulties have not fundamentally undermined the main foundations of the leadership, power, and influence that the United States has exerted in the region for many years.” Moreover, although China is certainly rising and probably will continue to do so, it “also has major limitations and weaknesses and has a long way to go to compete for regional leadership.” Indeed, he compares Chinese strengths and weaknesses with U.S. strengths and weaknesses and concludes that “the power and interests of the United States and most Asia-Pacific governments work against China ever achieving dominance in the region.” See Robert G. Sutter, *The United States in Asia* (Lanham, Md.: Rowman & Littlefield, 2008), 282.
27. For a discussion of the decline of the United States and the implications of a rising China, see G. John Ikenberry, “The Rise of China and the Future of the West,” *Foreign Affairs*, January 2008, www.foreignaffairs.com/articles/63042/g-john-ikenberry/the-rise-of-china-and-the-future-of-the-west. See also “G. John Ikenberry Responds: The Rise of Asia AND the West,” Washington Note, May 6, 2008, http://thewashingtonnote.com/archives/2008/05/g_john_ikenberr. Ikenberry states that he does not equate the decline of the United States with a revisionist China that will attempt to change the norms and practices of the Western-oriented international system. He notes, “To put it bluntly, I do not see Asia offering anything new or distinctive in the organization and governance of the global system. I do not see a lot of new ideas about how global rules and institutions should be transformed. I do not see an ‘Asian way’ of world politics. I do see efforts—legitimate efforts—to get seats at various tables. But the tables are not newly designed Asian tables. They are just tables, many of them dating from earlier decades when the United States really did shape the rules and institutions of the global system.” For a discussion of the end of U.S. unipolarity and the emergence of a multipolar international system, see “Global Trends 2030: Alternative Worlds,” National Intelligence Council, December 2012, www.dni.gov/files/documents/GlobalTrends_2030.pdf.
28. “Press Briefing by Press Secretary Jay Carney, National Security Advisor Tom Donilon, and Deputy National Security Advisor for Strategic Communications Ben Rhodes,” Office of the White House Press Secretary, November 19, 2011, www.whitehouse.gov/the-press-office/2011/11/19/press-briefing-press-secretary-jay-carney-national-security-advisor-tom-.
29. Officials from the Obama administration have repeatedly described the “Pacific Pivot” as a move that seeks to reposition the United States to capture the opportunities that will abound in the Asian region rather than to contain, encircle, or counterbalance a rising China. See “Press Briefing by Press Secretary Jay Carney [et al.], November 19, 2011”; Scott Sterns, “Clinton in Pacific Advancing U.S. Pivot to Asia,” *Voice of America*, September 1, 2012, www.voanews.com/content/clinton_in_pacific_advancing_us_pivot_to_asia/1499787.html; Julian Pecquet, “Clinton: ‘Pivot to Asia’ About Promoting Democracy, Not Countering China,” *Hill*, July 9, 2012, <http://thehill.com/blogs/global-affairs/asia-pacific/236743-clinton-says-administrations-pivot-to-asia-really-about-human-rights-democracy>; and Hillary R. Clinton, “America’s Pacific Century,” *Foreign Policy*, November 2011, www.foreignpolicy.com/articles/2011/10/11/americas_pacific_century. Also see Defense Secretary Panetta’s recent remarks reaffirming close military-to-military relations between the United States and China as the key to maintaining a peaceful Asia-Pacific region. Leon Panetta, “Statement at the PLA Engineering Academy of Armored Forces, Beijing, China, Wednesday, September 19, 2012.”
30. As noted in chapter 2, Chinese analysts do not use the term “antiaccess and area denial” to describe the capabilities that the PLA is acquiring in this realm; they most often employ the term “counterintervention” instead. This reflects the fact that such capabilities are primarily being developed as deterrent measures, to complicate the ability of U.S. forces to intervene in a crisis over Taiwan or other territorial disputes along Beijing’s maritime periphery.
31. For a more detailed definition of antiaccess/area denial (A2/AD), see U.S. Department of Defense, “Joint Operational Access Concept,” January 17, 2012, www.defense.gov/pubs/pdfs/JOAC_Jan%202012_Signed.pdf.
32. Leon E. Panetta, “Remarks by Secretary Panetta at the Shangri-La Dialogue in Singapore,” Singapore, June 2, 2012, www.defense.gov/Transcripts/Transcript.aspx?TranscriptID=5049. Panetta announced, “by 2020 the Navy will re-posture its forces from today’s roughly 50/50 percent split between the Pacific and the Atlantic to about a 60/40 split between those oceans. That will include six aircraft carriers in this region, a majority of our cruisers, destroyers, Littoral Combat Ships, and submarines.”

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33. While official documents describing JOAC do not explicitly identify China as a potential target for ASB-type approaches, other documents, as well as writings and remarks by U.S. military officers and defense analysts, make the connection very clear. See U.S. Department of Defense, "Joint Operational Access Concept," compared with U.S. Department of Defense, *Quadrennial Defense Review Report*, February 2010, www.defense.gov/qdr/qdr%20as%20of%2029jan10%201600.PDF, 31–34. See also General Norton A. Schwartz, U.S. Air Force, and Admiral Jonathan W. Greenert, U.S. Navy, "Air-Sea Battle: Promoting Stability in an Era of Uncertainty," *American Interest*, February 20, 2012, www.the-american-interest.com/article.cfm?piece=1212; and Jan van Tol, Mark Gunzinger, Andrew F. Krepinevich, and Jim Thomas, *Air-Sea Battle: A Point of Departure Operational Concept* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2010).
34. As Barry Watts notes, "Nearly two decades after the Office of Net Assessment raised the issue of a revolution in military affairs based on precision munitions, advanced sensors, and more automated command and control, the United States is still the only power able to conduct information-enabled precision-strike on a global basis." Barry Watts, "The Maturing Revolution in Military Affairs," Center for Strategic and Budgetary Assessments, June 2011, www.csbaonline.org/2011/06/03/csba-releases-new-report-on-the-maturation-of-the-precision-strike-regime.
35. "Annual Report to Congress on Long-Range Plan for Construction of Naval Vessels for FY 2013," Office of the Chief of Naval Operations, Washington, D.C., April 2012, www.militarytimes.com/static/projects/pages/navy-shipbuilding-report-032812.
36. Robert O. Work, "AirSea Battle: Power Projection in the Mature Guided Munitions Era," presentation delivered at the AIE Counter A2/AD Conference, October 26, 2010.
37. Owen R. Cote Jr., "The Third Battle Innovation in the U.S. Navy's Silent Cold War Struggle with Soviet Submarines," www.usnwc.edu/Publications/Naval-War-College-Press/Newport-Papers/Documents/16-pdf.aspx; for a table comparing the acoustic signatures of Chinese and Soviet-era submarines, see "The People's Liberation Army Navy: A Modern Navy with Chinese Characteristics," Office of Naval Intelligence, August 2009, www.fas.org/irp/agency/oni/pla-navy.pdf.
38. Owen R. Cote Jr., "Assessing the Undersea Balance Between the U.S. and China," SSP Working Paper, February 2011, http://web.mit.edu/ssp/publications/working_papers/Undersea%20Balance%20WP11-1.pdf.
39. Ibid.
40. Admiral Jonathan Greenert, "Navy 2025: Forward Warfighters," *Proceedings* 137, no. 12 (December 2011), www.usni.org/magazines/proceedings/2011-12/navy-2025-forward-warfighters.
41. Ibid.
42. James T. Conway, Gary Roughead, and Thad W. Allen, "A Cooperative Strategy for 21st Century Seapower," presented at the International Seapower Symposium, Newport, R.I., October 2007, www.navy.mil/maritime/Maritimestrategy.pdf.
43. Robert Haddick, "This Week at War: the Navy's Pacific Problem," *Foreign Policy*, March 30, 2012, www.foreign-policy.com/articles/2012/03/30/this_week_at_war_the_navys_pacific_problem.
44. Neil Jenkins, Michael Price, Peter Swartz, and Daniel Whiteneck, "The Navy at a Tipping Point: Maritime Dominance at Stake?" Center for Naval Analyses, March 2010, www.public.navy.mil/usff/Documents/navy_at_tipping_point.pdf.
45. Ronald O'Rourke, "Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress," Congressional Research Service, October 18, 2012, www.fas.org/sgp/crs/weapons/RL32665.pdf.
46. Ibid.
47. International Institute for Strategic Studies, *The Military Balance 2012* (London: International Institute for Strategic Studies, 2012), 23–24.
48. U.S. Department of Defense, *Quadrennial Defense Review Report*, 39.

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49. According to the 2010 Quadrennial Defense Review report, "Operations over the past eight years have stressed the ground forces disproportionately, but the future operational landscape could also portend significant long-duration air and maritime campaigns for which the U.S. Armed Forces must be prepared."
50. See Michael O'Hanlon, "America's Pacific Power and Pacific Alliances in an Age of Austerity," *International Journal of Korean Studies* 16, no. 2, www.icks.org/publication/pdf/2012-FALL-WINTER/4.pdf.
51. Jan Van Tol, Mark Gunzinger, Andrew F. Krepinevich, and Jim Thomas, *AirSea Battle: A Point-of-Departure Operational Concept* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2010), 47.
52. Jeremiah Gertler, "F-35 Joint Strike Fighter (JSF) Program," Congressional Research Service Report, February 16, 2012.
53. Figures in constant 2011 U.S. Dollars. Winslow Wheeler, "How the F-35 Nearly Doubled in Price (and Why You Didn't Know)," Time Magazine Blog, July 9, 2012, <http://battleland.blogs.time.com/2012/07/09/f-35-nearly-doubles-in-cost-but-you-dont-know-thanks-to-its-rubber-baseline>. Also see Michael O'Hanlon, *The Wounded Giant: America's Armed Forces in an Age of Austerity* (New York: Penguin Press, 2011), chapter 7.
54. For an excellent source on debates about F-35 air to air limitations, see "The F-35's Air-to-Air Capability Controversy," *Defense Industry Daily*, October 12, 2008, www.defenseindustrydaily.com/The-F-35s-Air-to-Air-Capability-Controversy-05089.
55. "Security Experts Admit China Stole Secret Fighter Jet Plans," *Australian*, March 12, 2012, www.theaustralian.com.au/news/world/security-experts-admit-china-stole-secret-fighter-jet-plans/story-fn-b64oi6-1226296400154.
56. Jeremiah Gertler, "Air Force Next-Generation Bomber: Background and Issues for Congress," Congressional Research Service Report, December 22, 2009, www.fas.org/sgp/crs/weapons/RL34406.pdf.
57. Ibid.
58. "Air Force Distributed Common Ground System: Fact Sheet," U.S. Air Force, December 9, 2011, www.af.mil/information/factsheets/factsheet.asp?id=15433.
59. Of an estimated 50,000 U.S. troops stationed in Japan, 38,000 are based ashore and 11,000 afloat. See U.S. Forces Japan, www.usfj.mil.
60. As the largest Air Force installation in the Pacific, Kadena hosts the U.S. Air Force's 18th Wing and a suite of supporting aircraft and systems. No less important is the fact that Kadena is one of only two bases within a 500 mile (800 kilometer) radius of the Taiwan Strait; Misawa Air Base is roughly 1,850 miles (nearly 3,000 kilometers) from the Strait. Various analysts have estimated that intense air campaigns featuring short-range tactical aircraft will require bases of roughly 500 nautical miles (roughly 920 kilometers) to 1,000 nautical miles (about 1,850 kilometers) of enemy borders; sustaining operations over greater distances would likely degrade sortie rates and strain pilots to their physical limits. See John Stillion, "Fighting Under Missile Threat," *Airforce Magazine* 92, no. 8 (August 2009): 34–37, www.airforce-magazine.com/MagazineArchive/Pages/2009/August%202009/0809fighting.aspx; and Andrew Krepinevich, Barry Watts, and Robert Work, *Meeting the Anti-Access Area Denial Challenge* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2003).
61. One estimate suggests that fewer than 200 ballistic missiles would be needed to overcome missile defenses and destroy virtually all parked aircraft and supporting infrastructure within Kadena. Other analysts estimated that 34 warheads armed with submunitions could destroy over 75 percent of parked aircraft in Kadena. See Marshall Hoyer, "China's Anti-Access Ballistic Missiles and U.S. Active Defense," *Naval War College Review* 63, no.4 (Autumn 2010): 84–105; John Stillion and Scott Perdue, "Air Combat Past, Present and Future," RAND Corporation, August 2008; for a broader discussion of the unique threats that ballistic and cruise missiles pose to fixed air bases, see John Stillion and David T. Orletsky, "Airbase Vulnerability to Conventional Cruise-Missile and Ballistic-Missile Attacks: Technology, Scenarios, and U.S. Air Force Responses," RAND Corporation, 1999, www.rand.org/content/dam/rand/pubs/monograph_reports/2006/MR1028.pdf.
62. "Air Force Alliance for the U.S. and Japan," *Airforce Magazine* 90, no. 6 (July 2007): 32–37, www.airforce-magazine.com/MagazineArchive/Pages/2007/June%202007/0607japan.aspx.

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63. "Changing the Game: the Promise of Directed Energy Weapons," Center for Strategic and Budgetary Assessments, 2012.
64. Carlo Kopp, "Air Power vs. Refuelling Infrastructure: Technical Report," *Air Power Australia*, April 2012, www.ausairpower.net/APA-Fuels-Infrastructure.html.
65. Estimates vary, but one analyst suggests that a twelve-bay shelter could cost as much as \$700 million, suggesting that tens of billions of dollars could be required to extend coverage to the nearly 300 aircraft deployed to Kadena. That said, these shelters would be a fraction of the cost of replacing destroyed aircraft, and could prevent the effective denial of airspace in a regional conflict. John Stillion, "Fighting Under Missile Threat," *Airforce Magazine* 92, no. 8 (August 2009): 34–37, www.airforce-magazine.com/MagazineArchive/Pages/2007/June%202007/0607japan.aspx.
66. Christopher Bowie, "The Anti-Access Threat and Theatre Air Bases," Center for Strategic and Budgetary Assessments, 2002.
67. That conflict was dubbed the first "space war" because of the extensive use of space-based systems to support laser-guided bombs, Tomahawk Land Attack Missiles and GPS-aided conventional air-launched cruise missile. Indeed, Chinese observations of the effectiveness of U.S. space and electronic networks during the Gulf War spurred on changes in the PLA to "informatize" the military.
68. See Marcia S. Smith, "Military Space Programs: Issues Concerning DOD's SBIRS and STSS Programs," Congressional Research Service, January 30, 2006, www.fas.org/sgp/crs/weapons/RS21148.pdf; and Federation of American Scientists, *Ensuring America's Space Security: Report of the FAS Panel on Weapons in Space*, September 2004, www.fas.org/programs/ssp/man/wpninspacefolder/ensurespacesec.html. The GPS constellation is composed of 24 satellites, which operate on various orbital planes at an altitude of 20,000 kilometers. There are plans to expand the constellation to include additional civil and military signals that will enhance compatibility with European PNT Galileo systems and increase antijam capability. GPS satellites operate at a higher altitude, which can make them more difficult to attack.
69. Patricia Moloney Figliola, "U.S. Military Space Programs: An Overview of Appropriations and Current Issues," Congressional Research Service, August 7, 2006, www.fas.org/sgp/crs/space/RL33601.pdf.
70. Steven Kosiak, "Arming the Heavens: A Preliminary Assessment of the Potential Cost and Cost-Effectiveness of Space-Based Weapons," Center for Strategic and Budgetary Assessments, October 31, 2007, www.csbaonline.org/publications/2007/10/arming-the-heavens-a-preliminary-assessment-of-the-potential-cost-and-cost-effectiveness-of-space-based-weapons.
71. As noted in chapter 2, in 2007, China tested its ASAT capability by destroying one of its own low-Earth orbit weather satellites. See Ashley J. Tellis, "Punching the U.S. Military's 'Soft Ribs': China's Antisatellite Weapon Test in Strategic Perspective," Policy Brief 51 (Washington, D.C.: Carnegie Endowment for International Peace, 2007), 4.
72. Federation of American Scientists, *Ensuring America's Space Security: Report of the FAS Panel on Weapons in Space*, September 2004, www.fas.org/programs/ssp/man/wpninspacefolder/ensurespacesec.html.
73. Ibid.; Geoffrey Forden, "After China's Test: Time For a Limited Ban on Anti-Satellite Weapons," *Arms Control Today*, www.armscontrol.org/act/2007_04/Forden.
74. Steven Kosiak, "Arming the Heavens: A Preliminary Assessment of the Potential Cost and Cost-Effectiveness of Space-Based Weapons," Center for Strategic and Budgetary Assessments, October 31, 2007, www.csbaonline.org/publications/2007/10/arming-the-heavens-a-preliminary-assessment-of-the-potential-cost-and-cost-effectiveness-of-space-based-weapons. Space-based weapons could, in theory, be used to carry out at least four different missions. Specifically, they could be used to defend against ballistic missile strikes; attack terrestrial-based (i.e., surface-based and airborne) targets; destroy or disable enemy satellites; and protect U.S. satellites, by intercepting enemy ASAT weapons.
75. Federation of American Scientists, *Ensuring America's Space Security*.
76. Bryan Krekel (Northrup Grumman Corporation), "Capability of the People's Republic of China to Conduct Cyber Warfare and Computer Network," report prepared for the U.S.-China Economic and Security Review

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Commission, October 9, 2009, www.uscc.gov/researchpapers/2009/NorthropGrumman_PRC_Cyber_Paper_FINAL_Approved%20Report_16Oct2009.pdf.

77. Assessments based on Chinese doctrinal writings suggest that United States would be less likely to face an indiscriminate wave of attacks than precise attempts to target logistical networks in the opening moments of a conflict. NIPRNET and unclassified networks underpinning TRANSCOM would be attractive and accessible targets, given that they host a significant portion, if not the majority, of the real-time logistics data vital for the movement of U.S. forces, ranging from deployment schedules to resupply rates and prepositioning plans. In comparison, targets such as civilian infrastructure would be less appealing, given the possibility that such attacks might provoke further U.S. retaliation and prevent China from achieving a quick, low-cost victory in a regional engagement. And although the Pentagon's SIPRNET could offer a bounty of sensitive information, attempting to penetrate classified and encrypted networks would be time-consuming, resource-intensive, and a relatively less attractive option given the potential benefits of attacking NIPRNET. See Krekel, "Capability of the People's Republic of China to Conduct Cyber Warfare." Also see Bryan Krekel, Patton Adams, and George Bakos, "Occupying the Information High Ground: Chinese Capabilities for Computer Network Operations and Cyber Espionage," prepared for the U.S.-China Economic and Security Review Commission, March 7, 2012, www.uscc.gov/RFP/2012/USCC%20Report_Chinese_CapabilitiesforComputer_NetworkOperationsandCyberEspionage.pdf.
78. Over the past two years, for instance, Cyber Command has been able to anticipate and block multiple efforts by hackers to breach Pentagon networks through spearphishing campaigns or by exploiting vulnerabilities in commonly used software. See "Statement of General Keith B. Alexander, Commander, U.S. Cyber Command," delivered at the House Committee on Armed Services, Subcommittee on Emerging Threats and Capabilities," March 20, 2012.
79. "Air Force Aerial Layer Networking Concept to Enhance Warfighter Connectivity," U.S. Air Force, March 24, 2011, www.af.mil/news/story.asp?id=123248423; also see Earl D. Matthews, "Delivering AF Cyber Capabilities for the Joint Fight," remarks delivered at the AFA Air & Space Conference, National Harbor, Maryland, September 18, 2012, www.af.mil/shared/media/document/AFD-120920-050.pdf.
80. Jonathan Diamond, "Blowback: Will Stuxnet Be Turned Against Its Makers?" Center for Strategic and International Studies blog, July 30, 2012, <http://csis.org/blog/will-stuxnet-be-turned-against-its-makers>.
81. Ibid.
82. Scott Shane, "Cyberwarfare Emerges from Shadows for Public Discussion by U.S. Officials," *New York Times*, September 26, 2012, www.nytimes.com/2012/09/27/us/us-officials-opening-up-on-cyberwarfare.html.
83. "Pentagon Proposes More Robust Role for Its Cyber-Specialists," *Washington Post*, August 9, 2012, www.washingtonpost.com/world/national-security/pentagon-proposes-more-robust-role-for-its-cyber-specialists/2012/08/09/1e3478ca-db15-11e1-9745-d9ae6098d493_story.html.
84. Bonnie S. Glaser and Christopher K. Johnson, "Secretary of Defense Leon Panetta Heads to China," Center for Strategic and International Studies, September 17, 2012, <http://csis.org/publication/secretary-defense-leon-panetta-heads-china>.
85. See remarks by Secretary Panetta on Cybersecurity to the Business Executives for National Security, New York City, October 11, 2012, www.defense.gov/transcripts/transcript.aspx?transcriptid=5136; also see James Andrew Lewis, "Rethinking Cybersecurity: A Comprehensive Approach," Sasakawa Peace Foundation, Tokyo, September 12, 2011, http://csis.org/files/publication/110920_Japan_speech_2011.pdf.
86. Harold Hongju Koh, "International Law in Cyberspace," remarks delivered at the USCYBERCOM Inter-Agency Legal Conference, Fort Meade, Maryland, September 18, 2012, www.state.gov/s/1/releases/remarks/197924.htm.
87. In that regard, some cyber specialists have suggested that the cyber threat posed by China has been overstated, pointing to the relative lack of sophistication of Chinese cyberwarfare capabilities (especially compared to countries such as Russia and Israel), the inherently limited, episodic and hence unreliable nature of most cyberattacks, the likely extreme retaliation that could result from any attempt to undertake a major cyberattack, and the strength of U.S. cyber defenses of the most critical military systems.

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88. "Addressing Cyber Instability," Cyber Conflict Studies Association, 2012, <http://hss-prod.hss.aol.com/hss/storage/industry/31ae768c424368f55b1a35cf20f7c666/CCSA%20-%20Addressing%20Cyber%20Instability.pdf>.
89. Bureau of Arms Control, Verification and Compliance, U.S. Department of State, "New START Treaty Aggregate Numbers of Strategic Offensive Arms," Fact Sheet, April 6, 2012, www.state.gov/t/avc/rls/178058.htm; Lesley McNiesh, "Fact Sheet: Global Nuclear Weapons Inventories in 2012," August 2012, Center for Arms Control and Non-Proliferation, http://armscontrolcenter.org/issues/nuclearweapons/articles/fact_sheet_global_nuclear_weapons_inventories_in_2012.
90. "Obama to Consider Deep Reductions to Launch-Ready Nuclear Force," Global Security Newswire, February 15, 2012, www.nti.org/gsn/article/obama-consider-deep-reductions-launch-ready-nuclear-force.
91. "Fact Sheet: U.S. Nuclear Modernization Programs," Arms Control Association, March 22, 2012, www.armscontrol.org/factsheets/USNuclearModernization.
92. Some analysts—particularly those associated with the nonproliferation and arms control community—have argued that the United States could preserve deterrence with a dramatically reduced arsenal of warheads and delivery systems. For instance, the arms control advocacy group Global Zero has argued that the United States could cut its total stockpile of warheads to 900 and eliminate ICBMs from the nuclear triad without endangering nuclear deterrence against either Russia or China. Similarly, the Arms Control Association has suggested that the United States could preserve deterrence and all three legs of the nuclear triad with as few as 500 weapons. These observers note that no nation other than Russia possesses nuclear forces in quantities sufficient to rival those of the United States. China's total inventory of 200 to 300 nuclear weapons, most of which are undeployed or in reserve, pales in comparison to the United States' 8,000 or more nuclear weapons, of which 1,800 are operationally deployed. Most notably, proponents of deeper cuts to the U.S. arsenal argue that the deployment of multiple SSBNs across geographic theaters provides the United States with an assured second-strike capability that obviates the need to maintain a significant numerical advantage over an enemy's arsenal. As each SSBN would likely be equipped with several dozen warheads, the United States would almost certainly be able to retaliate against even the most devastating and comprehensive nuclear attacks. Federation of American Scientists, "Status of World Nuclear Forces," May 7, 2012, www.fas.org/programs/ssp/nukes/nuclearweapons/nukestatus.html; "Briefing on the Future of the U.S. Nuclear Arsenal: Issues and Policy Options," panel at Carnegie Endowment for International Peace, January 20, 2012, www.armscontrol.org/events/The-Future-of-the-US-Nuclear-Arsenal-Issues-and-Policy-Options%20.
93. While the United States forswears the use of nuclear weapons for offensive purposes, it has not issued a no-first-use pledge, and continues to maintain vast quantities of operationally deployed warheads. Indeed, the United States has maintained the right to use nuclear weapons to deter conventional attack, and has, on occasion, asserted its nuclear superiority in an attempt to extract political concessions from nations such as China. U.S. Department of Defense, "U.S. Nuclear Posture Review Report," Washington, D.C., April 2009, www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf.
94. Amy F. Woolf, "Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues," Congressional Research Service, February 13, 2012, www.fas.org/sgp/crs/nuke/R41464.pdf.
95. The definition of command and control, or C2, can be found in the U.S. Defense Department's dictionary of military terms: www.dtic.mil/doctrine/dod_dictionary/data/c/3226.html. This definition explains that C2 involves the complicated arrangement of "personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission."
96. Joe Quartararo Sr., Michael Rovenolt, and Randy White, "Libya's Operation Odyssey Dawn: Command and Control," *Prism*, issue 3, no. 2 (March 2012), www.ndu.edu/press/libyas-operation-odyssey-dawn.html.
97. General Norton A. Schwartz and Admiral Jonathan W. Greenert, "Air-Sea Battle: Promoting Stability in an Era of Uncertainty," *American Interest*, February 20, 2012, www.the-american-interest.com/article.cfm?piece=1212; U.S. Department of Defense, "Joint Operational Access Concept."
98. Jan van Tol, Mark Gunzinger, Andrew F. Krepinevich, and Jim Thomas, *Air-Sea Battle: A Point of Departure Operational Concept* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2010), 112–13.

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99. Emma Chanlett Avery, "The U.S.-Japan Alliance," Congressional Research Service, January 18, 2011, www.fas.org/sgp/crs/row/RL33740.pdf.
100. Ibid.
101. Colonel Hiroaki Uchikura, "The Future of Trans-Pacific Airpower Interoperability: Preparation for a Growing Anti-Access/Area Denial Environment," Brookings Institution, June 30, 2010, www.brookings.edu/~media/research/files/papers/2010/6/30%20transpacific%20airpower%20uchikura/0630_transpacific_airpower_uchikura.pdf.
102. See Emma Chanlett-Avery and Ian E. Rinehart, "The U.S. Military Presence in Okinawa and the Futenma Base Controversy," Congressional Research Service, August 3, 2012; and David J. Berteau, Michael J. Green, Gregory Kiley, and Nicholas Szechenyi, *U.S. Force Posture Strategy in the Asia Pacific Region: An Independent Assessment* (Washington, D.C.: Center for Strategic and International Studies, August 2012), http://csis.org/files/publication/120814_FINAL_PACOM_optimized.pdf.
103. See "Okinawa, Japan," Global Security, 2012, www.globalsecurity.org/military/facility/okinawa.htm.
104. Berteau, Green, Kiley, and Szechenyi, *U.S. Force Posture Strategy in the Asia Pacific Region: An Independent Assessment*.
105. Chanlett-Avery and Rinehart, "The U.S. Military Presence in Okinawa and the Futenma Base Controversy," Congressional Research Service, August 3, 2012.
106. Ibid.
107. Ibid.
108. Berteau, Green, Kiley, and Szechenyi, *U.S. Force Posture Strategy in the Asia Pacific Region: An Independent Assessment*.
109. Ibid.
110. Ibid.
111. Ibid.
112. According to the National Bureau of Economic Research, the financial crisis and its subsequent recession lasted from December 2007 to June 2009. The United States' average precrisis growth rate is thus derived from growth from 1991 to 2006. See "World Development Indicators," <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG/countries?display=default>.
113. Productivity increases were by far the most significant factor in fueling the unique mix of high growth and low inflation. Other factors included falling oil prices and declining healthcare costs, a rise in the dollar's exchange rate, and changes to the methodology behind the Consumer Price Index. William D. Norhaus, "The Story of a Bubble," *New York Review of Books*, January 15, 2004, www.nybooks.com/articles/archives/2004/jan/15/the-story-of-a-bubble/?pagination=false#fn4-760393989.
114. According to the National Bureau of Economic Research, the post-financial crisis recession lasted from December 2007 until June 2009. Marc Labonte, "The 2007–2009 Recession: Similarities to and Differences from the Past," Congressional Research Service, October 6, 2010, www.fas.org/sgp/crs/misc/R40198.pdf.
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116. Alan S. Binder and Mark Zandi, "How the Great Recession Was Brought to an End," Moody Analytics, July 27, 2010, www.economy.com/mark-zandi/documents/End-of-Great-Recession.pdf.
117. Paul Krugman and Robin Wells, "Our Giant Banking Crisis: What to Expect," *New York Review of Books*, May 13, 2010, www.nybooks.com/articles/archives/2010/may/13/our-giant-banking-crisis/?pagination=false.
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119. Analysts warn that if permitted to take their course, such measures would trigger a significant contraction in the U.S. economy, with damaging implications for growth, revenue, and debt.
120. Jeanne Sahadi, "National Debt: Why Entitlement Spending Must Be Reined In," CNN Money, September 5, 2011, http://money.cnn.com/2011/09/05/news/economy/national_debt_spending/index.htm?iid=EL.
121. "Global Economic Outlook 2012," Conference Board, 2012, www.conference-board.org/data/globaloutlook.cfm.
122. Per existing trends, efforts to reach a "grand bargain" to reform entitlements and taxes could gain little traction despite a deteriorating fiscal outlook.
123. For instance, the CBO estimates that federal debt could exceed 100 percent of GDP by the 2030s if Congress neglects to address rising healthcare costs, by reversing planned reductions in Medicare payment rates for doctors, nullifying spending caps associated with the Budget Control Act, and preventing restraints on healthcare subsidies from taking effect. See Douglas W. Elmendorf, "The 2012 Long-Term Budget Outlook," Testimony before the House Committee on the Budget, June 6, 2012. http://cbo.gov/sites/default/files/cbofiles/attachments/LTBO_Testimony.pdf.
124. International Monetary Fund, *World Economic Outlook April 2012: Growth Resuming, Dangers Remain* (Washington, D.C.: International Monetary Fund, 2012), www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf.
125. "Economic Effects of Reducing the Fiscal Restraint That Is Scheduled to Occur in 2013," Congressional Budget Office, May 22, 2012, www.cbo.gov/publication/43262.
126. Elmendorf, "2012 Long-Term Budget Outlook."
127. The United States possesses three advantages that distinguish it from nations that have suffered acute currency crises: first, the dollar is the de facto reserve currency of the world, allowing the United States to depreciate its way out of debt owed to foreigners; second, the United States has been viewed as a "safe haven" for investment, and there are no alternative investment vehicles that could absorb the "savings glut" of emerging economies such as China; and finally, the United States maintains a flexible exchange rate, reducing the vulnerability of the dollar to speculation. See Marc Labonte, "Is the U.S. Current Account Deficit Sustainable?" Congressional Research Service, April 2, 2010, <http://fpc.state.gov/documents/organization/141590.pdf>.
128. Ibid.
129. Carmen Reinhart and Kenneth Rogoff, "The Aftermath of Financial Crises," working paper, National Bureau of Economic Research, January 2009, www.nber.org/papers/w14656.pdf?new_window=1.
130. Uri Dadush, "The Long-Term Economic Outlook of the United States and Its International Implications," Carnegie Endowment for International Peace, December 2011, www.acus.org/files/ISP/120211_Dadush_Long-TermEconomicOutlook.pdf.
131. In releasing budgets and projections, the Pentagon and administration have typically used the sum of these two categories as shorthand for overall military spending in a given year. Critics of this practice point out that such a narrow definition of defense spending significantly understates the actual cost of national security programs, which include funding for U.S. nuclear forces, veterans care and pensions, homeland security, and interest paid on the debt accrued as a result of defense spending. These critics note that when these programs are taken into account, U.S. defense spending in 2012 will exceed \$900 billion and approaches \$1 trillion. Winslow Wheeler, "Which Pentagon Numbers Are Real? You Decide!" AOL Defense, February 17, 2012, <http://defense.aol.com/2012/02/17/which-pentagon-budget-numbers-are-real-you-decide>.
132. In December 2011, President Obama signed an appropriations bill that provided \$646.3 billion in funding for both the "base budget," or ordinary peacetime operations, and "overseas contingency operations" in Afghanistan, Iraq, and other nations. Pat Towell, "Defense: FY2012 Budget Request, Authorization and Appropriations," Congressional Research Service, February 13, 2012, www.fas.org/sgp/crs/natsec/R41861.pdf.
133. Virtually all parties involved—including the Obama administration, both aisles of Congress, and the Pentagon—oppose the across-the-board cuts that sequestration deals to the U.S. defense budget. That said, Democratic and

Republican leaders maintain seemingly irreconcilable preferences on the desired balance between tax increases and spending cuts, as well as the share of cuts that should be borne by social programs as opposed to the military budget. See Jonathan Weisman, "Some Lawmakers Look for Way Out as Defense Cuts Near," *New York Times*, June 3, 2012, www.nytimes.com/2012/06/04/us/politics/budget-control-act-military-cuts-raise-concerns.html.

134. Walter Pincus, "Retired Gen. James Cartwright Offers a Fresh View on Defense," *Washington Post*, May 21, 2012, www.washingtonpost.com/world/national-security/retired-gen-james-cartwright-offers-a-fresh-view-on-defense/2012/05/21/gIQA_rMTgU_story.html.
135. For examples of pundits and military analysts who have argued that sequestration will be catastrophic for U.S. defense efforts, see Herbert London, "'Sequestration' Threatens U.S. Defense," *Newsmax*, September 25, 2012, www.newsmax.com/HerbertLondon/Sequestration-Defense-budget-cuts/2012/09/25/id/457524; William J. Bennett, "Clock Ticking to Disastrous Defense Cuts," *CNN*, August 9, 2012, www.cnn.com/2012/08/09/opinion/bennett-sequestration-defense-cuts/index.html; Joseph Blady, "What Sequestration Means for the Department of Defense," *Huffington Post*, August 21, 2012, www.huffingtonpost.com/joseph-blady-md/sequestration-department-of-defense_b_1819341.html; and Richard Wolf, "White House Warns of Massive Defense, Domestic Cuts," *USA Today*, September 14, 2012, <http://content.usatoday.com/communities/theoval/post/2012/09/14/obama-says-sequestration-would-be-disaster/70000363/1#.UGhBH03A-pQ>.

For a more nuanced view of the likely effects of sequestration, see Peter W. Singer, "After-Action Report: It'd Be Stupid but Not Disastrous," *Time*, September 28, 2012, <http://nation.time.com/2012/09/28/after-action-report-itd-be-stupid-but-not-disastrous>; The Task Force on a Unified Security Budget, *Rebalancing Our National Security: The Benefits of Implementing a Unified Security Budget* (Center for American Progress and Institute for Policy Studies, October 2012), www.americanprogress.org/wp-content/uploads/2012/10/UnifiedSecurityBudget.pdf; and Lawrence J. Korb, "Commentary: Defense Cuts Won't Hurt That Much," *CNN Money*, August 2, 2012, <http://money.cnn.com/2012/08/02/news/economy/defense-cuts-commentary/index.htm>. Brookings Institution defense analyst Peter W. Singer questions the prediction made by some alarmists that sequestration will invite aggression by potential and actual adversaries. While acknowledging that it is a suboptimal approach to defense cuts, Singer argues that sequestration will "by no means fundamentally change" the U.S. force; in fact, it will simply reduce the defense spending level to that of the 2007 military budget. Similarly, the Task Force on a Unified Security Budget has argued that though the sequester does not represent "sound budgeting practice," "the amount of cuts to the Pentagon budget mandated by ... the debt deal is readily achievable with no sacrifice to our security—if the cuts are done in a thoughtful manner over the next decade."

136. "Long-Term Implications of the 2012 Future Years Defense Program," CBO, June 2011, www.cbo.gov/sites/default/files/cbofiles/ftpdocs/122xx/doc12264/06-30-11_fydp.pdf.
137. Mitt Romney, the Republican nominee in the 2012 presidential election, advocated pegging the base budget to 4 percent of GDP. Any costs associated with ongoing engagements in Afghanistan and Iraq would be above and beyond this figure. See Michael Kranish, "Mitt Romney's Defense Budget Target Is Lofty," *Boston.com*, March 19, 2012, http://articles.boston.com/2012-03-19/nation/31207973_1_romney-first-andrea-saul-governor-romney.
138. While relatively few analysts have attempted to peg U.S. defense spending to a specific share of national output, a significant contingent of experts and policymakers have argued that the United States should consider dramatic investments in order to expand the Navy's fleet to exceed 300 ships. Representative J. Randy Forbes, "Defense Cuts Imperil U.S. Asia Role," *Diplomat*, October 26, 2011, <http://the-diplomat.com/2011/10/26/defence-cuts-imperil-us-asia-role/2>.
139. Tyrone C. Marshall Jr., "Debt Is Biggest Threat to National Security, Chairman Says," *American Forces Press Service*, September 22, 2011, www.defense.gov/news/newsarticle.aspx?id=65432.
140. Andrew Feickert and Stephen Daggett, "A Historical Perspective on 'Hollow Forces,'" Congressional Research Service, January 31, 2012, www.fas.org/sgp/crs/natsec/R42334.pdf.
141. The F-22 fighter and the Zumwalt-class destroyer are two prominent examples of programs where spiraling costs resulted in order reductions, delays, and ballooning unit costs that eventually led to the programs' cancellation. Whether a given program survives despite cost growth is dependent on highly contingent strategic and political calculations, rather than budget arithmetic alone—for instance, underlying the decision to cancel the F-22 was the belief that the F-35 could form the backbone of the U.S.'s next-generation fighter force.

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142. Anthony H. Cordesman, "America's Self-Destroying Airpower: Becoming Your Own Peer Threat," Center for Strategic and International Studies, December 16, 2008, http://csis.org/files/media/csis/pubs/081001_aircraft_modernstudy.pdf.
143. David C. Gompert and Philip G. Saunders, "Paradox of Power: Sino-American Strategic Restraint in an Age of Vulnerability," National Defense University, www.ndu.edu/press/paradox-of-power-ch2.html
144. In 2008, the U.S. Census Bureau projected that the U.S. population would grow by 20.4 percent over the two decades from 2010 to 2030 (from 310.2 million to 373.5 million), implying an average annual growth rate (AAGR) of 0.93 percent. U.S. Census Bureau, Population Division, Table 2. Projections of the Population by Selected Age Groups and Sex for the United States: 2010 to 2050 (NP2008-T2), August 14, 2008, www.census.gov/population/www/projections/files/nation/summary/np2008-t2.xls.

In its 2012 annual report, the Social Security Board of Trustees posited an intermediate estimate of total growth in the population of the Social Security Area (approximately equivalent to the U.S. population) to be 17.2 percent, expanding from 315 million in 2010 to 369 million in 2030, an AAGR of 0.8 percent. The low-growth estimate postulated a 13.9 percent increase in population size (an AAGR of 0.65 percent), and the high estimate posited 20.2 percent growth (an AAGR of .92 percent). Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, *The 2012 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (Washington, D.C.: U.S. Government Printing Office, 2012), www.ssa.gov/oact/tr/2012/tr2012.pdf.

In the 2010 Revision of its World Population Prospects, the United Nations projected a somewhat lower total population growth rate of 16.5 percent, from 310 million in 2010 to 362 million in 2030 (an AAGR of 0.77 percent). Its low variant posited 10.8 percent growth in population size, and its high variant predicted 22.3 percent growth (AAGRs of 0.51 percent and 1.01 percent, respectively). United Nations Department of Economic and Social Affairs, Population Division, "Population Estimates and Projections Section, World Population Prospects, 2010 Revision," <http://esa.un.org/unpd/wpp/index.htm>. See also Laura B. Shrestha and Elayne J. Heisler, "The Changing Demographic Profile of the United States," Congressional Research Service, March 31, 2011, www.fas.org/sgp/crs/misc/RL32701.pdf.

145. A panel of ten expert demographers predicted in 2011 that net immigration to the United States would return to 89 percent of 2001 peak levels by 2015 and 97 percent of 2001 levels by 2025. See Dowell Myers and John Pitkin, *Assimilation Tomorrow: How America's Immigrants Will Integrate by 2030* (Washington, D.C.: Center for American Progress, 2011), www.americanprogress.org/issues/2011/11/pdf/dowell_assimilation_report.pdf. In 2012, the Social Security Board of Trustees offered an intermediate set of projections for immigration that posited net legal immigration of 750,000 people per year from 2011 to 2030 and beyond, with net illegal immigration rebounding from 150,000 immigrants in 2011 to 500,000 in 2015 and then gradually declining to 375,000 immigrants annually by 2030. Immigration levels in 2030 would thus stand at approximately 59 percent of the net immigration of 1.9 million persons that occurred in 2005, which is when total (legal plus illegal) net immigration peaked, according to the Social Security Board of Trustees. The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, "The 2012 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds" (Washington, D.C.: U.S. Government Printing Office, April 25, 2012), www.ssa.gov/oact/tr/2012/tr2012.pdf.
146. Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, *2012 Annual Report*.
147. See Nicholas Eberstadt, "Asia-Pacific Demographics in 2010–2040," in *Strategic Asia 2010–11: Asia Responds to Its Rising Powers—China and India*, edited by Ashley J. Tellis, M. Taylor Fravel, and Michael J. Green (Seattle: National Bureau of Asian Research, 2011).
148. Grayson K. Vincent and Victoria A. Velkoff, "The Next Four Decades, The Older Population in the United States: 2010 to 2050," *Current Population Reports* (U.S. Census Bureau), May 2010, 25–1138, www.census.gov/prod/2010pubs/p25-1138.pdf; Mitra A. Toossi, "Labor Force Projections to 2020: A More Slowly Growing Workforce," *Monthly Labor Review*, January 2012, 43–64, www.bls.gov/opub/mlr/2012/01/art3full.pdf; and Mitra A. Toossi, "A New Look at Long-Term Labor Force Projections to 2050," *Monthly Labor Review*, November 2006, 19–39, www.bls.gov/opub/mlr/2006/11/art3full.pdf. As Toossi (2012) explains, while labor force participation rates among the elderly are likely to increase somewhat, this growth will be insufficient to counterbalance the structural and demographic forces pushing labor force participation rates down.

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149. Social Security and Medicare Boards of Trustees, "A Summary of the 2012 Annual Reports," www.ssa.gov/oact/trsum/index.html; Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, *2012 Annual Report*; Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, "2012 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds," April 23, 2012, www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/TR2012.pdf.
150. If deficit savings from the 2010 Patient Protection and Affordable Care Act were not double-counted toward extending solvency, this date would actually be 2016. See Charles Blahous, *The Fiscal Consequences of the Affordable Care Act* (Arlington, Va.: Mercatus Center, George Mason University, 2012), http://mercatus.org/sites/default/files/publication/The-Fiscal-Consequences-of-the-Affordable-Care-Act_1.pdf; and Avik Roy, "Trustees: Medicare Will Go Broke in 2016, If You Exclude Obamacare's Double-Counting," April 23, 2012, www.forbes.com/sites/aryoy/2012/04/23/trustees-medicare-will-go-broke-in-2016-if-you-exclude-obamacares-double-counting.
151. See Richard S. Foster, "I. Statement of Actuarial Opinion," in "2012 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds," 277–79; and Roy, "Trustees: Medicare Will Go Broke in 2016."
152. "Long-Term Implications of the 2012 Future Years Defense Program," CBO, June 2011, www.cbo.gov/sites/default/files/cbofiles/ftpdocs/122xx/doc12264/06-30-11_fydp.pdf.
153. Lieutenant General David W. Barno, U.S. Army (Retired), Nora Bensahel, Matthew Irvine, and Travis Sharp, "Sustainable Preeminence: Reforming the U.S. Military at a Time of Strategic Change," Center for New American Security, May 2012, www.cnas.org/files/documents/publications/CNAS_SustainablePreeminence_Barno-BensahelIrvineSharp_1.pdf.
154. Portions of this section, "Foreign and Defense Policy Actors," are adapted from Swaine, *America's Challenge*, chapter 9.
155. The significance of such divergence ebbs and flows with the comings and goings of different administrations and senior officials. There was evidently more friction on China policy between State and Defense in the Bush administration, for example, than there has been during the Obama administration.
156. For example, the degree of emphasis PACOM places on the military threat posed by China and the type of military contingencies and planning undertaken can vary considerably depending on the background and outlook of the commander at the time. Some commanders place a heavier emphasis on countering Chinese capabilities through increased deployments and classic "balancing" behavior, whereas others stress both bilateral and multilateral military diplomacy, although always from a position of strength.
157. Despite occasional spikes in public criticism of Chinese behavior, overall, congressional attitudes significantly diverge from the views of both ordinary citizens and nongovernmental elites with regard to China. A poll undertaken by the Committee of 100 in 2007 strongly suggested that congressional staff members hold a much lower opinion of China than the general public, opinion leaders, and business leaders. See Committee of 100, *Hope and Fear: Full Report of C-100's Survey on American and Chinese Attitudes Toward Each Other* (New York: Committee of 100, 2008), <http://survey.committee100.org/2007/files/C100SurveyFullReport.pdf>. See the results of the 2009 and 2012 Committee of 100 surveys at <http://survey.committee100.org>. See also "U.S. Public, Experts Differ on China Policies: Public Deeply Concerned about China's Economic Power," Pew Global Attitudes Project, September 18, 2012, www.pewglobal.org/files/2012/09/US-Public-and-Elite-Report-FINAL-FOR-PRINT-September-18-2012.pdf.
158. Pat Towell, "Defense: FY2012 Budget Request, Authorization and Appropriations" Congressional Research Service, February 13, 2012, www.fas.org/sgp/crs/natsec/R41861.pdf.
159. Ibid.
160. Robert Suettinger, *Beyond Tiananmen: The Politics of U.S.-China Relations 1989–2000* (Washington, D.C.: Brookings Institution Press, 2003), 427.
161. Swaine, *America's Challenge*.

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162. Frank Newport, “Americans Remain Divided on Defense Spending,” Gallup, February 15, 2011, www.gallup.com/poll/146114/Americans-Remain-Divided-Defense-Spending.aspx. The report shows that there has been a slight tilt toward respondents who believe that U.S. military spending is too high, while a slight majority of respondents (57 percent) believe that military spending is just about right or slightly too little.
163. Annual polls conducted from 2007 to 2012 by the Gallup Organization, commissioned by the Ministry of Foreign Affairs of Japan, have highlighted the ongoing support from the U.S. general public of Japan, both as a dependable ally and as the most important partner of the United States in Asia. See www.mofa.go.jp/region/n-america/us/survey/index.html.
164. See Chicago Council on Global Affairs, *Global Views 2010: Constrained Internationalism—Adapting to New Realities; Results of a 2010 National Survey of Public Opinion* (Chicago: Chicago Council on Global Affairs, 2010), www.thechicagocouncil.org/UserFiles/File/POS_Topline%20Reports/POS%202010/Global%20Views%202010.pdf. The poll found that 68 percent of the American public favors a policy of cooperation and engagement with China rather than an attempt to work actively to limit the growth of China’s power. See also Pew Research Center for the People and the Press, “Strengthen Ties with China.” This study generally confirmed the findings of the Chicago Council poll, which included the fact that 60 percent of Americans “see China’s economic strength as a greater threat than its military strength.” That said, 58 percent of survey respondents said “it is very important to build a stronger relationship between the U.S. and China,” and only 22 percent view China as an adversary. See also “U.S. Public, Experts Differ on China Policies: Public Deeply Concerned about China’s Economic Power,” Pew Global Attitudes Project, September 18, 2012, www.pewglobal.org/files/2012/09/US-Public-and-Elite-Report-FINAL-FOR-PRINT-September-18-2012.pdf. General attitudes in favor of engagement with China are long-standing. See WorldPublicOpinion.org, “General Engagement with China, Americans and the World Digest—China,” August 2008, www.americans-world.org/digest/regional_issues/china/china1.cfm.
165. See the full report of “U.S. Public, Experts Differ on China Policies: Public Deeply Concerned about China’s Economic Power,” Pew Global Attitudes Project, September 18, 2012, www.pewglobal.org/files/2012/09/US-Public-and-Elite-Report-FINAL-FOR-PRINT-September-18-2012.pdf. This survey project, conducted in conjunction with the Carnegie Endowment for International Peace, found that 78 percent of the American public believe that the large amount of U.S. debt held by China is a very serious problem, 71 percent believe that loss of U.S. jobs to China is a very serious problem, and 61 percent felt thus about the U.S. trade deficit with China. Meanwhile, 49 percent view China’s growing military power as a very serious problem, and only 27 percent said the same about tensions between Taiwan and China. Fifty-nine percent of respondents expressed greater concern over China’s economic strength, while less than half that amount (28 percent) said Beijing’s military power was more concerning.
166. Cynthia English, “Americans See Benefits of Close U.S.-China Relations,” Gallup, April 17, 2012, www.gallup.com/poll/153911/Americans-Benefits-Close-China-Relations.aspx; Cynthia English, “Americans Split on Whether China’s Economic is Good for U.S.,” Gallup, April 12, 2012, www.gallup.com/poll/153860/Americans-Split-Whether-China-Economy-Good.aspx; and Cynthia English, “Americans, Opinion Leaders See U.S.-China Ties Friendly,” Gallup, February 14, 2012, www.gallup.com/poll/152618/Americans-Opinion-Leaders-China-Ties-Friendly.aspx.
167. Donna Smith, “Public Prefers Cutting Defense Spending; Reuters/Ipsos Polls,” Reuters, March 9, 2011, www.reuters.com/article/2011/03/09/us-usa-budget-poll-idUSTRE7286DW20110309.
168. However, if the U.S. economy’s growth were to gyrate around 1 percent for much longer than a decade, U.S. defense budgets would likely experience considerable strain—making the following “Faltering” trajectory more likely. The floor on American deployments in the Asia-Pacific region outlined by President Obama in his Canberra speech in November 2011 could thus erode, prompting pressures for a less-engaged military strategy and throwing greater responsibility for security and maintenance of public goods on the region’s states, including Japan.
169. Another uncertainty derives from the unknown capability of China’s growing arsenal of A2/AD-oriented and supportive military, space, and cyber capabilities. It is possible that even under the best of economic conditions and the most robust of military capabilities, U.S. and Japanese land, sea, and air assets in the Western Pacific might remain under a high level of threat from Beijing, thus undermining the deterrent effectiveness of even a fully deployed ASB concept or Offshore Control system. In other words, in some very significant ways, U.S. primacy might end and Japan might remain to a certain extent vulnerable, even under this most “optimistic” trajectory of U.S. military capabilities, thus forcing assessments of alternative operational concepts and strategies toward China. Of course the likelihood of such an outcome would arguably increase if the United States were to experi-

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ence prolonged economic problems impacting such capabilities. Thus, beyond this study's fifteen- to twenty-year time frame, such a development might result in policies closer to the following "Faltering" trajectory. These issues, and the implications of "wild card" events, are discussed in some detail in chapters 5 and 6.

170. Apart from improved missile defense systems, carriers and major surface combatants could develop radar and emissions control, decoys, and obscurants to force enemies to expend a greater volume of munitions.
171. In an ASB-oriented approach, for instance, carriers would most likely remain outside the range of key land-based antiaccess systems (particularly any ASBMs), at least until deep strikes had disabled enemy C4ISR networks. Similarly, a strategy of Offshore Control would most likely place U.S. ships beyond the first island chain, away from China's most densely concentrated defenses.
172. Recapitalized budgets, optimized acquisition schedules, and a higher priority on securing the Western Pacific would most likely allow the United States to expand its fleet (albeit not significantly beyond 300 vessels) and increase its shipbuilding rate. For instance, the U.S. Navy could acquire Aegis destroyers, cruisers, and (perhaps most important) submarines in greater numbers and within a shorter time frame than seen in recent decades. The composition of the fleet would thus be more effectively tailored to potential contingencies featuring the PLA.
173. A key issue would be whether such experimental capabilities would reach maturity during the time period examined in this study.
174. A CPGS system would likely feature several dozen to a hundred missiles in the form of conventional ICBMs or modified SLBMs; long-range bombers and combat drones would be unlikely to be produced en masse, given the costs associated with combining stealth, range, and persistence into a single platform. Bombers and drones would not generate the sortie rates necessary to conduct intense air campaigns; rather, they would strike at important C4ISR nodes in enemy territory, facilitating the entry of TACAIR into the theater.
175. Marshall Hoyler, "China's 'Antiaccess' Ballistic Missiles and U.S. Active Defense," *Naval War College Review* 63, no. 4 (Autumn 2010): 84–104, www.usnwc.edu/getattachment/74ed0fae-cc89-4a64-9d6a-5cf6985a6f33/China-s--Antiaccess--Ballistic-Missiles-and-U-S--A.
176. See Mulvenon, "PLA Computer Network Operations."
177. U.S. Department of Defense, "Joint Operational Access Concept."
178. Ibid.
179. Ian Easton, *The Great Game in Space: China's Evolving ASAT Weapons Programs and Their Implications for Future U.S. Strategy* (Washington, D.C.: Project 2049 Institute, 2009), http://project2049.net/documents/china_asat_weapons_the_great_game_in_space.pdf.
180. "U.S. Department of Defense, "Joint Operational Access Concept."
181. How this delicate balance in U.S. power and policy (that is, withdrawing while maintaining confidence in the U.S. deterrence and war-fighting capability) could be achieved without precipitating enormous regional instability is extremely difficult to foresee, however. The conditions that might precipitate such a radical shift in U.S. policy and presence are discussed in greater detail below.
182. Roger Cliff, "Future East Asian Security Architecture: Implications for the PLA," in *Assessing the Threat: China's Military and Taiwan's Security*, edited by Michael D. Swaine (Washington, D.C.: Carnegie Endowment for International Peace, 2007).
183. U.S. bases in Guam or areas outside the first and second island chains would not necessarily be sanctuaries in the event of a conflict. By 2030, China will likely have made considerable progress in its efforts to develop additional air- and ground-launched cruise missiles that could potentially strike Guam. Nevertheless, bridging such distances in the Western Pacific would most likely pose a greater technologically, operationally, and financial burden for the PLA, while offering more opportunities for the United States to mount a credible defense.

CHAPTER 5

1. Over the long term, the decline in the U.S. military presence, and the likely continued failure to resolve the outstanding tensions between Beijing and Tokyo over territorial and other disputes, would almost certainly erode the cooperative aspects of the Sino-Japanese relationship, absent significant confidence-building measures and security assurances that reduce significantly the likelihood of confrontations.
2. The “kill chain” is the sequence of events required for a missile to disable or destroy its target; it includes detecting and tracking a ship, transmitting that data to a launcher, and then ensuring that the ASBM reentry vehicle can overcome a ship’s onboard defenses to score a hit.
3. Captain Karl Hasslinger, U.S. Navy (Retired), and John Pavlos, “The Virginia Payload Module: A Revolutionary Concept for Attack Submarines,” *Undersea Warfare Magazine*, no. 47 (Winter 2012), www.public.navy.mil/subfor/underseawarfaremagazine/issues/archives/issue_47/virginia.html.
4. Christopher McCarthy, “Anti-Access/Area Denial: The Evolution of Modern Warfare,” U.S. Naval War College Paper, www.usnwc.edu/Lucent/OpenPdf.aspx?id=95&title=The%20Global%20System%20in%20Transition.
5. Ian Easton, *The Great Game in Space: China’s Evolving ASAT Weapons Programs and Their Implications for Future U.S. Strategy* (Washington, D.C.: Project 2049 Institute, 2009), http://project2049.net/documents/china_asat_weapons_the_great_game_in_space.pdf; also see Ashley J. Tellis, “China’s Military Space Strategy,” *Survival* 49, no. 3 (Autumn 2007): 41–72, www.carnegieendowment.org/files/tellis_china_space1.pdf.
6. China’s arsenal of modern, but doctrinally, operationally, and numerically constrained, nuclear weapons would be used to threaten retaliation against civilian centers in the event of an enemy first strike. As blunt, unwieldy instruments of deterrence, China’s strategic forces would be of limited use in exacting political concessions from non-nuclear states such as Japan. But given Japan’s status as a frontline state dependent upon an American nuclear umbrella, China’s conventional and nuclear modernization would heighten existing insecurities felt by Japanese leaders.
7. Linton Brooks, “The Sino-American Nuclear Balance and its Implications,” in *China’s Arrival: A Strategic Framework for a Global Partnership*, edited by Abraham Denmark and Nirav Patel (Washington, D.C.: Center for New American Security, 2009).
8. It is of course also possible that either the United States or China could significantly falter economically and experience major declines to mid to low levels of economic capacity over the next fifteen to twenty years, thereby contributing to some of the scenarios described below. This is more likely to happen in China than in the United States. As indicated in chapters 2 and 4, those who are pessimistic about the PRC’s long-term prospects—and conversely, more sanguine about America’s chance for recovery—tend to doubt the vitality and responsiveness of China’s political system. The argument is that many of the economic reforms required to secure China’s continued growth are opposed by powerful interest groups (and their factional supporters), and reduce state influence over key industries in ways that may compromise the regime’s ability to monopolize economic, social, and political power. Internal divisions and political deadlock will result, throttling growth. In contrast, the United States’ current recession and political deadlock are seen as temporary setbacks that can be resolved by new administrations, new policy consensus brokered between parties, and new initiatives implemented by the country’s more vibrant and resilient institutions.
9. As such, the capabilities above would be most feasible and likely under a high-capacity United States, which would see a return to precrisis growth rates (ranging from 2.5 to 3 percent, if not more), a long-term resolution to entitlement costs and growing deficits, and sustained increases in the defense budget that would gradually reverse the impact of the roughly \$500 billion in budget cuts recently implemented.
10. Analysts note that the 1997 Asian financial crisis, which coincided with massive losses reported by state-owned enterprises, provided Premier Zhu Rongji with the political capital to undertake sweeping reforms of the state-owned and banking sectors.
11. As discussed in chapter 2, some analysts argue that, despite its investment-heavy growth model, China’s overall levels of capital stock and infrastructure is still low in comparison with industrial economies and its East Asian neighbors. In their view, the large share of China’s population that has yet to move from the rural inland to pro-

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ductive urban centers will fuel demand for infrastructure, housing, and consumer goods.

12. Such a development would essentially involve features of Chinese behavior outlined in chapter 2, especially the more aggressive versions of possible domestic social and foreign policy behavior stipulated in the “Aggressive Ultrationalism” trajectory.
13. As discussed in greater detail in chapter 6, critical decisions regarding strategy or doctrine by the United States and Japan could either mitigate or compound the risks and uncertainty of a shifting military balance. These decisions could include revising and dispersing the forward U.S. presence in the region, or conversely, doubling down to defend fixed air bases and big-deck carriers against China’s expanding arsenal of theater missiles. U.S. and Japanese doctrine will also affect their performance across the domains of competition, particularly in the willingness of allied forces to exploit asymmetric missions to maximize the potential of their still-considerable forces.
14. China would be hard-pressed to use its nuclear capabilities as a weapon of blackmail or coercion without developing larger numbers of more precise warheads and delivery vehicles, and abandoning its long-standing no-first-use policy. Chinese leaders would be unlikely to revise these two core tenets of Chinese nuclear doctrine in the absence of an overwhelming threat from large arrays of CPGS weapons, BMD networks, or other systems deployed in numbers sufficient to neutralize China’s arsenal of 150 to 200 nuclear warheads. Moreover, any effort to shift to a new posture of limited, rather than minimal deterrence, would require China to undertake a significantly more ambitious modernization of its strategic forces—a process that would be gradual and relatively easy to monitor for U.S. or Japanese analysts.
15. In the United States, a mid- to lower-range trajectory would see a partial economic recovery that falls short of the precrisis boom, with real annual growth hovering around 2 percent or slightly lower. Extensive budget cuts forestall a major debt crisis, but increased healthcare and entitlement costs for an aging baby boomer population create new fiscal burdens. Faced with external budgetary pressures and political divisions within civilian and military bureaucracies, Washington permits existing trends in defense planning and procurement to run their course. At the same time, steady increases in personnel and operations costs would occupy an increasing proportion of a stagnant budget, reducing the resources available for acquisition and modernization.
16. Even with marginal improvements in submarine capabilities, however, the PLA would not pose a serious threat to Pacific sea lines of communication.
17. Although Beijing would likely witness a lower level of technological innovation and network system capabilities under this scenario, it is almost impossible to determine if such deficiencies would inhibit the deployment of an ASBM system in this time frame. Indeed, it is very possible that Beijing will achieve at least some level of deployment of a system—albeit one likely limited in number of missiles and range, and perhaps of an undetermined accuracy—given that such a project would certainly receive priority funding and attention even in a low-capacity scenario.
18. As Mulvenon notes, the PLA appears to regard unclassified U.S. networks as significantly more accessible and thus more attractive targets for infiltration and disruption than classified networks. NIPRNET, for instance, would provide a wealth of information on U.S. logistics networks (e.g., readiness status and the timing and destination of deployments) the PLA could target to delay U.S. intervention in a crisis, with a relatively high chance of success. An attack on SIPRNET, however, would pit the PLA against more sophisticated defenses and significantly increase the risk of failure—an unacceptable outcome, given the importance of cyber operations in the PLA’s efforts to level the playing field in the military balance. This is not to say the PLA would not attempt to exploit vulnerabilities in classified networks, but rather that Chinese cyber doctrine appears to emphasize attacks on unclassified U.S. networks. See James Mulvenon, “PLA Computer Network Operations: Scenarios, Doctrine, Organizations, and Capability,” in *Beyond the Strait: PLA Missions Other Than Taiwan*, edited by Roy Kamphausen, David Lai, and Andrew Scobell (Carlisle, Pa.: Strategic Studies Institute, 2009), 253–86.
19. Under either situation, the U.S. dollar would remain the default reserve currency, with the euro a weaker competitor, and with no clear East Asian alternative currency. For the United States to appreciably strengthen its capabilities in the Western Pacific, it would need to implement the long-term objectives of the Joint Operational Access Concept (or some other ambitious counter-A2/AD approach), sustaining commitments in strategy, doctrine, spending, and procurement across multiple administrations and in the face of other contingencies (particularly in the Middle East) that may emerge.
20. In this instance, heightened threat perceptions of China would likely allow U.S. and Japanese policymakers to overcome political constraints in securing additional basing and access agreements, which would give allied forces

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greater flexibility in dispersing and pre-positioning assets. More broadly, regional threat perceptions of China could facilitate a wider array of partnerships and basing arrangements with the nations that belong to the Association of Southeast Asian Nations, enabling the United States to adopt a more flexible and geographically distributed presence. As discussed above, however, moving away from concentrated basing infrastructure would exact an operational toll on the alliance's ability to project power into the regional theater.

21. How this delicate balance in U.S. power and policy (that is, withdrawing while maintaining confidence in the U.S. deterrence and war-fighting capability) could be achieved without precipitating enormous regional instability is extremely difficult to foresee, however. The conditions that might precipitate such a radical shift in U.S. policy and presence are discussed in greater detail below.
22. For the United States, a low-capacity scenario would feature prolonged economic stagnation with anemic annual growth that could fall below 1.5 percent. Diminished budgetary resources could create pressing imperatives to rein in long-term deficits through any means necessary, resulting in broad cuts to entitlements and defense spending alike. At the same time, cost escalation for the high-technology capabilities that make up the vast majority of the Air Force's and Navy's acquisition through the 2020s continues unabated, forcing the Pentagon to delay force modernization. Against the larger backdrop of austerity, the political will to marshal a strategically sound response to China's antiaccess capabilities—which might otherwise include adopting more circumscribed or defensive missions to exploit the United States' still-considerable forces—declines precipitously.
23. In this instance, the United States' ability to assist Japan would degrade significantly, as operating exclusively from bases in Guam or further out would reduce sortie rates by U.S. fighters and bombers by as much as 40 to 50 percent, strain supply and logistics, and make allied air forces less durable and resilient in the face of attrition. Standoff weapons, including longer-range cruise missiles, could compensate to some degree for a reduced presence in the air, although their reach into Chinese territory would be limited.
24. Although a number of analysts have noted that Japan could leverage its advanced nuclear infrastructure to produce functioning warheads within several months (six months is a commonly cited figure), more detailed assessments have pointed out that acquiring a minimal second-strike capability would require a much more resource- and time-intensive process. Specifically, Japan would need to produce fissile materials, engineer warheads and missiles, and create its own effective and survivable delivery vehicles. A 2006 *Sankei Shimbun* article, for instance, cited internal Japanese government estimates that developing a miniaturized warhead would require a minimum of three to five years and ¥200–300 billion. Several U.S. analysts—including Jeffrey Lewis, Toshi Yoshihara, and James Holmes—have thus suggested that the process would take a few years rather than several months. See “Japan Needs 3–5 Years to Build Nuclear Warheads,” Kyodo World Service, December 25, 2006; “Unaware of Reported Government Documents on Nuke Warhead: Shiozaki,” Jiji Press, December 25, 2006 (cited by Yoshihara and Holmes); Jeffrey Lewis, “How Long for Japan to Build a Deterrent?” *Arms Control Wonk*, December 28, 2006, <http://lewis.armscontrolwonk.com/archive/1339/japans-nuclear-status>; and Toshi Yoshihara and James R. Holmes, “Thinking About the Unthinkable: Tokyo's Nuclear Option,” *Naval War College Review* 62, no. 3 (Summer 2009): 59–78.

CHAPTER 6

1. See Richard A. Bitzinger, “AirSea Battle: Old Wine in New Bottles?” *RSIS Commentaries*, August 23, 2012. Bitzinger states that while ASB is short on specifics, “it is based on the idea of carrying out massive counterstrikes against an enemy's home territory. Cruise missiles, launched from submarines or ships, along with smart bombs dropped from stealth aircraft, would blind and incapacitate the adversary by taking out its military surveillance and communications systems. Other attacks would target the enemy's missile bases, airfields, and naval facilities.”
2. T. X. Hammes, “Offshore Control: A Proposed Strategy for an Unlikely Conflict,” Center for Strategic Research, Institute for National Strategic Studies, National Defense University, June 2012. Hammes notes that ASB is “the antithesis of strategy. While ASB is short on specifics, it is based on the idea of carrying out massive counterstrikes against an enemy's home territory.” Hammes presents Offshore Control as a less escalatory alternative: “By reducing reliance on space and cyber domains, Offshore Control is designed to slow a crisis down and reduce escalatory pressure in a crisis and potential ensuing conflict.... If escalation is required, deliberate and transparent escalation is better than a sudden surprise that could be misinterpreted.... Offshore Control seeks termination of the conflict

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on U.S. terms through China's economic exhaustion without damage to mainland China's infrastructure or the rapid escalation of the conflict."

3. As Hammes writes, strategically, Offshore Control seeks to use "currently available but limited means and restricted ways to enforce a distant blockade on China. It establishes a set of concentric rings that *denies* China the use of the sea inside the first island chain, *defends* the sea and airspace of the first island chain, and *dominates* the air and maritime space outside the island chain. No operations would penetrate Chinese airspace. Prohibiting penetration is intended to reduce the possibility of nuclear escalation and to make war termination easier." Hammes, "Offshore Control," 4.
4. Gabriel B. Collins and William S. Murray, "No Oil for the Lamps of China?" *Naval War College Review* 62, no. 2 (Spring 2008): 79–95.
5. As discussed above, the United States would confront a fiscal dilemma in attempting to simultaneously reduce the overall deficit, rein in entitlement costs, and sustain levels of defense spending required to realize ambitious doctrines, capabilities, and force structures. Managing the long-term deficit without resorting to sequestration would be particularly difficult, as abandoning several hundred billion dollars in deficit reduction could inflate the ratio of debt to gross domestic product and possibly raise borrowing costs.
6. In addition to the technical obstacles involved in developing a highly integrated air-sea operational system, an effective ASB concept would likely require painful revisions in the doctrinal assumptions and preferred missions of both the Air Force and Navy. For instance, the U.S. Navy would have to contend with the possibility that its carriers might play a secondary role at the outset of a conflict, or at least until long-range bombers or standoff attacks had disabled the networks underpinning China's antiship ballistic missiles. And the U.S. Air Force would likely need to accept a greatly increased role for unmanned, long-range stealth aircraft, including attack drones, and a relatively diminished role for its traditional short-range tactical fighters.
7. Raoul Heinrichs, "America's Dangerous Battle Plan," *Diplomat*, August 17, 2011, <http://the-diplomat.com/2011/08/17/america%E2%80%99s-dangerous-battle-plan>.
8. Ibid.
9. Collins and Murray, "No Oil?"
10. Ibid.
11. This scenario would see select counter-A2/AD capabilities grafted onto a more technologically advanced version of the extant U.S. force structure, mitigating some of the United States' current vulnerabilities while reproducing others. The force structure under this scenario would likely include (1) a reliance on standoff, rather than long-range, deep-strike capabilities; (2) carrier fleets serving familiar doctrinal roles, such as bringing short-range tactical aircraft into the theater or serving as "geopolitical chess pieces" to convey U.S. presence; (3) a central role for short-range tactical aircraft that would be highly dependent on fixed forward bases vulnerable to missile attacks; (4) considerable, albeit lower, levels of U.S. and Japanese integration in areas such as base defense and C4ISR; (5) significant increases in antimine and ASW capabilities and an increased reliance on submarines as ASW and cruise missile platforms; (6) the maintenance of superior U.S. offensive cyber abilities that remain highly dependent upon networks and infrastructure whose security would not be assured in a conflict; and (7) the maintenance of a broad-based, persistent surveillance capability through satellites in geosynchronous orbit, beyond the range of most ASAT systems.

Given its continued, heavy reliance on forward basing, this approach would also require a considerable strengthening of both active and passive defenses, to preserve U.S. sanctuary areas essential for the basing and operation of U.S. air power systems. In terms of active defense, this approach would require significant investments to increase the number of Patriot Battalions, Aegis ships, SM-3 missiles, and ABM systems in Japan and surrounding areas. Past and ongoing programs might also receive increased funding and focus, such as the Terminal High Altitude Area Defense (THAAD) system to shoot down ballistic missiles in their terminal phases, and the Medium Extended Air Defense System (MEADS) intended to update Patriot air defense systems.

In terms of passive defense, a number of measures might be taken. Passive defense at sea would include radar and emissions control, use of decoys and deception emitters, development and deployment of obscurants, and adoption of operational patterns that China may find hard to predict. Such efforts could reduce the likely effectiveness of

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ASBM targeting. Passive defense with relation to land bases would include runway hardening, hardened aircraft storage shelters, rapid-runway-repair kits, protection for fuel-storage and logistical supply chains, and ways to protect vulnerable big-wing aircraft. See Marshall Hoyle, "China's 'Antiaccess' Ballistic Missiles and U.S. Active Defense," *Naval War College Review* 63, no. 4 (Autumn 2010): 84–104.

12. For example, if the DF-21D ASBM has a 1,750-kilometer range, it can still reach 850 kilometers offshore from nearly 900 kilometers inland. This is beyond the effective range of U.S. TACAIR. Thus, deep strikes might be required to effectively dismantle the ASBM system. The authors are indebted to William Murray for this comment.
13. Hoyle, "China's 'Antiaccess' Ballistic Missiles."
14. Michael Raska, "Decoding the Air-Sea Battle Concept: Operational Consequences and Allied Concerns," *RSIS Commentary*, August 23, 2012. See also Jeffrey E. Kline and Wayne P. Hughes Jr., "Between Peace and the Air-Sea Battle: A War at Sea Strategy," *Naval War College Review* 65, no. 4 (Autumn 2012): 35–40, www.usnwc.edu/getattachment/e3120d0c-8c62-4ab7-9342-805971ed84f4/Between-Peace-and-the-Air-Sea-Battle--A-War-at-Sea. We are also indebted to William Murray of the U.S. Naval War College for his indispensable assistance in defining this response.
15. Lyle Goldstein offers some extremely interesting ways for U.S. policymakers to reduce the tensions generated by such sensitive issues. These include gradual reductions in U.S. arms sales to Taiwan as part of broader confidence-building measures and an overall reduction in overt intelligence-gathering activities along China's periphery. Moreover, Goldstein argues that, in return for the latter U.S. concession, Washington "could very reasonably expect China to offer tangible increases in transparency." See Lyle J. Goldstein, "Resetting the U.S.-China Security Relationship," *Survival* 53, no. 2 (April-May 2011): 89–116, www.iiss.org/publications/survival/survival-2011/year-2011-issue-2/resetting-the-uschina-security-relationship.
16. See Henry A. Kissinger, "Avoiding a U.S.-China Cold War," *Washington Post*, January 14, 2011, www.washingtonpost.com/wp-dyn/content/article/2011/01/13/AR2011011304832.html. Kissinger argues that, for such a concept to work, some type of "consultative mechanism" must be created that "permits the elaboration of common long-term objectives and coordinates the positions of the two countries [China and the United States] at international conferences. The aim should be to create a tradition of respect and cooperation so that the successors of leaders meeting now continue to see it in their interest to build an emerging world order as a joint enterprise."
17. This development would resemble the explanations some analysts have offered for increased Chinese assertiveness since 2009.

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