

**Strategic Silence: East Asian Responses to Chinese Military
Power in the Context of an East Asian Arms Race**

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I . Ascending Asia and Strategic Consequences

For more than two centuries, a succession of Western powers—Europe’s great powers until World War II, Russia until the collapse of the Soviet Union, and the United State since the end of the Second World War—have dominated the global strategic landscape owing principally to their economic prowess and corresponding military power. This strategic dominance was contested periodically by a limited number of East Asian states most noticeably by Japan in the early 1900s and more forcefully during the Second World War, by North Korea and China during the Korean conflict, and by North Vietnam from the 1950s until victory in 1975. But despite the stalemate in Korea and the subsequent U.S. withdrawal from Vietnam, no East Asian power has been able to displace, much less match, the cumulative power projection capability of the United States. Such a state of events is unlikely to change for the foreseeable future but the catch is that within the next two to three decades, the “foreseeable future” will transform into “current reality.”

While the emergence of an East Asian theater peer that could conceivably contest the strategic supremacy of the United States (or that of its key allies) seems highly unlikely at least until the 2020 or so time frame, the potential emergence of a *near* theater peer within the foreseeable future no longer lies in the realm of war games. In essence, East Asia on the whole, and selective actors in particular such as China, India, Japan, and to a lesser degree Korea, is awakening from *strategic hibernation* that could have far-reaching consequences not only for the region, but for global security and prosperity. The cumulative rise of East Asia—unparalleled economic and technological capabilities coupled with progressively advancing power projection capabilities—has no parallel in East Asian history. Ever since East Asia was forced into the modern international system following the Opium War in the mid-19th century, only one regional power, Japan, acquired and then subsequently lost regional strategic presence. Assuming that current economic, military, and political trends continue, however, East Asia by the year 2020 is likely to harbor at least three states with significant strategic capabilities—China, Japan, and possibly a unified Korea. If one factors in India, major power rivalries—latent, muted, or real—may well come to characterize East Asia’s strategic landscape in the second half of the 21st century.

Great powers seldom, if ever, emerge by accident. The confluence of focused national strategies, economic and technological capabilities, accelerated maturation of soft power attributes, and sustained political will among other forces culminates in the creation of strategic capabilities. The East Asian story since 1945 differs substantially from the rise of previous great powers, e.g., the concert of European powers from the late 18th until the late 19th century, in that hard and soft power attributes have been compressed at an accelerated rate to create a

commanding synergy. If a select number of East Asian states have spent the last 50 years accumulating and expanding national capabilities, including more modernized military potential, they are likely to spend the next 50 years honing, refining, and ultimately using their newly gained national capabilities. This is not to suggest that Western and in particular American dominance of advanced military technologies will ebb anytime in the near future. Indeed, in areas such as direct-energy weapons, high-power microwaves, unmanned combat air vehicles, and biocomputers U.S. dominance can be fully expected to expand.¹ That said, selective progress in asymmetrical technologies coupled with immense dual-use opportunities offered by the on-going information revolution will be exploited fully by China, Japan, Korea, India, and even selective Southeast Asian states.

It is in this context that more and more East Asian states are turning their attention to acquiring more expansive power projection capabilities in general and airspace capabilities in particular. As a case in point, despite the propensity to downgrade the strategic utility of North Korea's missile forces, one should really look into the speed in which Pyongyang has acquired over 500 surface-to-surface missiles including the longer-range Taepodong-1. To be sure, the debate continues on the net military utility of North Korean missiles given limited accuracy and payload constraints. Nonetheless, the fact remains that North Korea has chosen to expand its strategic envelope with significant implications for South Korean, Japanese, and U.S. forces based on the peninsula and in Japan.

Air power in and of itself has never translated into decisive strategic presence. But in combination with a broader array of power projection capabilities such as ballistic and cruise missiles, precision targeting capabilities, and precision guided munitions, they can provide virtually any state with potent projection capabilities. For reasons that are illustrated below, selective East Asian states today have already acquired or are in the process of acquiring more lethal weapons platforms than at any time since the end of the Korean War. Ironically, such a development stems, in part, from the very success of the postwar economic recovery of East Asia since regional states have the financial ability to modernize their armed forces. More importantly, with the exception of the Korean Peninsula where large-scale ground forces continue to confront each other over the DMZ, the specter of all-out attrition warfare has declined significantly with the global end of the Cold War. Thus, the need for large, ground-based mechanized forces with fixed artilleries has declined substantially with corresponding emphases on air and naval power projection capabilities. Indeed, notwithstanding the current limitations of China's space program, "increased space capability is the only way for the

¹ For a concise and lucid treatment of emerging military technologies and U.S. advantages, see William C. Martel, ed., *The Technological Arsenal: Emerging Defense Capabilities*, (Washington, D.C.: The Smithsonian Institution, 2001).

Chinese armed forces to catch up with the current revolution in military affairs and information technology. China's increased focus on its space program is coupled with plans to redesign the People's Liberation Army into a modern, efficient, high-tech fighting force."² At the same time, although it is highly unlikely that China will overtake the United States in military space even over the next 20-30 years, "it has the potential to develop within this time frame a military space capability that the U.S. military would have to reckon with."³

Insofar as Japan's military capabilities are concerned, *Stratfor.com* issued a special report in May 2001 that characterized Japan as being in a strategic turning point and further that "creating a credible Japanese military deterrent in East Asia—after more than half a century of isolationism—will place Tokyo at the center of competition for influence in the region. *More than those by the United States or China, Japan's moves will intensify an already heated competition for regional influence.*"⁴ (Emphasis added). Last but not least, South Korea's own space program coupled with the agreement reached in January 2001 enabling Seoul to deploy SSMs up to a range of 300 km with conventional payloads up to 500 kg (in return for South Korea's entry into the MTCR) "*will spur commercial competition and may trigger increased regional missile proliferation*" and further, that "South Korea seeks technological and economic benefits from a purely indigenous space program, one that could eventually defend the entire peninsula while decreasing economic and security dependency on the United States."⁵ (Emphasis added).

In the final analysis, these assessments may or may not accurately depict the future direction of Chinese, Japanese, or Korean strategic priorities. But the more relevant point is that insofar as *capabilities* are concerned—quite apart from *intent*—all three states possess fairly robust offensive military arsenals that could be enhanced significantly in the years and decades ahead. To be sure, despite outstanding political and historical constraints, the possibility of any direct military clash between South Korea and Japan remain virtually nil—in large part owing to Tokyo's and Seoul's half century alliances with the United States. Indeed, while Japan remains concerned on the potential shift in South Korea's strategic calculus, e.g., weakened strategic ties with the United States with correspondingly closer ties with China in the post-unified era, a Korea under a Chinese security umbrella would face enormous constraints with potentially debilitating consequences as evinced by Korea's loss of strategic independence owing to its forced status as a tributary state. For different historical, political, and strategic reasons,

² "China's Long March Into Space," *Stratfor.com*, January 10, 2001, www.stratfor.com/asia/commentary/0101101950.html

³ *Ibid.*

⁴ "Will Japan Re-Arm?," May 28, 2001, *Stratfor.com*, January 10, 2001, www.stratfor.com/asia/commentary/0105282155.html

⁵ "Unintended Consequences: Proliferation in South Korea," *Stratfor.com*, March 5, 2001, www.stratfor.com/asia/commentary/0103051130.html

however, all three key Northeast Asian states are pursuing force modernization programs that will ultimately drive and shape the regional strategic template: China, in order to regain and reassert its historical geopolitical role; Japan, in an effort to overcome the limitations posed by the Yoshida Doctrine; and Korea, in order to offset any major spill-over from great power rivalries or clashes. It is perhaps for these reasons that airspace and naval assets are fast becoming the platforms of choice for China, Japan, and Korea.

II. Strategic Jointness and Hybrid Conflicts

While the use of air power in strategic theaters dates back to the Second World War, the never ending debate on whether air power is a decisive factor in modern warfare largely rests on the fact that “seventy years of over promising by air power advocates had left a deep residue of distrust in Washington’s military culture” and that “because air power was thought to have failed in Indochina in some very general sense and because it was not deemed to have been ‘decisive’ in either the Korean War or the Second World War” many argued that air power prior to U.S. and allied air offenses against Iraq during the Gulf War would also fail.⁶ Before assessing in greater detail key developments in air power since the Gulf War, it is perhaps necessary to briefly articulate what one means by air power as noted by a leading air power analyst:

First, air power does not refer merely to combat aircraft or to the combined hardware assets of an air arm, even though these may seem at times to be the predominant images of it held by both laymen and professionals alike. Rather, *in its totality, air power is a complex amalgam of hardware equities and less tangible but equally important ingredients bearing on its effectiveness*, such as employment doctrine, concepts of operations, training, tactics, proficiency, leadership, adaptability, and practical experience.

Second, *air power is functionally inseparable from battlespace information and intelligence*...Air power and intelligence are thus opposite sides of the same coin. If the latter fails, the former is likely to fail also. For that reason, accurate, timely, and comprehensive information about an enemy and his military assets is not only a crucial enabler for allowing air power to produce pivotal results in joint warfare; it is an indispensable precondition for ensuring such results.

Third, *air power, properly understood, knows no color or uniform*. It embraces not only Air Force air craft, munitions, sensors, and other capabilities, but also naval aviation and the attack helicopters and battlefield missiles of land forces...*Recognition and acceptance of the fact that air warfare is an activity in which all services have important roles to play is a necessary first step toward a proper understanding and assimilation of air power’s changing role in joint warfare.*⁷ (Italics added).

If one understands air power in these terms, a critical dimension of air power is its inherent flexibility—in strategic, operational, and tactical terms. As defined in current U.S. joint

⁶ Edward N. Luttwak, “Air Power in U.S. Military Strategy,” in Richard H. Shultz, Jr., and Robert L. Pfaltzgraff, Jr., eds., *The Future of Air Power in the Aftermath of the Gulf War*, (Maxwell Air Force Base, Alabama: Air University Press, 1992), p. 20.

⁷ *Ibid.*, pp. 117-118.

doctrine, the strategic level of warfare is “that level at which a nation or coalition determines security objectives and guidance...Operational art governs the organization, deployment, integration, and conduct of major campaigns and operations. Proper leadership at this level guides the direction and coordination of tactical forces within the theater. Tactical doctrine (tactics) provides detailed guidance to combat units for winning individual engagements.”⁸ In the context of air power, Glenn A. Kent and David A. Ochmanek at RAND emphasize the concept of core competency, “that is, the core competency of air and space forces—their ability to traverse air and space—gives them inherent characteristics of speed, range, mobility, and perspective. These inherent characteristics, in turn, make it possible for air and space forces to possess the fundamental capabilities of projection, responsiveness, maneuver, mass, and situation awareness.”⁹ Or as *Joint Vision 2020* highlights with respect to achieving full spectrum dominance:

For the joint force of the future, this goal will be achieved through full spectrum dominance – the ability of US forces, operating unilaterally or in combination with multinational and interagency partners, to defeat any adversary and control any situation across the full range of military operations.

The full range of operations includes maintaining a posture of strategic deterrence. It includes theater engagement and presence activities. It includes conflict involving employment of strategic forces and weapons of mass destruction, major theater wars, regional conflicts, and smaller-scale contingencies. It also includes those ambiguous situations residing between peace and war, such as peacekeeping and peace enforcement operations, as well as noncombat humanitarian relief operations and support to domestic authorities.

The label full spectrum dominance implies that US forces are able to conduct prompt, sustained, and synchronized operations with combinations of forces tailored to specific situations and with access to and freedom to operate in all domains – space, sea, land, air, and information.

Achieving full spectrum dominance means the joint force will fulfill its primary purpose – victory in war, as well as achieving success across the full range of operations, but it does not mean that we will win without cost or difficulty. Conflict results in casualties despite our best efforts to minimize them, and will continue to do so when the force has achieved full spectrum dominance.¹⁰

To the extent that jointness is a crucial component of maximizing the advantages inherent in air power, it must also be mentioned that outside of the U.S. military, only a very limited number of militaries actually practice jointness. (As is well known, however, consensus remains relatively thin even within the U.S. armed forces as to what precisely defines jointness, and more importantly, which service should be in the lead vis-à-vis the forging of greater jointness). Nevertheless, the key point here is to illustrate the critical importance of thinking

⁸ Major Scott Walker, USAF, “A Unified Theory of Coercive Airpower,” *Airpower Journal*, vol. 11, no. 2 (Summer 1997), www.airpower.maxwell.af.mil/airchronicles/aphj/sum97/sum97.html

⁹ Glenn A. Kent and David A. Ochmanek, *Defining the Role of Airpower in Joint Missions*, (Santa Monica, CA: RAND, MR-927-AF, 1998), pp. 11-12.

about air power in a holistic framework and not in a service-parochial manner. Thus, insofar as air power is concerned, it must be conceptualized within the broader context of the use of force, or more precisely, to understand that “although air power gives us new avenues of approach and ways to avoid most of the enemy surface forces en route to a target, the question of what we are trying to get the enemy to do (or stop doing) remains the same.”¹¹

More recently, the debate on the role and efficacy of air power¹² has once again been ignited on the heels of the unparalleled usage of and success in precision bombing against the Taliban and Al Qaeda militias in Afghanistan. According to Army Gen. Tommy Franks, the Commander-in-Chief of U.S. Central Command, “the Taliban...no longer controls Afghanistan, Al Qaeda cells inside Afghanistan have in some cases been destroyed, in other cases disrupted, and in fact, Al Qaeda is on the run.”¹³ The overall degree to which air power contributed to the military demise of the Taliban and Al Qaeda will be studied intensively once the Afghanistan campaign draws to a close but initial evidence suggests strongly that air superiority, precision bombing, real-time intelligence, and close air support were decisive factors in defeating the 45,000 strong Taliban forces and thousands of Al Qaeda militia forces 90 days after the beginning of military operations in early October.

While the matching of highly tailored forces with multiple mission requirements is not new (as shown by the Gulf War and the Kosovo campaign), one of the most significant military aspects of the Afghanistan campaign is the ability of the U.S. armed forces to effectively operationalize a “system of systems” that ties together emerging technologies and RMA assets, unparalleled C⁴ ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) capabilities, and unmatched precision fire power. As one commentator has noted, Operation Enduring Freedom is likely to be remembered as a key benchmark campaign or as the first campaign where air power reached “critical mass.”¹⁴ In more ways than one, unparalleled *Jointness* led by air assets in the Afghanistan campaign can be seen as the decisive factor in destroying the Taliban and Al Qaeda forces.

Notwithstanding the initial success of the combined air/special forces/marines campaign in Afghanistan and the critical role of precision bombing, the more significant issue is how the on-going war in Afghanistan is likely to influence the conduct of future conflicts—

¹⁰ *Joint Vision 2020*, (Washington, D.C.: Joint Chiefs of Staff, 2000), www.dtic.mil/jv2020/jvpub2.htm

¹¹ Walker, “A Unified Theory of Coercive Airpower.”

¹² An increasing number of analysts prefer to use the term “airspace power” or “aerospace power” rather than “air power” but “air power” is used in this paper in the context of air and space power including, but not limited to combat and non-combat aircraft, ballistic and cruise missiles, UAVs and UCAVs, and space-based platforms. The terms “airspace power” and “air power” are used together in this paper.

¹³ Jim Garamone, “Central Command Chief Please with Afghan Progress,” *American Forces Press Service*, January 4, 2002. www.defenselink.mil/news/Jan2002/-n01042002_200201045.html

¹⁴ Thomas E. Ricks, “Bull’s-Eye War: Pinpoint Bombing Shifts Role of GI Joe,” *Washington Post*, December 2, 2001, p. A1. www.washingtonpost.com/a...A44042-2001Dec2.html

both from the warriors and policymakers perspectives. Proponents of air power have argued ever since the Gulf War, and more recently, in the aftermath of the 1999 Kosovo campaign, that air power demonstrated its ability to decimate enemy forces with minimum casualties to U.S. and allied forces. There is little doubt that the modus operandi of warfare has changed significantly, perhaps even fundamentally, with the advent of long-range strikes utilizing precision munitions combined with new information technologies that enables commanders and front line troops with “24/7” situational awareness.¹⁵ As one enthusiastic analyst commented on the “Operation Allied Force demonstrated that the true precision air attack—once a far-off goal but now taken for granted—has become an indispensable capability. It proved to be vital not just for the prosecution of the Balkan military effort but also as a means of holding together the Western coalition by minimizing civilian casualties and damage.”¹⁶

That said it should be borne in mind that in assessing the future role of air power, one major caveat is in order. Despite the ability of the U.S. and allied air forces to achieve unmatched air superiority from the onset of military operations in the Gulf War, the Kosovo campaign, and more recently in Afghanistan, it remains that the Iraqi, Serbian, and Taliban forces did not have a viable air force to counter aggressive U.S. air campaigns. During the initial stages of the air campaign in the Gulf War and in Kosovo, U.S. and coalition forces confronted Iraqi and Serbian air defenses with some collateral damage but enemy air defenses were quickly suppressed.

Throughout the Gulf War and the Kosovo campaign, air superiority was never relinquished by U.S. and coalition forces. In the Afghanistan campaign, neither the Taliban or Al Qaeda forces had viable air power with the notable exception of the possibility of portable SAMs such as Stingers left over from the earlier Afghanistan war. Since the inception of Operation Enduring Freedom, however, Stingers or similar portable SAMs were not used by the Taliban. Thus, the more relevant strategic question in analyzing the efficacy of air power today and into the foreseeable future is how air power is likely to fare under conditions where opposing forces are able to wield significant air assets including combat aircraft, bombers, smart bombs, and air defense capabilities. In essence, the key question is whether advanced air power

¹⁵ Thomas E. Ricks, “A War That’s Commanded at a Distance,” *Washington Post*, December 27, 2001, p. A1. www.washingtonpost.com/wp-dyn/articles/A28078-2001Dec26.html. The numbers 24/7 refers to 24 hours/7 days situational awareness or what the Pentagon also calls “full spectrum information dominance.” In the context of the Afghanistan campaign, a minor debate has surfaced with respect to the physical location of the CINC. Some have argued that like Gen. Norman Schwarzkopf during the Gulf War, the current Central Command CINC should be directing the Afghanistan campaign not from Tampa but closer to the theater, e.g., Saudi Arabia. Gen. Franks and others, however, have asserted that current communications networks fully enables his command to conduct the war in Afghanistan in real-time—something that wasn’t available during the Gulf War.

¹⁶ John A. Tripak, “The State of Precision Engagement,” *Air Force*, vol. 83, no. 3 (March 2000). www.-afa.org/magainze/0300precision.html.

capabilities will result in the effective dislocation or destruction of strategic and operational centers of gravity (COGs) of opposing military forces under fairly evenly matched *quantitative* conditions.¹⁷

For a combination of reasons that are noted below, the growing strategic importance of air power has to be understood in the context of four interlocking forces: shifting geopolitical priorities, the proliferation of asymmetrical capabilities, increasing emphasis on the need for capabilities-based defense planning and the rapidly declining likelihood of full-scale conventional conflicts or as one observer commented after the Gulf War, “of all the wars that might develop, the least likely is a global conventional war centered around a mature, prepared theater like the one that grew for 40 years over the inter-German border. The notion that no conflict is likely to center around a mature theater has some very significant implications.”¹⁸ Air power has proven to be critical in so-called cutting-out operations like Panama and Grenada including airlift, electronic detection, and extremely accurate precision attacks to support ground operations.¹⁹ Specifically, air power offers comprehensive quick-response capabilities that no other force can easily match:

When we think about real power projection, about protecting our interests against small to midsize power threats, air power becomes dominant, and our primary defense problem becomes one of responding with sharp, decisive actions. Air power becomes important because it has a unique ability to get to the combat area with massive power and to affect enemy operational and strategic centers of gravity. *All components can attack centers of gravity, but only air power can frequently circumvent enemy forces and attack strategic centers of gravity directly.*²⁰ (Italics added).

While air power alone cannot possibly meet all of the emerging strategic and military challenges, it is important to note that air power in its broader configuration that includes ballistic and cruise missiles, space-based C⁴ ISR, and stand-off/precision targeting capabilities is emerging as the next phase of the revolution in warfare. At the center of the airpower debate is whether the current and emerging inventory of air-delivered standoff attack weapons can effectively achieve key battlefield objectives “in lieu of ground forces”²¹ and the Gulf War stands out as one of the principal examples for air power enthusiasts who contend that were it

¹⁷ For example, in a future conflict scenario on the Korean Peninsula, one of the most critical strategic equations is whether U.S. and South Korean air forces will be able to attain air superiority in the early phases of conflict. Despite the hollowing out of North Korea’s combat aircraft capabilities over the past decade and the U.S.-ROK Combined Forces Command’s ability to ultimately retain air superiority, North Korea’s air defense assets, SAM batteries, underground air bases, and long-range artillery means that allied forces will suffer significant collateral damage in the earlier phases of conflict.

¹⁸ Col. John A. Warden III, “Employing Air Power in the Twenty-first Century,” in Richard H. Shultz, Jr., and Robert L. Pfaltzgraff, Jr., eds., *The Future of Air Power in the Aftermath of the Gulf War*, (Maxwell Air Force Base, Alabama: Air University Press, 1992), p. 59.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Benjamin S. Lambeth, “The Role of Air Power Going into the 21st Century,” p. 117.

not for the sustained air campaign, land-based war of attrition was unavoidable.

What air power achieved during the Gulf War is still open to queries, particularly in assessing the strategic objectives of Desert Storm. As Benjamin Lambeth has written, “the Persian Gulf War has now come to be seen by most observers as having been considerably less than a towering strategy success. Many of the loftier goals articulated by its leaders before the war...did not come to pass.”²² At the same time, however, he argues that in a more narrow definition of the operational application of air power, Desert Storm was “anything but inconclusive.” Specifically, the operational objectives of the air campaign during the Gulf War were as follows: (1) isolate and incapacitate the Iraqi regime by attacks on leadership facilities, electric power production, and telecommunications; (2) gain and maintain air supremacy by attacks on the air defense system and the air force; (3) destroy nuclear, biological, and chemical warfare (NBC) capabilities; (4) eliminate offensive military capabilities by attacks on logistical sites, Scud missiles and launchers, oil refining and distribution facilities, and naval forces and bases; and (5) render the Iraqi army ineffective and isolate it in the Kuwait theater by attacks on railroads and bridges and on the units themselves, particularly the Republican Guard.²³

Although it is beyond the scope of this paper to offer an in-depth assessment of the Gulf War, some statistics reveal the sheer magnitude of the air campaign. Whatever one may say about the coalition’s inability to achieve key strategic objectives through air power, it should be noted that political decisions prompted the end of the hostilities after the “100 hour ground war.” Overall, the coalition air campaign conducted a total of 109,876 sorties over the 43-day war or an average of 2,555 sorties per day. Of these, over 27,000 targeted Scuds, airfields, air defenses, biological and chemical weapons sites, military headquarters, intelligence assets, communications, the Iraqi army, and oil refineries.²⁴ In Air Force tonnage terms compared with other conflicts, however, the Gulf War was not an exercise in massive bombing as shown in Table II below. The Air Force’s tonnage expenditure in the Gulf War was only 11% compared to the Japan campaign during World War II (537,000 tons) and less than 4% of the Nazi Germany campaign (1,613,000 tons). Nevertheless, the Gulf War air campaign was critical in crushing the Iraqi army barely 100 hours after the coalition’s ground war began. By the end of the war, it was estimated that 32% of all Iraqi APCs, 47% of all artillery pieces, and 39% of all tanks were destroyed from the air. The destruction of the Iraqi air force was a let down for the coalition forces since remnants of the Iraqi air force fled to Iran after the beginning of coalition counterattacks. For the record, however, Iraq had 724 fixed-wing aircraft as of January 10, 1991 and by February 28, 408 were out of commission: 33 shot down, 113 destroyed in the open, 141

²² Lambeth, *op. cit.*, p. 119.

²³ Thomas A. Keaney, “Surveying Gulf War Air Power,” *Joint Forces Quarterly*, (Autumn 1993), p. 27.

²⁴ “Operation Desert Storm,” *FAS Military Analysis Network*, www.fas.org/man/dod-101/desert_storm.-

destroyed in bunkers and shelters, and 121 fled to Iran. By war's end, Iraq had 316 fixed-wing aircraft left in its inventory.²⁵

One of the key areas where the U.S. Air Force came under criticism was in the relatively low rate in taking out Iraqi Scuds. So-called Scud hunting did not eliminate the problem but air attacks reduced, suppressed, and degraded Iraqi Scuds so that Iraqi Scud launches declined from the end of January. (Scud launches picked up somewhat in early February but tapered off towards end of February). To be sure, other mistakes were made throughout Desert Storm such as the decision to end the ground war after 100 hours without achieving a key strategic objective, namely, dislodging Saddam Hussein, intelligence and targeting problems that at certain points impeded strategic effect. That said, it is virtually impossible to imagine that Iraq's military machine could have been effectively destroyed without air power that ultimately resulted in relatively low U.S. and allied casualties. While the debate continues to this day on the efficacy of the air campaign, the air war "paralyzed, incapacitated, and demoralized the enemy from the first sorties to the last on day 38—leaving only 100 hours of 'mop-up' duty for the ground forces."²⁶

Table 1
Bomb Tonnage Comparisons

War	Tonnage	Length	Tonnage/Month
World War II	2,150,000	45 months	47,777.78
Korea	454,000	37 months	12,270.27
Vietnam/SEA	6,162,000	140 months	44,014.29
Gulf War	60,624	1.5 months	40,416.00

Source: "Operation Desert Storm," *FAS Military Analysis Network*, www.fas.org/man/dod-101/desert_storm.-html

A related component of the air power debate is whether air power can really be effectively utilized across the spectrum of conflict, particularly in low intensity conflicts such as Bosnia or more poignantly, Chechnya. In brief, it should be noted that the initial failure of Russia's operations against rebel forces in Chechnya owed as much to a combination of poorly trained and equipped troops, low morale, poor intelligence, and deflating Chechnya's warfighting potential. One major flaw of the initial air campaign was the focus on destroying Chechnya's limited air force rather than destroying high value targets such as Chechnya's administrative and military command and control centers, communications hubs, and other key

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²⁵ "Statistics from Desert Storm," www.afa.org/magazine/0498storm.html

²⁶ Lt. Col. Martin Wojtysiak, "Another View of the Myths of the Gulf War," *Airpower Journal*, vol. xv,

infrastructures although close air support for Russian ground forces proved to be critical force multiplier in the overall campaign. Generally speaking, however, the Chechnya campaign demonstrated that “air power cannot invariably work its reputed magic in circumstances where the target set is elusive, problems predominate in target location and identification, and there is an ever-present danger of unintended harm to noncombatants.”²⁷ Some of the key lessons from the Russian air campaign can be cited as follows: (1) air superiority provides no guarantee of victory even against an enemy with no effective air force; (2) militias and guerillas can effectively use high-information assets as easily as modern armies allowing them to establish quick contacts, mobilize assets, and access other information; (3) operating in LIC environments will mean finding and defending against mobile targets spread throughout the country and the civilian population; and (4) realistic training is essential to overcome LIC threats.²⁸

If Chechnya was a real eye opening experience on the rapid decline of Russia’s armed forces after the collapse of the Soviet Union and a textbook case of how *not to wage war*, NATO’s Kosovo air campaign, while successful, was entangled from the very beginning by a combination of political constraints, deeply imbedded policy disputes within NATO, and significant military obstacles. Although NATO’s 78 day air campaign over Kosovo in 1999 ended with Yugoslavian President Slobodan Milosevic’s capitulation, a fierce debate continues to rage even today on the overall effectiveness of the air campaign.²⁹ When NATO forces began operations on March 24, 1999, it was tasked with five key objectives: (1) ensure a verifiable end to all military action and the immediate ending of violence and repression by Serbian forces in Kosovo; (2) withdrawal from Kosovo of Serbian military, police, and para-military forces; (3) agreement to the stationing in Kosovo of an international military presence; (4) agreement to the unconditional and safe return of all refugees and displaced persons; and (5) provide credible assurance of Serbian willingness to work on the basis of the Rambouillet Accords in the establishment of a political framework agreement for Kosovo in conformity with international law and relevant U.N. provisions.³⁰ Poor weather conditions, a 15,000 feet ceiling for air sorties in order to avoid Yugoslavian air defense systems, and the decision to forego a ground invasion

no. 3, (Fall 2001). www.airpower.maxwell.af.mil/airchronicles/apj/apj01/fal01/wojt...

²⁷ Benjamin S. Lambeth, “Russia’s Air War in Chechnya,” RAND Draft Report as cited by Timothy L. Thomas, “Air Operations in Low Intensity Conflict,” *Airpower Journal*, vol. 11, no. 4 (Winter 1997), p. 55.

²⁸ Timothy L. Thomas, “Air Operations in Low Intensity Conflict,” *Airpower Journal*, vol. 11, no. 4 (Winter 1997), p. 58.

²⁹ For a succinct overview of the conditions under which Milosevic settled after the 78 day air campaign, see “Why Milosevic Decided to Settle the Conflict Over Kosovo When He Did,” *RAND Research Brief*, www.rand.org/publications/RB/RB71/

³⁰ “Operation Allied Force,” *FAS Military Analysis Network*, www.fas.org/man.dod101/ops/allied_force.-htm

affected the overall effectiveness of the campaign such as the ability to rapidly stop Serbian aggression against the Kosovars. In the final analysis, Operation Allied Force was successful owing to NATO solidarity and the persistence and precision of the air campaign that damaged Milosevic's forces to wage an effective military campaign against NATO.

In hindsight, the problems associated with Operation Allied Force was as much political as military given the unusually tight constraints in which NATO had to conduct the air campaign. As is well known, the United States and NATO ultimately had to resort to the use of force after repeated warnings to Milosevic to desist from military operations in Kosovo. Convinced that these threats were bluff, Milosevic intensified his repressive actions in Kosovo that left NATO with only one credible option—to restore political credibility by undertaking military operations. When the option for a ground war was rejected, NATO had to undertake an air campaign that ultimately resulted in victory but post-war analysis also showed that despite 38,000 sorties NATO failed to substantially degrade the Yugoslav army in Kosovo and to shape the situation on the ground.³¹

Perhaps the most important lesson from the Kosovo air campaign was NATO's decision to use "maximum achievable force" in phased operations given that it could not resort to large-scale ground operations, massive bombing, or other brute-force in order to minimize civilian casualties.³² Thus, this basic constraint resulted in the implementation of strict protocols relating to target selection and identification and to the weapons chosen to attack each target. Seen from such a perspective, precision guided munitions (PGMs) in Operation Allied Force were highly effective, or in the words of then Chairman of the Joint Chiefs of Staff Gen. Henry H. Shelton, Operation Allied Force represented "the most precise bombing campaign in history."³³ (During Desert Storm 9% of the total munitions used were PGMs compared to 35% in Allied Force).

Such an optimistic assessment of NATO's air campaign is probably understandable given that the U.S. military and NATO had to conduct military operations under extremely limiting circumstances. Even so, detractors continue to point out that "the air campaign, conducted in isolation, is not a fair test of air power, nor should its apparent success lead to asymmetric bases for future strategy and force structure. In fact, air power alone failed to meet its prewar promise."³⁴ Or as one succinct analyst has noted:

³¹ Alain Pellerin, "Fallout from the Air and Missile Offensive Against Yugoslavia," *FAS Military Analysis Network*, www.fas.org/dod-10/ops/docs99/ndu99/pellerin.html

³² Tripak, "The State of Precision Engagement."

³³ Ibid. The U.S. lead in the Kosovo air campaign was possible to a number of efforts that took effect after the Gulf War notably the equipping of all fighters with the ability to use Laser-Guided Bombs (LGBs), greater dissemination of night vision gear, and introduction of a new class of low-cost satellite-guided weapons.

³⁴ Alain Pellerin, "Fallout from the Air and Missile Offensive Against Yugoslavia."

Airpower is a precious asset. Merely because it *can* be used does not necessarily mean that it *should* be used. When it is used, it should be used appropriately to maximize its inherent capabilities. A near flawless operational application of airpower cannot substitute for a flawed strategy...In a curious sort of way, the myths of air war over Serbia are part of the problem, not part of the solution in sustaining our investment in airpower...As the joint force air component commander himself—Lt. Gen. Mike Short, USAF, Retired—has commented about the air war over Serbia, ‘This was little more than random bombing of military targets that achieved victory by happenstance.’³⁵

Indeed, the argument on whether or not air power is able to conduct LIC-related missions predates NATO’s Kosovo campaigns, not to mention Russia’s initial setbacks in Chechnya. For example, when Britain faced an increasing number of new colonial obligations in the form of League of Nations mandates to govern Palestine, Transjordan, and Iraq, the Royal Air Force argued persuasively based on its initial success in quelling uprisings in Somaliland in 1919-20 that it should be given full responsibility to undertake military operations in Britain’s most troubling new mandate in the former Ottoman provinces of Mesopotamia. By the late 1920s, the RAF registered a number of successes but these were due not only to the relatively new use of air power to police colonies, but owing to relatively smooth joint operations between the RAF, British Army and Iraqi Army units. Until such time that the RAF secured its position as an independent service, the RAF hierarchy took special care not to offend its army partners or to overplay the role of air supremacy. As one RAF officer wrote in 1992, “it is not for one moment to suggest that aircraft alone can garrison any country without military assistance, but rather to show that economy in military strength and in money may be effected by a more extensive employment of aircraft.”³⁶

While the RAF was involved constantly in a series of combat operations such as bombing campaigns or ground-support operations, “the air-control experience did not translate into tactics useful in conducting a major conventional war”³⁷ so that when World War II broke out, the RAF basically had to learn from scratch how to carry out conventional air campaigns. As one commentator notes, however, the key lesson from the British experience during the interwar years is that while air control may appear to be cheap, effective, and with the added benefit of low casualties, it does not follow that air power is a doctrinal solution to some of the current peacekeeping operations that burdens the U.S. defense establishment. While air control may look like the ideal answer, it is, in the words of one analyst, actually quite deceptive in that

³⁵ Grant T. Hammond, “Myths of the Air War over Serbia,” *Airpower Journal*, vol. 14, no. 4 (December 2000).

³⁶ Flight Lt. C.J. Mackay, “The Influence in the Future of Aircraft Upon Problems of Imperial Defence,” *RUSI Journal* 67 (May 1922), p. 299 as cited in James S. Corum, “The Myth of Air Control: Reassessing the History,” *Aerospace Power*, vol. 14, no. 4 (Winter 2000). www.airpower.maxwell.afmil/airchronicles/apj/apj001/win001/corum.doc.

³⁷ James S. Corum, “The Myth of Air Control: Reassessing the History,” *Aerospace Power*, vol. 14, no. 4 (Winter 2000). www.airpower.maxwell.afmil/airchronicles/apj/apj001/win001/corum.doc.

“one could barely justify air control as a doctrine 80 years ago, and people who advocate an updated version of such doctrine for current U.S. Air Force operations have misread history.”³⁸

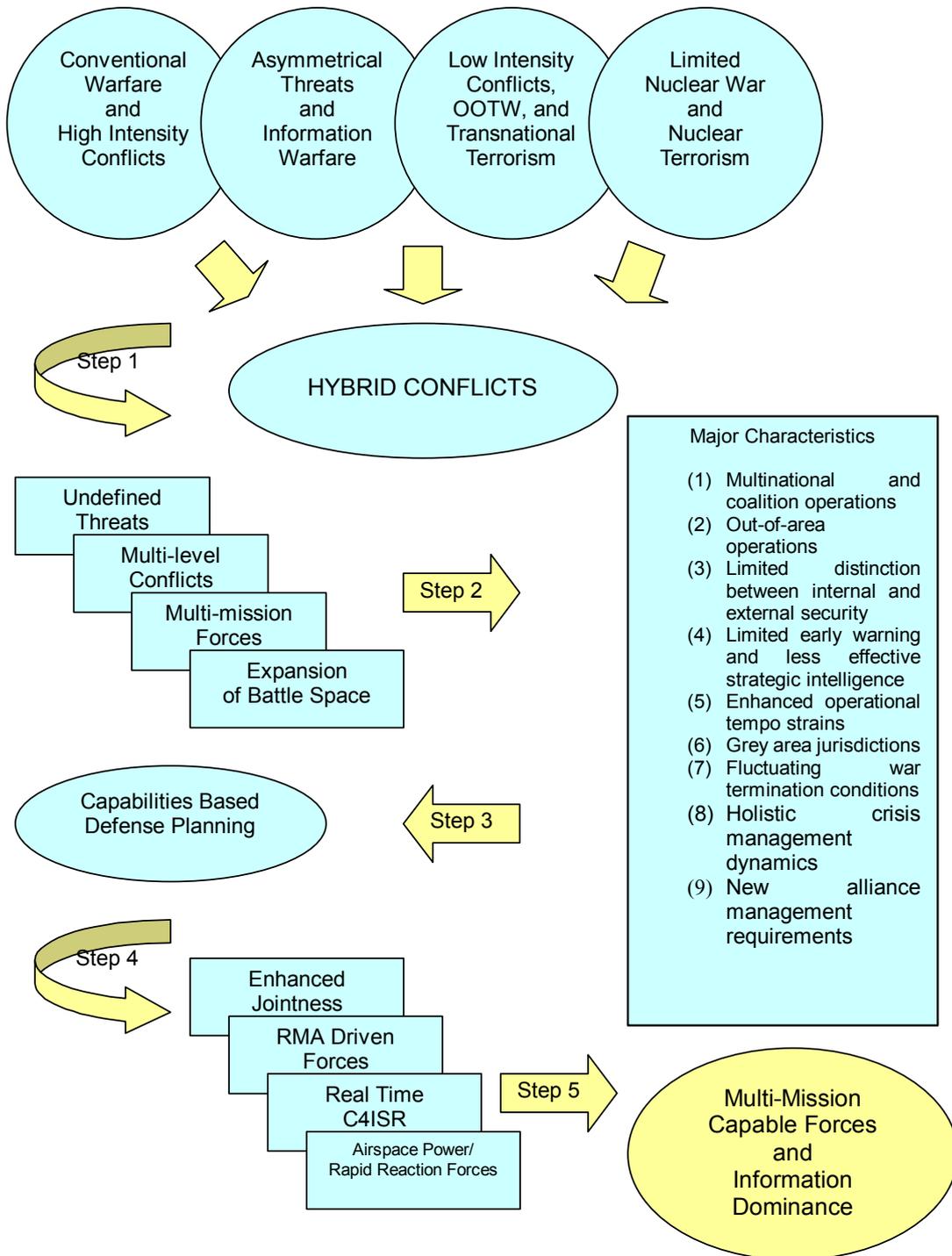
The contours of the emerging air power debate, or more precisely, the role of air power in the conduct of future warfare or conflicts, is therefore likely to be shaped by the following key drivers. First, the emergence of “hybrid conflicts” or amalgamated or layered conflicts that are characterized by the compression of conventional, unconventional, asymmetrical, information warfare, terrorism, and guerilla warfare. Variations of hybrid conflict can be found throughout the history of warfare but they have gained increasing currency owing to the acceleration of asymmetrical capabilities such as weapons of mass destruction (WMD), ballistic and cruise missiles, information warfare, and of late, unmanned combat air vehicles (UCAVs). The ability to successfully defeat opposing forces is likely to become increasingly dependent upon the ability to rapidly deploy an array of forces and weapons systems with superior and real-time strategic and tactical intelligence. More than ever, military forces both on the ground and in command centers have to demonstrate the ability to perform increasingly complex multifaceted missions under severe operational tempo requirements. With the notable exception of U.S. and perhaps a very small circle of near-capable forces such as the British and French, and in increments the Chinese and Japanese forces, the ability to effectively fight and win future hybrid conflicts will be limited. Thus, notwithstanding the success of post-Gulf War air campaigns in maintaining and retaining air superiority as well as interdicting and destroying ground forces (notably Iraqi and Serbian but also Chechnyan in the second Chechnyan campaign), success in Operation Enduring Freedom is *unlikely* to be easily transferable or duplicated *unless* one is able to field battle management and combat assets that will enable militaries to fight “smart” wars across the conflict spectrum.

Second, the changing dimensions of nuclear and conventional deterrence in the face of accelerating asymmetrical technologies and the very real probability of cataclysmic terrorism. As the September 11 terrorist attacks demonstrated, it is virtually impossible to prevent cataclysmic terrorism. To be sure, the war against terrorism has resulted in some gains that could serve to deter certain acts of terrorism. For example, between 800 and 1,000 terrorism suspects have been arrested or detained in more than 50 countries excluding the near 700 held in the United States. More than 140 countries have frozen assets in 270 accounts with assets of \$65 million.³⁹ But more to the point, enhancing *strategic* deterrence vis-à-vis transnational terrorism

³⁸ Ibid.

³⁹ Robin Wright, “Invisible War on Terror Accelerates Worldwide,” *Los Angeles Times*, January 7, 2002. www.latimes.com/templates.../printstory.jsp?slug=la%-2D010702nex

Graph 1
Hybrid Conflict and Defense Planning



or the proliferation of WMD and asymmetrical weapons systems (such as ballistic and cruise missiles as well as UCAVs) are likely to remain highly situation specific. Thus, fielding more RMA-intensive forces and weapons systems should not be construed necessarily as enhancing one's deterrent capabilities against a spectrum of focused asymmetrical challenges.

Third, long-term force restructuring efforts are likely to be driven by the need to field a truly joint force or a force that is "organized, trained, and equipped as a joint force that has a standing joint command and control capability, exercises frequently, and participates in tests of new ways of working together."⁴⁰ In situations that are likely to be characterized by hybrid conflicts, the effectiveness of joint operations will become a key prerequisite for operational success. That said, deeply imbedded bureaucratic and service specific resistance to jointness could stifle any significant move to create a truly joint force, especially under situations when jointness inevitably leads to addressing force imbalances as is the case in the ROK's Armed Forces or the People's Liberation Army (PLA). The allocation of force modernization budgets already under severe constraints in most of the mature armed forces will mean even more intensified funding battles between the services. Therefore, a major gap is likely to persist in those states and their armed forces in understanding the inherent advantages provided by the on-going Revolution in Strategic Affairs (RSA) (or the "system of systems" revolution that includes the RMA and information dominance) and realistic attempts to implement concrete policy, doctrinal, strategic, and procurement decisions in an era of shrinking defense budgets and service specific bureaucratic inertia.

Fourth, integrated C⁴ ISR with holistic intelligence capabilities is already emerging as a decisive force multiplier in the modern battlefield but with even greater implications for the emerging electronic battlefield of the 21st century. No armed force today and well into the future will be able to perform an increasingly complex array of missions without comprehensive intelligence capabilities. For the time being, the ability to attain near-total or total situational awareness is likely to be exercised primarily by the U.S. military given its dominance of space-based intelligence platforms. As former U.S. Air Force Chief of Staff Ronald Fogleman remarked in the mid-1990s but still highly relevant today:

From space we provide global situational awareness. Our space forces are central to giving this capability to the nation. These assets provide a unique kind of global presence from the high ground. *We help monitor events and provide timely information—24 hours a day, anywhere in the world...* Now you ask, 'Can space forces influence events?' You bet. Not only do they do it in a very real sense as we look at intelligence, reconnaissance, and surveillance data, but they are constantly present... Because of what we can do in the space medium, I would suggest that space is the four dimension of warfare. And, we've

⁴⁰ Statement by Retired U.S. Air Force Brig. Gen. James McCarthy as reported in Jim Garamone, "Joint Operations is Key to Transformation," *American Forces Press Service*, June 14, 2001. www.defenselink.mil/specials/transform/-joint_ops.html.

entered this dimension by building on our experiences in air.⁴¹ (*Italics added*).

In essence, these four drivers as well as others are likely to have a significant impact on conceptualizing, planning, and executing future military operations. Although these drivers are going to impact force modernization and restructuring efforts globally, they will significantly affect the East Asian strategic landscape well into the 2020 plus time frame for a combination of reasons. To begin with, the shift in global geopolitics from Europe to Asia means that the primary sources of competition between the major powers and newly emerging powers will be focused in East Asia, particularly in Northeast Asia. As one former U.S. Air Force chief of staff has written, the 21st century will be remembered as the “aerospace century” and in combination with the geostrategic rise of Asia, “offer unparalleled opportunities for Asia—and for Northeast Asia in particular.” Although historical comparisons should always be treated with caution, the key cause for concern for 21st century Northeast Asia lies in the growing possibility of strategic rivalry. Unlike the early 20th century when Japan was the only Asian nation-state that harbored modern military capabilities, East Asia today has the highest concentration of conventional as well as unconventional forces in the world. Even as East Asian states cooperate on economic matters, they may view each other as strategic rivals and while “wars between them may not be likely, but neither will it be unthinkable.”⁴² (For illustrative purposes, see Table I below which shows the region’s share of world GDP compared with Europe and North America. Asia’s share of global GDP in 1950 was 19%, behind Europe’s 30% and North America’s 31%. In four decades, Asia’s share of world GDP rose to 37% topping Europe’s 23% and North America’s 25% in 1998 with projections of 43% of world GDP by 2015).

Table 2
Shares of World GDP by Regions

	1820	1870	1913	1950	1973	1998	2015		
Asia			59%	38%	25%	19%	24%	37%	43%
Europe			27%	38%	38%	30%	29%	23%	<19%

⁴¹ Gen. Ronald R. Fogleman, “Air and Space Power in the 21st Century,” remarks delivered for the 1995 Ira C. Eaker Lecture, United States Air Force Academy, Colorado Springs, Colorado, April 6, 1995. www.af.mil/news/speech/current/html

⁴² Richard J. Ellings and Aaron L. Friedberg, *Strategic Asia 2001-02: Power and Purpose*, (Seattle, Washington: The National Bureau of Asian Research, 2001), p. 11.

North America	2%	10%	22%	31%	25%	25%	>17%
Russia	5%	8%	9%	10%	9%	3%	3%

Source: Richard J. Ellings and Aaron L. Friedberg, *Strategic Asia 2001-02: Power and Purpose*, (Seattle, Washington: The National Bureau of Asian Research, 2001, p. 2)

More relevant, however, is the very high concentration of conventional forces that are adopting in their own ways new power projection capabilities with an emphasis on acquiring asymmetrical capabilities. While the circumstances are quite different from state to state, the PLA's focus on acquiring superior information warfare fighting capabilities together with a long overdue replacement of its aging combat aircraft, the SDF's comprehensive force modernization programs including a strategic shift vis-à-vis China, South Korea's own mid- to long-term defense modernization programs including next generation combat aircraft (FX), early warning aircraft (EX), and Aegis-class cruisers (KDX III), and North Korea's continuing efforts to upgrade its ballistic missile forces coupled with on-going concerns on a potential nuclear weapons program suggests that almost all of the major armed forces in East Asia are in the process of implementing their own versions of "defense transformations." As a RAND study noted recently, "if or when they enter the geopolitical arena as confident 'actors,' they may find themselves engaged in heightened political-military competition or even conflict with their neighbors."⁴³

The acquisition of more lethal, accurate, and mobile weapons systems connected by an increasingly modernized C⁴ ISR system (partially driven by Northeast Asia's on-going Information and Communication Technologies revolution) means that for the first time in history, almost all of the mature armed forces in the region now have growing power projection capabilities. Such developments have also been spurred by latent strategic rivalries based on the the specter of a rising China and India, a more security conscious and militarily capable Japan, the possibility of volatile if not violent transitions on the Korean Peninsula, and potential military clashes in the Taiwan Straits or in the South China Seas. Or as one noted U.S. observer has written:

The information revolution spreading around the world brings much more diverse sources of intelligence to the Asian military decision-making system. Satellites, fiber-optic communication lines, computer networks, and cellular telephone technologies disgorge information that will transform civil-military relations in Asia. The new information technologies allow a quantum jump in

⁴³ Zalmay Khalilzad, et. al., *The United States and Asia: Toward a New U.S. Strategy and Force Posture*, (Santa Monica, CA: RAND, MR-1315-AF, 2001). P. 7.

performance for key parts of the military...*In some areas, like jet aircraft or mechanized ground warfare, the Asian military is extremely backward compared to America or Europe. However, this assessment overlooks the role of new information technologies in making missile strikes and other tactics highly effective.*⁴⁴ (Italics added).

As East Asia enters the 21st century, modernized power projection capabilities has finally enabled most regional powers with the ability to incrementally overcome the “tyranny of geography.” To what extent emerging strategic rivalries may escalate into actual conflicts remains unknown since one cannot assume that more robust power projection capabilities will necessarily lead to strategic instability and conflict. Given the very real prospects for enhanced friction in East Asia over the next 10-15 years owing to accelerated Chinese military capabilities, more robust Japanese and South Korean air and naval assets, and North Korea’s on-going search to strengthen its correlation of forces, preventive politico-military measures including sub-regional confidence building measures could be implemented. “But it is also easy enough to imagine events—a mismanaged crisis on the Korean Peninsula or a confrontation across the Taiwan Strait or over Kashmir—that could shake strategic Asia to its core and bring powerful competitive forces, now latent, to the surface.”⁴⁵

III. Strategic Drivers: Are They Leading Up to a New Arms Race?

First, the emergence of “hybrid conflicts” or amalgamated or layered conflicts that are characterized by the compression of conventional, unconventional, asymmetrical, information warfare, terrorism, and guerilla warfare. Variations of hybrid conflict can be found throughout the history of warfare but they have gained increasing currency owing to the acceleration of asymmetrical capabilities such as weapons of mass destruction (WMD), ballistic and cruise missiles, information warfare, and of late, unmanned combat air vehicles (UCAVs). The ability to successfully defeat opposing forces is likely to become increasingly dependent upon the ability to rapidly deploy an array of forces and weapons systems with superior and real-time strategic and tactical intelligence. More than ever, military forces both on the ground and in command centers have to demonstrate the ability to perform increasingly complex multifaceted missions under severe operational tempo requirements. With the notable exception of U.S. and perhaps a very small circle of near-capable forces such as the British and French, and in

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More relevant, however, is the very high concentration of conventional forces that are adopting in their own ways new power projection capabilities with an emphasis on acquiring asymmetrical capabilities. While the circumstances are quite different from state to state, the PLA’s focus on acquiring superior information warfare fighting capabilities together with a long overdue replacement of its aging combat aircraft, the SDF’s comprehensive force modernization programs including a strategic shift vis-à-vis China, South Korea’s own mid- to long-term defense modernization programs including next generation combat aircraft (FX), early warning aircraft (EX), and Aegis-class cruisers (KDX III), and North Korea’s continuing efforts to upgrade its ballistic missile forces coupled with on-going concerns on a potential nuclear weapons program suggests that almost all of the major armed forces in East Asia are in the process of implementing their own versions of “defense transformations.” As a RAND study has noted, “if or when they enter the geopolitical arena as confident ‘actors,’ they may find themselves engaged in heightened political-military competition or even conflict with their neighbors.”⁵⁰

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IV. Latent Arms Rivalry between China and Japan

Defense modernization in China and Japan is examined in terms of trends and drivers. As contributing factors to defense modernization, threat perceptions, security policy, resource and arms suppliers’ market sharing are carefully examined. Then, comparative analysis of the two regional powers is conducted. While downsizing army and emphasizing its rapid and flexible response,⁵³ Chinese efforts to update conventional

⁵¹ Paul Bracken, *Fire in the East: The Rise of Asian Military Power and the Second Nuclear Age*, (New York: HarperCollins Publishers, Inc., 1999), p. 79.

⁵² Ellings and Friedberg, *Strategic Asia 2001-02*, p. 23.

⁵³ The number of army personnel reduced from 2,200,00 in 1995 to 1,7000 in 2000.

weapons are focused on navy and air force. The 1.7 million-strong ground forces of the People's Liberation Army (PLA) are emerging from reorganization with a smaller but more flexible structure intended to meet a new set of missions in the information age.⁵⁴ Given the absence of 'early, major and nuclear war' with the Soviet Union, the PLAA should quickly responds to local and limited war around Chinese periphery with speed and flexibility. In this context, the ground forces are transformed from static and huge group army formations into more mobile and responsive units at the brigade and division-level.⁵⁵ Of importance are amphibious capabilities by Marine to cope with limited and local contingencies.

With shock incurred by the Gulf War in 1991, China's security planners began to emphasized the requirements for high-tech weapon systems and high technology, abruptly revising their depiction of future conflict from 'limited war under general condition,' to "limited war under high-tech conditions."⁵⁶ Chinese navy (PLAN) received much attention from Chinese strategists who stress the necessity of force modernization. Although the smallest of the three services, the Chinese navy (PLAN)'s importance is steadily growing as the country's national security and economic prosperity become increasingly tied to the maritime regime.⁵⁷

The PLAN has pursued updated submarine capabilities as a sea denial force, aircraft carrier, and advanced navy air force. As Table 1 demonstrated, the PLAN has 53 tactical submarines. It retired outdated Romeo-class SSKs and added new Kilo-class and Ming-class SSKs. Through retirement and acquisition, SSKs capabilities has been growing. More significant is the fact that a new SSN named Type 093 is under construction, displacing 6,000 tons dived and capable of carrying torpedoes, anti-ship missiles, and land attack cruise missiles.⁵⁸

There are 20 destroyers and 40 frigates in the PALN, 75%, of which foreign naval analysts consider outdated and obsolete to carry out current and future operations.⁵⁹ The PLAN recently brought into service most advanced one Sovremenny-class (8,000 ton) and one Luhai-class (6,000 ton) destroyers.⁶⁰ Of great interest is VLS (vertical launch system) for 360° engagements, which give the PLAN a significant blue-water capability. Introduction of Soveremenny-class destroyer made great stride in acquiring aircraft carriers. Procurement of

⁵⁴ *Jane's Defence Weekly*, 11 July 2001, p. 24.

⁵⁵ *Ibid.*

⁵⁶ Paul H. B. Godwin, "From Continent to Periphery: PLA Doctrine, Strategy and Capabilities towards 2000," *The China Quarterly*, No.146 (June 1996), p.47.

⁵⁷ *Jane's Defence Weekly*, 11 July 2001, p. 25.

⁵⁸ *Ibid.* 24 January 2001, p.23. Type 093, based on the Russian Victor III-class boat, will be a substantial improvement in the PLAN's anti-submarine warfare and anti-ship capability.

⁵⁹ *Jane's Defence Weekly*, 11 July 2001, p. 25.

⁶⁰ These figures were drawn from *The Military Balance 2000-2001*, but, in *Jane's Defense Weekly*, 24 January 2001, two Sovremenny were acquired from Russia and two more such vessels will be sought, and Luhai-class is now under construction.

Sovermenny-class destroyer is deemed in the direction of aircraft carrier acquisition. It is construed that at the bottom end of the possible PLAN carrier options is the acquisition of small (23,000-25,000 ton), but cheap CCVs , equipped with a small number of STOVL (short take-off and vertical landing) aircraft and helicopters.⁶¹ The crux of the PALN's modernization plan is both to acquire a aircraft carrier capability and to bring into service of more potent nuclear powered attack submarines (SSN) such as Type 093.⁶² Outdated amphibious ships (LST, *Shan*) were retired and reduced and improved LSTs were procured. In supporting ships, two oilers (AO) entered service. There has been dramatic decrease of bombers, FGAs (fighter, ground attack), and fighters, which were out of date and obsolete. By contrast, RECCE and AEW capability were enhanced.

Table 4: Trends of Chinese Armed Forces

NATIO N	FORC E	Type		'90	'95	'00		
China	Army	Manpower		2,300,000	2,200,000	170,0000		
	Navy	Submarine s	Strategy(SSBN)		1	1	1	
			Tactical	SSN		4	5	5
				SSG		1	1	1
				SSK		87(SS)	44(SS)	57
		Surface	Destroyer(DDG)		18	18	20	
			Frigate(FFG)		37	32	40	
			Patrol And Combatant s	Missile Craft		215	220	93
				Torpedo craft		160	160	16
				Patrol craft		540	495	259
			Amphibious		58	54	59	
			Support and miscellaneous		136	164	159	
		Marine	Man power		6,000	5,000	5,000	
		Navy Air force	BBR		160	155	75	
			FGA		50	100	50	
			FTR		600	600	354	
			RECCE		1	1	7	
			MR/ASW		9	20	8	
	AEW		0	0	1			
	HEL		ASW		61	68	37	
		TPT		0	0	78		
	Air force	BBR		470	420	120		
FGA		500	400	1,840				

⁶¹ *Jane's Defense Weekly*, 24 January 2001, p. 23.

⁶² *Ibid.*

	FTR	4,000	4,000	1,105
	RECCE/ELINT	290	290	290
	TPT	600	600	425
	TKR	0	0	6
	HEL	400	190	170
	UAV	0	0	1

Source: IISS, *The Military Balance 1990-1991*, pp.148-152; *1995-1996*, pp.176-179; *2000-2001*, pp.194-197.

For example, RECCE increased from one in 1995 to seven in 2000 and one AEW (*Yangki-8*) was introduced and possibly two more AEW will be delivered shortly. 78 transportation helicopters were entered the PLAN's inventory. The PLA Air Force (PLAAF) is slowly gaining strength as deliveries of advanced Russian and indigenously developed combat aircraft start to appear, supported by an increasingly capable air-defense and support apparatus.⁶³ The PLAAF's modernization program intends to extend the range of operations as far as possible. The PLAAF got rid of around 3000 old-fashioned fighters of MiG-15 and 17. 20 Su-30MKK, the most advanced fighter for deep-strike and interceptor missions, have so far been delivered and 18 more are expected soon.⁶⁴ They are equipped with an advanced package of missiles and other armaments. Su-20 fighter trainer increased from 26 in 1995 to 65 in 2000. Older transportation aircraft have been retired and its newest IL-76 and TU-154 were acquired. Especially, TU-154 is long-range heavy transportation aircraft, which gave the PLAAF a significant transportation capability. Of importance is acquisition of six tankers (in-flight refueling aircraft), which are requisite to expand mission range. One UAV was added to the inventory of the PLAAF. With the decision to halt its Phalcon airborne warning and control system (AWACS) aircraft to Beijing owing to U.S. pressure, Russia started negotiation with China since 2000 concerning selling or leasing four A-50 AWACS aircraft for around \$800 million.⁶⁵

Then, what determines the trends of defense modernization in China? First of all, threat perceptions matters in forging force modernization plans. Threat to Chinese security comes from Spratly Islands, Taiwan, the U.S. Japan, and land border.⁶⁶ Commensurate with disappearance of northern border threat imposed by the Soviet Union, Spratly Island and Taiwan emerges as urgent threat to China. Chinese security planners also fear U.S. involvement in Asia-Pacific. Overall Chinese military capabilities, however, are far behind those of the United States, it is not likely to catch up with the U.S. in one or two decades. As the rapid modernization of Japanese forces, among others, has been perceived as more serious and near-term threat to

⁶³ *Jane's Defence Weekly*, 11 July 2001, p. 27.

⁶⁴ *Ibid.*

⁶⁵ *Ibid.*

⁶⁶ Allen S. Whiting, "The PLA and China's Threat Perceptions," *The China Quarterly*, No.146 (June 1996), pp.596-615.

China, it seems to significantly affect the direction of arms acquisition of China. Furthermore, a bitter historical experience also intervenes in China's strategic competition with Japan. Given Chinese threat perceptions, Chinese security policy is directed to exercise influence in the region at best and defend territory and sovereignty from limited local war at least.

Resource is another factor influencing the pace and scope of arms upgrading. Financial affordability is prerequisite to planning and implementing arms modernization program. Despite the lowest level of transparency among regional countries except North Korea, there is no way but to trace released information with caution.⁶⁷ It is generally accepted that disclosed military expenditure of China is lesser than its actual one. As table 3 show, Chinese economy is robust, marking average economic growth rate of 9.23%. More striking is China's pretty sound economic performance during East Asian financial crisis in 1998 and 1999. For two years, military expenditure was augmented. Escalating military spending is likely to facilitate the purchase of high-tech weaponry and military technology to modernize PLA's aging armament, primarily from Russia.⁶⁸ Concurrent with incessant economic growth, military expenditure could increase. It is Chinese financial affordability that portends full-fledged force modernization in China.

Table 5. Military Expenditure and Growth of China and Japan, 1990-99

(Figures are in US \$m., at constant 1995 prices and exchange rates)

State		'90	'91	'92	'93	'94	'95	'96	'97	'98	'99
China	Mil. Exp.	10,800	11,400	13,800	12,700	12,200	12,500	13,700	14,900	16,900	18,400
	Growth rate	4.9	6.2	12.8	13.0	11.8	10.2	9.7	8.8	7.8	7.1

Source: SIPRI Yearbook 2000, p 273; IISS, *The Military Balance 1990-2001*

Lastly, arms suppliers' market sharing should be taken into consideration. In case of China, most weaponry has been supplied by Russia, which occupied a lion's share of 93% during the 1990s. This means that China's military inventory has been preoccupied with Russian-origin weapons. This biased arms procurement pattern is likely to hamper planning and implementing streamlined and efficient arms modernization. It should be realized that force modernization couldn't be managed by respective country, but influenced by the flows of arms transfer.

⁶⁷ Concerning military transparency of china, see Taeho Kim, "New Trends of Air Force Build-up in East Asia: Comparison for China, Japan, and Taiwan," in Chung-in Moon and Chung Min Lee eds., *Air Power Dynamics and Korean Security* (Seoul: Yonsei University, 1999), p. 97.

⁶⁸ Godwin, "From Continent to Periphery: PLA Doctrine, Strategy and Capabilities Toward 2000," p.464.

V. Characteristics and Determinants of Force Modernization in Japan

As with China, Japanese force modernization plan was focused on upgrading of navy and airforce capabilities. The Mid-Term Defense Program (MTDP, FY1996-2000) provides a guideline, which emphasizes promotion of rationalization, effectiveness, and compactness. According to the guideline, Self-Defense troops were reduced from 151,200 in 1995 to 148,500 in 2000. In order to expand its role beyond the traditional one of ensuring sea-lane security out to 1,000n miles, the maritime self-defense force (MSDF) has been enhanced. Most pronounced is the introduction of the Osumi-class landing platform dock (LPD) with partial functions of aircraft carriers. It is well equipped to operate helicopter, and could be modified with a 'ski jump' to allow operation of a very limited number of STOVL fixed-wing aircraft or a greater number of unmanned combat air vehicles (UCAVs) and unmanned air vehicles (UAVs).⁶⁹ Pertaining to submarine, three Oyashio-class SSKs with air independent propulsion (AIP) is acquired. The Oyashio-class SS enhanced its endurance capability of operations. MSDF owned 4 Aegis and 80 P-3C. MSDF has strong anti-submarine and patrol capabilities.

Air Self-Defense Force (ASDF) has 60 FGA and 210 fighters. ASDF also has 20 RECCEs, compared to Chinese 7 RECCEs. Japan, therefore, has stronger reconnaissance capabilities than China. For airborne early warning, Japan procured four Boeing 767 modified AWACs, which complement older 10 E-2C. The aircraft can stay on station for over nine hours, covering 1,000 nautical miles. Electronic warfare aircraft (YS-11) increased from 5 in 1995 to 11 in 2000.⁷⁰ Of particular note is the procurement of the F-2 fighter-support. The F-2 (formerly FS-X) is a much improved version of the F-16 series. Eventually, ASDF will procure 130 F-2.⁷¹ Table 2. shows a general trends of SDF's arms acquisition in the 1990s. In the next MTDP (FY2001-FY2005), the items of arms modernization plan were specified: 4 tankers, heavy transportation ship (13,500 ton), 130 F-2s, launch of 4 military satellites, and reinforcement of P-3C and C-1. The ceiling of the total amount of defense-related expenditure necessary for the implementation of the new MTDP is estimated at approximately 25.16 trillion yen at FY2000 price.⁷²

Table 6. Trends of Japanese Self-defense Forces

NATIO N	FORC E	Type	'90	'95	'00
Japan	Army	Manpower	156,200	151,200	148,500

⁶⁹ *Jane's Defense Weekly*, 24 January 2001, p. 24.

⁷⁰ China has no electronic warfare aircraft.

⁷¹ Taeho Kim, "New Trends of Air Force Build-up in East Asia," p.120.

⁷² *Defense of Japan 2000*.

	Navy	Submarines	SSK	14	18	16	
		Surface	Destroyer	DDG	6	8	30
				DD	0	0	12
			Frigate	FFH	23	24	9(FFG)
				FF	35	31	4
			Patrol And Combatants	Missile	0	3	3
				Torpedo	5	0	0
				Patrol	9	3	0
		Amphibious	6	6	9		
		Support and miscellaneous	14	19	19		
		Navy Air force	MR	76	100	80	
			ASW	60	99	80	
			MCM	9	9	10	
			EW	3	2	Several	
			TPT	4	4	Several	
			SAR	20	40	40	
			TRG	114	110	90	
Air self-defense force	FGA	78	50	60			
	FTR	257	290	210			
	RECCE	14	20	20			
Japan	Air self-defense force	AEW	10	10	14		
		EW	5	5	11		
		TPT	56	55	40		

Source: IISS, *The Military Balance 1990-1991*, PP. 164-166; *1995-1996*, PP. 181-183; *2000-2001*, pp. 200-201.

Several factors shape the patterns of arms acquisition in Japan. Threat perceptions of Japanese security planners should be investigated in the first place. Japanese security planners viewed North Korea as a source of immediate threat and China as another source of mid- or long-term threat. Since 1993-94, Japan has expressed serious concerns over nuclear and ballistic missile programs in North Korea. Economic hardship, potential collapse of the Kim Jong Il regime, and an increasing probability of military provocation have heightened Japan's threat perception over the North.⁷³ The launch of Taep'o-dong I in August 1998 triggered nation-wide anxiety. The Taep'o-dong shock virtually nullified the leftist claims, while strengthening the conservative line of reasoning. Another argument is that Japan perceives its primary security threat for the future to be China's expanding military capability and perceived hegemonic

⁷³ In *Defense of Japan 2000*, Japan emphasized improvement of capabilities to better cope with attacks waged in various forms such as those by guerilla-commando or special operation units and those with biological or chemical weapons (NBC attacks). This emphasis, if not specified North Korea, seems to be closely connected with North Korea.

ambitions for East Asia.⁷⁴ After the collapse of the Soviet Union Japan also worries about unspecified regional threat stemming from territorial and sovereignty disputes.

Given the U.S. and Japan alliance structure, Japan's objective of security policy is to become influential power in the region and in the world as well, commensurate with its economic power and to defend territory and sovereignty as well. Japan's regional aspiration is destined to compete with China. In this context, Japan is pursuing expansion of SDF activities and modernization of SDF actively, taking account of constraints imposed by the Peace Constitution. For achieving its security goals, Japan should cope with North Korea's relatively near-term threat and China's mid- and long-term threat. The security challenges from North Korea and China in part contributes to the direction of arms acquisition. Defense spending and arms supplier's arms transfer policy is explanatory factors of defense modernization. As Table 3 shows, Japan's military expenditure has been on the rise until 1997, but it was reduced since then due to decline of economic growth rate. If Japan's economy was not recovered and military expenditure was constricted, force modernization program would be retarded.

Table 7. Military Expenditure and Growth of Japan, 1990-99

(Figures are in US \$m., at constant 1995 prices and exchange rates)

State		'90	'91	'92	'93	'94	'95	'96	'97	'98	'99
Japan	Mil. Exp.	46,984	47,676	48,819	49,377	49,632	50,112	51,092	51,319	51,285	51,184
	Growth rate	5.7	4.2	1.3	-0.2	1.5	1.4	3.6	0.9	-2.6	-1.4

Source: SIPRI Yearbook 2000, p 273; IISS, *The Military Balance 1990-2001*

VI. South Korea's Strategic Options to Mixed Threats

Force modernization in South Korea has been guided by several assumptions. First is the deep-rooted suspicion of North Korean intention. Security planners in Seoul have firmly believed that the North's ultimate goal is to liberate the South from American imperial domination and to implant socialist revolution through violent means. Thus, the South's security has always been geared toward coping with the North's aggressive intention. The second assumption is related to the North's strategic and tactical posture. It is generally believed that the North Korean military move will take the form of bi-frontal surprise attacks involving all-out conventional attack along the border line and guerrilla warfare on the home front. Preparing the dual attacks has constituted the foundation of Seoul's security policies. Despite remarkable improvements in the forces since the mid-1970s, the South Korean security planners

⁷⁴ *Jane's Defense Weekly*, 24 January 2001, p. 24.

still argue that the South is inferior to the North in its overall military capability. Catching up with the North has remained the primary concern of the South's security policy.

Judged from the above assumptions, South Korea's security policy has been defensive and reactive rather than offensive and active. Offensive deterrence characterizes the essence of Seoul's strategic posture. This perception of the North's aggressive intention and of its potential for surprise attacks has made Seoul pay greater attention to its early warning capability. At the same time, in order to cope with bi-frontal attacks, the South has pursued a comprehensive line defense along the border on the one hand and strengthened anti-guerrilla warfare capability on the other. While the line defense system necessitated a massive deployment of growing forces along the front line, anti-guerrilla warfare capability to counter North Korean infiltration in the back line produced massive home reserve forces.

To deal with its military inferiority, the South Korean government relied on several options. First, South Korea regarded the effective alliance management with the United States as the primary policy goal because the presence of American troops in the South was conceived of as being the best deterrent. They have often applied the logic of trip-wire to American forces in the South. Second, the South has initiated an ambitious force modernization and improvement program since 1974. During the period of 1990-1999, South Korea spent almost \$20 billion in modernizing and improving its conventional forces (see Table 5). Entering the 1990s, remarkable improvements were made in the areas of airfighters, naval vessels, and mobile equipment such as tanks and APCs as Table 4 reveals. Obsolete infantry weapons were also replaced. Finally, the promotion of the defense industry throughout the 1970s had also laid foundation to enhance the level of conventional forces in South Korea.

Table 8. The Trends of armed forces in South Korea and North Korea

FORC E	Type		'90		'95		'00	
			S.K	N. K	S. K	N. K	S. K	N. K
Army	Manpower		650,000	1,000,000	520,000	1,000,000	560,000	950,000
Navy	Submarines	SSK	-	24	3	25	8	26
		SSI	3	-	3	61	11	66
	Surface Destroyer	DDG	7	-	7	-	6	-
		DD	2	-	-	-	-	-
	Frigate	FFG	7	-	9	-	9	-
		FF	-	3	-	3	-	3
	PCC		18	-	24	-	24	-
	Patrol and Combata	PCC	4	3	4	4	4	6
Missile		11	34	11	42	5	43	

		nts	Torpedo	0	173	-	198	-	103
			Patrol, inshore	68	154	107	169	75	158
		Mine warfare	9	20	14	25	15	23	
		Amphibious	15	126	15	260	14	270	
		Support and miscellaneous	9	7	12	7	13	7	
	Marine	Manpower	25,000	-	25,000	-	25,000	-	
	Navy Air force	ASW	61	-	80	-	71	-	
Air force	FGA/FTR			380	706	385	509	485	541
	TPT			53	517	47	583	-	318
	TAC AIRLIFT WG			-	-	-	-	41	-
	RECCE			37	-	28	-	23	-
	BBR			-	80	-	80	-	80
	Attack helicopter			-	60	-	80	-	320
	UAV			-	-	-	-	103	-

Source: IISS, *The Military Balance 1990-1991*, pp. 166-169; *1995-1996*, pp. 183-186; *2000-2001*, pp. 202-205.

In order to finance the force modernization and improvement plans, South Korea had increased its defense budget considerably. In absolute terms, military expenditure has been growing except in 1998 and 1999. Because of economic crisis and ensuing constriction of defense budget, planned force modernization program was adjusted to financial affordability. Meanwhile, North Korea's economic growth rate has been on the decline except in 1999. Data on North Korea's defense budget are not available.

Table 9. Military Expenditure and Growth of South and North Korea, 1990-99

(Figures are in US \$m., at constant 1995 prices and exchange rates)

State		'90	'91	'92	'93	'94	'95	'96	'97	'98	'99
S. Korea	Mil. Exp.	11,666	12,683	13,130	13,002	13,625	14,424	15,481	15,564	15,182	15,022
	Growth rate	9.0	9.2	5.4	5.5	8.3	8.9	6.8	5.0	-6.7	10.9
N. Korea	Mil. Exp.	1,988	2,058	2,112	2,162	2,220	-	-	-	-	-
	Growth rate	-3.7	-3.5	-6.0	-4.2	-2.1	-4.1	-3.6	-6.3	-1.1	6.2

Source: *SIPRI Yearbook 2000*, p 273; Bank of Korea, *Estimate of the North Korean GDP* (Seoul: Bank of Korea, 2001).

In sum, offensive deterrence, catch-up mentality, and a reactive security posture have constituted the core of the force modernization program in South Korea. In the minds of South Korean security planners, maximizing power commodities, coupled with effective alliance management with the United States, could ensure its national survival. Human and material resources were mobilized for this purpose, and an articulation of foreign and defense policies were conducted along this line.

What impact has the post-Cold War era made on the old thinking of national security? The dissolution of the bipolar structure as well as changing inter-Korean relations has influenced the nature of the military assets in two ways. First, the advent of the post-Cold War security environment has entailed growing popular demands for peace dividends and a diversion from the defense sector. Such demands could significantly constrain the previous pattern of force improvement and modernization. Second, inter-Korean military relations are still precarious, but negotiations over confidence building measures, arms control and arms reduction between two Koreas cannot be avoided. Any breakthroughs in such negotiations could significantly alter the nature of the existing strategies and tactics, weapons choice and acquisition, force structure, development patterns, and US-ROK alliance structure. If the status of US forces in Korea changes owing to peace process on the Korean peninsula, South Korea would pursue an alternative military posture, which is radically different from the present one.

Judging by the military thinking prevalent in South Korea, the international systemic transformation does not appear to have produced any significant changes in security management. Citing uncertain security environment, the ministry of national defense is calling for a greater allocation of defense budgets. Force improvement has been implemented, with the absolute amount of defense spending on the rise. The inflow of advanced weapons systems from abroad has increased. Forward deployment along the front line has not changed. Given the protracted stalemates in inter-Korean military talk, sticking to the old pattern of offensive deterrence with increased combat readiness seems a safe bet. However, the preoccupation with the logic of deterrence could undermine the peace process on the peninsula. In this line of reasoning, Kim Dae-jung government continues to pursue 'Sunshine Policy', simultaneously emphasizing security.

This is not to deny some positive impacts of international systemic changes on the composition of force modernization. The spread of post-Cold War ambience and financial crisis has made the South Korean military more budget-conscious. Aware of popular pressures for peace dividends and economic difficulties, economizing the military budget has become a new catchphrase. In this connection, serious debates on the future force structure are also taking place. As part of efforts to get away from the primacy of the army in South Korea's force structure, the ministry of national defense and the joint chief of staffs are paying more emphasis

to the navy and air force. In addition to ensuring a balance among the different armed services, the realignment of force structure is designed in part to prepare for the new security environment. When, and if, the United States disengages from the region, neighboring powers could emerge as potential threats. To counter newly emerging security challenges, South Korea needs to build up an optimal deterrence force. For this, strengthening air and naval power becomes an essential prerequisite. The potential withdrawal of American troops has also redirected force modernization. More emphasis is now being given to the independent development of command, control, communication, computer, intelligence, surveillance, and reconnaissance (C4ISR). In a similar vein, endogenous defense-related research and development is also being seriously promoted.

South Korea is undergoing three major transformations: democratization of political system, reconciliation with North Korea and the rise of the post-Cold War order. These internal and external changes compel South Korea to discard the old way of thinking and adopt new thinking in the management of national security. These demands, in turn, create new tension and chasm in the national security community. Table 6 presents a comparative overview of South Korean security agenda in the post-Cold War era. Changes in security environment do not seem to have significantly altered the threat perception of security planners in Seoul. North Korea is still perceived of as being the primary source of military threats. However, regional actors are being projected as a new source of threats. Ironically, in some sense, the advent of the post-Cold War era seems to have made South Korea's security environment more precarious and uncertain. This is a result partly of a preoccupation with the old realist inertia deeply rooted in the minds of security planners.

Force modernization program shows some changes, but not many. Despite a growing emphasis on the realignment of force structure, the army still remains, and is likely to remain, the mainstay of the military forces. Force improvement is being expedited, and a full transition to high-tech weapons is far from a reality. Dependence on the United States for advanced weapons and C4ISR has not been quite reduced. One visible change is the shifting priority of resource allocation. Mobilizing defense resource is becoming increasingly difficult. As with other countries, budgetary constraints are likely to emerge as a primary driving force for realigning force modernization program. As long as North Korea's military threat remains acute, the old way of thinking will be prevailing for some time in future regardless of inter-Korean rapprochement. Hence, it is not easy for government to place priority on acquiring military capabilities required in the long-term.

Table 10. Comparative overview of inertia and new direction

	Old inertia	New direction
Threat actor	North Korea / China / Soviet Union	Dilute/uncertain: North Korea and potentially Japan and China
Weapons choice	Conventional / land-based	High-tech weapons / air force and naval
Resource mobilization	Comprehensive / less constraints	Limited and more constraints
Weapons acquisition	Dependent on United States	Diversification and endogenous research and development
Force structure	Army- based	Air force and /or navy-based
C3I	Dependent on United States	Independent and autonomous

In terms of characteristics and determinants, comparative assessment could be done. First, as Desmond Ball aptly pointed out⁷⁵, there is a certain degree of consistency in the items of acquisition programs. The crux of force modernization program is to enhance navy and air force capabilities;

- National C4ISR systems;
- Multi-role fighter aircraft,
- Maritime surveillance aircraft
- Modern surface combatants
- Submarines
- Electronic warfare (EW) systems
- Rapid deployment forces

Second, given the significant coherence in the items, the degree of modernization, however, varies across regional countries. In terms of navy and air force capabilities, Japan ranks highest among three countries. Following China, South Korea ranks lowest. There are the most sophisticated F-2 fighter-support under test, F-15, AWACS, E-2C, P-3C, Aegis, Oyashio-class SSK equipped with AIP, Osumi-class LPD, and EW in Japan. China acquired Sovremenny-class DDG, AEW, Su-30MKK, Su-27, and Tankers. South Korea procured F-15, and KDX-1. Taking account of upgraded capacities, the rank of overall performance in force modernization hold valid in the areas of power projection capacity and RMA

Third, arms rivalry between China and Japan is emerging. Two regional actors perceived each other as a latent threat. Without cooperative efforts, they could be trapped in arms race

⁷⁵ Ball, “Military Acquisitions in the Asia-Pacific Region,” p. 81

spiral. Historical experience of both countries would intensify strategic competition. In explaining characteristics of arms acquisition, diverse threat perceptions, different security policies and different degree of resource abundance guide force modernization program. For instance, the size of military budget varies across regional countries. In addition, suppliers' arms transfer policy makes difference in force modernization. Suppliers' market sharing is as Table 6. The United States almost dominates Japan and South Korea's arms market. While generous to Japan, the U.S. has relatively strictly control technology transfer to South Korea. It seems difficult for China to get access to U.S. weaponry and technology.

Table 11. Arms Supplier, 1995-1999

Recipient	Six Major Suppliers						Other	Total
	U.S.	Russia	France	UK	FRG	Neths		
China	-	3346	197	16	-	-		
Japan	4250	-	-	45	8	-	40	4343
Korea, South	4904	203	267	76	454	51	56	6011
Total	9154	3549	464	137	462	51	531	14348
%	64	25	3	1	3	-	4	100

Source: *SIPRI Yearbook 2000*, p 341. (The list includes countries/non-state actors with aggregate imports of \$500 million or more for 1995-99 from at least one of the seven major suppliers. Figures are trend-indicator values expressed in US\$. At constant 1990 prices)

VII. Security Implication for Northeast Asian Security and South Korea

Although the interplay of diverse forces complicates an accurate assessment of the East Asia's longer-term strategic environment and the types of military conflicts that could erupt, on going trends suggest that force modernization based on selective RMA technologies will continue. In this regard, Bracken's prognosis of a so-called "second nuclear age" is perhaps too pessimistic since he implicitly assumes that East Asia's absorption of strategic weapons systems could be inherently destabilizing compared to the "stabilizing" role of Western military power although his insights, if they indeed materialize, could have profound implications for regional stability.

A sweeping change is occurring in the structure of international security, distinct from the particular ambitions of individual countries. The structural features are the capacities of the countries in Asia to strike at a distance beyond their borders; to quickly escalate the potential for violence in a crisis; to manipulate the threat of nuclear attack for political benefit; and to undermine or actually destroy the key foundations of military power in Asia. *These are ineluctable, long-term trends.*⁷⁶ (Italics added).

⁷⁶ Bracken, *Fire in the East.*, p. 149.

Nevertheless, the strategic contours of Northeast Asia are changing with an emphasis on three key areas: enhanced power projection capabilities, incrementally increasing asymmetric capabilities, and more robust indigenous national security strategies. This is not to suggest that major power rivalries will necessarily lead to greater regional instability, and in the worst case scenario, to military conflicts. As Paul Dibb cautions, “we should learn from previous failures of assessment and refrain from overconfident, straight-line extrapolations.”⁷⁷ But he also points out some of the more salient features of East Asia’s strategic rise including the following points. First, the spreading of the RMA phenomenon to Asia including the introduction of longer-range and more accurate weapons supported by enhanced surveillance information so that “the geography of Asia will be compressed.” Second, the proliferation of ballistic missiles may enhance security invulnerabilities, particularly in the smaller Asian states and correspondingly, either ballistic proliferation will escalate or “the acquisition from the United States of a missile defense system” that may well mean the rise of the most acute proliferation challenge for the United States. Third, while long lead-times are necessary for any major weapons system to become fully operational, “capabilities in many instances can change quickly through the acquisition of quite limited numbers of relatively cheap, long-range, and accurate tactical missiles.” And fourth, while fielding modern air forces and navies are becoming increasingly expensive “newer platforms are in many instances able to deliver more lethality and firepower.”⁷⁸ Underlying such developments is the very much transformed East Asian security template since the end of the Cold War, most notably in the decreasing need for strategic cooperation between the United States and China absent a common security threat in the form of the former Soviet Union. As Robbyn Lim has stated, “now China, freed from threatening Russian forces to the north and in Soviet client Vietnam to the South, is expanding its strategic reach east and south by claiming rights over the whole South China Sea and increasing its influence in Southeast Asia.”⁷⁹

As East Asia inevitably rises from half a century of strategic hibernation, managing security transitions are likely to be more volatile, more complex, and potentially more dangerous given that intent, rather than capabilities will be the driving force behind much of the regional powers political and strategic ambitions. If the United States has been able to sustain its role as the preponderant Pacific military power on the basis of its cumulative power projection capabilities, it may come under increasing competition from China and the desirability, however

⁷⁷ Paul Dibb, “Strategic Trends: Asia at a Crossroads,” *Naval War College Review*, (Winter 2001), www.nwc.navy.mil/press/Review/2001/Winter/art2-w01.htm

⁷⁸ Ibid.

⁷⁹ Quoted in David Lague, “A Growing Storm for East Asia,” *The Far Eastern Economic Review*, May

limited at the present time, of more independent security postures on the part of Japan and South Korea. The acquisition of comprehensive power projection capabilities on the part of key East Asian states suggests that at a minimum, greater constraints will confront the United States in maintaining strategic presence but more importantly, in help shaping a security environment more conducive to its and its allies' interests. There is little doubt that no East Asian power, including China, will displace the indispensable role of the United States any time in the near-future. That said, there is also little doubt that over the next 20 to 30 years, the cumulative rise of China cannot but shift geostrategic preferences not only of China, but that of the United States and its key allies in the region. Perhaps most importantly, historical parallels fail to serve as adequate guidelines in that China, Japan, and Korea have never acquired modern military capabilities at the same time. As noted in a previous section, Europe's debilitating experience with a multipolar balance of power up to the outbreak of World War I could serve as a guide but here one must caution the applicability of 19th century European angst with 21st century East Asian equivalents.

By way of summary, mention should be made of a silver lining in the on-going march towards enhanced strategic capabilities, namely, the growing incentives for economic and political cooperation based on the increasingly interlocking and interdependent nature of the East Asian economies with the global economy. Outbreak of a major war on the Korean Peninsula, in the Taiwan Straits, or a severe crisis in the South China Seas to name but a few of the more probable causes of conflict would have severe economic and political repercussions. But however future East Asian governments and leaders choose to refine their respective national security strategies, coping responsibly with more viable and destructive military capabilities is something that cannot be transferred either from history or from other regions, in other words, it has to be self-taught to become enduring and institutional. Thus, the real challenge for East Asia over the next two to three decades does not lie in accumulating more advanced military capabilities since this is already self-evident. Rather, the more relevant task lies in taming, to the extent possible, new power capabilities with potentially disruptive national strategies, foremost on the part of China as it seeks to regain its "rightful" strategic presence in East Asia. Security implications can be summarized as follows. First, U.S disengagement from Northeast Asia would expedite arms rivalry between China and Japan. Given the power vacuum created by U.S. disengagement, the two regional powers would perceive the opposite's threat more immediate and serious. As arms rivalry begin to emerge, both actors expedite arms build-up and destabilize regional security. U.S. engagement policy is prerequisite to maintain peace and security in the region.

17, 2001, p. 17.