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The Future of US Airpower on the Korean Peninsula

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Editorial Abstract: US military support to the Republic of Korea (ROK) remains critical to peace and stability. The author details constraints faced by the army of the Democratic People's Republic of Korea (DPRK) in any attempt to invade the ROK. Although much of the surface-based defense capability in the South is transitioning to the ROK army, a strong US airpower presence demonstrates US commitment to Korean security, counterbalances the DPRK's offensive systems, and deters war.

Since the summer of 1950, US airpower has remained one of the dominant military forces on the Korean Peninsula. Through the Korean War, the Cold War, the uncertain post-Cold War era that has existed since the fall of the Soviet Union, and the transition of power in North Korea from Kim Il Sung to his son, Kim Jong Il, the ability of US airpower to serve as a key pillar of deterrence to forces that threaten the stability and security of the Republic of Korea (ROK) and the ROK-US alliance has remained unquestioned. In a transforming geopolitical landscape and a rapidly evolving region, this is unlikely to change in the future.

Many issues relating to the disposition of US forces in Asia—Korea in particular—are relevant to any discussion regarding the future of air forces on the peninsula and surrounding areas that would find themselves involved in a conflict or major military operation during a crisis. Among the most important of these is the evolving North Korean threat. This article analyzes that threat and its development over the past decade. Because the threat from North Korea has indeed evolved, one must also conduct an analysis of how the United States can best support its ally South Korea in a time of crisis and examine why airpower represents a more important element of this equation than it has in the past. Equally important, the article considers how transformation in the US military and within its forces in Korea has changed the role of US airpower as it relates to the ROK-US alliance, as well as how recent concerns of both Seoul and Washington have altered the paradigms of the ways in which our military forces can best support the South Korean military in a crisis or full-scale war. These issues have all come to the forefront

since the nuclear confrontation with North Korea heated up in the fall of 2002.¹

The Evolving North Korean Threat

In order to address why US airpower has become such an important deterrent to the North Korean military threat, one must first note how that threat has changed. During the 1990s, North Korea—a nation of 22 million people—boasted the world's fifth largest military (fig. 1). Its army fields 3,700 tanks, 3,500 armored personnel carriers, over 4,000 self-propelled artillery pieces, and nearly 800 aircraft.²

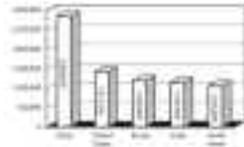


Figure 1. The world's five largest militaries. (Reprinted from *The Military Balance, 1997/98* [London: International Institute for Strategic Studies, 1999] and included in a report to the Speaker of the House of Representatives by the North Korean Advisory Group, a special organization formed in the House to review problems unique to the national security policy of the United States as it relates to North Korea, November 1999, released to the public in written form, 29 October 1999.)

Since subsidies from a collapsed Soviet Union ceased at the end of the Cold War, North Korea has faced the absolute impossibility of maintaining the readiness and capabilities of a military (with a large, mechanized army as its core) poised to attack South Korea with the goal of achieving unification under the communist regime in Pyongyang.³ Maintaining a sizable military dominated by mechanized forces and self-propelled artillery in a high state of readiness requires a substantial amount of fuel for the field training of these forces. Feeding them also stands as a daunting task, especially since food (as well as fuel) has remained in drastically short supply in North Korea since the early 1990s.⁴ Furthermore, in any invasion scenario, North Korea's military would have to flow south through two key narrow invasion corridors—the Kaesong-Munsan and the Chorwon Valley (the east-coast approach would support only a small-scale flow of forces) (fig. 2).⁵



Figure 2. Avenues of approach. (From ROK Ministry of National Defense, 2001.)

A full-scale invasion through north-south approaches in narrow corridors by mechanized and self-propelled artillery forces would need support from a modern air force capable of keeping modern US and South Korean aircraft from destroying ground forces as they attempted to navigate roads into the south. Unfortunately for Pyongyang, its air force has received almost no upgrades since the late 1980s, and minor purchases such as the acquisition of 40 MiG-21s from Kazakhstan in 1999 have not led to any real advances in the capabilities of North Korean airpower.⁶ Additionally, North Korean pilots are lucky to get 20 hours a year of flight time (probably because of the same lack of fuel that bedevils mechanized, armored, and self-propelled artillery forces), a situation that further diminishes the readiness of their less-than-modern air force.⁷ A report on commercial satellite photos released by the Japanese press in 2005 revealed that “90 percent of North Korean military aircraft are Korean War vintage [and that the] newest fighters were those supplied in 1984 and 1988 by the Soviet Union.”⁸ Although perhaps exaggerated, the press report does point to a challenge faced by the North Korean military: it would have grave problems providing air cover for any invasion force into South Korea.

In light of the information discussed above, one wonders whether the threat from North Korea has diminished if that country has undergone a severe degradation in its capability to mount a successful invasion of South Korea with conventional military forces. The likely answer is no. Indeed, as Pyongyang’s capability to make war on the South using conventional maneuver forces lessened, the regime began to concentrate on a new capability—threatening South Korea (and ultimately the region) with asymmetric forces. Since the mid-1990s, when Pyongyang realized it could no longer maintain previous levels of readiness and capabilities in its armored and mechanized forces, the regime has apparently focused on weapons and capabilities that continue to threaten the security and stability of the government in Seoul but do not severely drain its dwindling resources. This asymmetric triad of forces includes long-range artillery, missiles, and special operations forces (SOF).

Since the mid-1990s, North Korea has moved more than 500 self-propelled, long-range artillery

systems to areas just north of the demilitarized zone (DMZ), at least 300 of them at sites that could literally target areas in and around Seoul on a moment's notice and potentially kill hundreds of thousands.⁹ Indeed, the South Korean Defense Ministry's latest version of its defense white paper noted that North Korea's ability to maintain old equipment had hit a wall, with the number of military tanks and armored vehicles declining (because a lack of fuel and electricity hindered Pyongyang's maintenance of its armament industry and production of spare parts). The report also noted, however, that North Korea had increased the number of artillery pieces in its arsenal by 1,000 since the year 2000—a significant improvement.¹⁰ Thus, as one capability to threaten South Korea declined during recent years, the North Korean military replaced it with another one in many ways just as lethal.

Also disturbing is North Korea's development of super-long-range missiles such as the Taepo Dong and the recently disclosed Taepo Dong X, both of which will eventually (if not already) be able to hit parts of US territory.¹¹ But Scud missiles already deployed in North Korea constitute the main threat to the security and stability of the South. Estimates suggest that Pyongyang already has at least 500 of them in its inventory and that some or all of them can carry chemical warheads.¹² The North could use these missiles concurrently with the long-range artillery already deployed along the DMZ, with little or no warning, adding significantly to what would amount to an already substantial casualty count on the first day of a war.

Finally, North Korea's well-trained SOF cadre, estimated at up to 100,000, stands as the world's largest. Unlike many of the forces in North Korea's resource-constrained military, these have not suffered from a lack of fuel or food. They train year-round and have not experienced the decline in training evident in many of the conventional forces in Pyongyang's arsenal. In addition, North Korean SOF personnel can practice paradrop training from towers as well as aircraft, the former obviously not constrained by limitations on fuel and/or flight time. In wartime, large numbers of these forces could attack key command-and-control nodes, air bases, or any other high-value target in South Korea. Perhaps equally disturbing, they could also conduct unconventional operations or even terrorist acts that would severely disrupt morale and alter public opinion in both South Korea and the United States. Most likely, the more than 300 AN-2 Colt (World War II vintage) aircraft in North Korea's inventory would insert these forces into South Korea. Reportedly, North Korea has made a concerted effort to keep its arsenal of easy-to-fly AN-2s well maintained.¹³

The evidence shows a clear change of direction that began when North Korea's armed forces began to decline during the 1990s. Pyongyang has shifted from building and maintaining a conventional capability that would ultimately overrun and conquer South Korea to establishing one that threatens all or most of Seoul—and eventually disrupts or threatens the security of much of the remaining landmass in the south. This tack accomplishes many of the same initial objectives. By severely degrading Seoul and destroying or damaging much of the landmass and/

or population of South Korea, North Korea could reduce a country boasting the world's 10th largest gross domestic product to third world status.¹⁴ Thus, Pyongyang can threaten South Korea's very way of life and, ultimately, its national security. Although the spectre of violent reunification has dimmed, the prospect of violent war and destruction of life as most South Koreans now know it has not. Therefore, deterring North Korea is just as important as ever. One must then determine how the United States and South Korea can best defend against the evolving North Korean threat.

Answering the Threat: Why Airpower Is Key

Although North Korea appears to be experiencing a decline in its ability to launch massive, mobile, mechanized forces deep into South Korea, it is still able to directly threaten Seoul and severely damage other parts of the country. As discussed earlier, Pyongyang cannot easily flow forces south through the two principal invasion corridors because its air force cannot match the United States' and South Korea's more modern airpower. The South Korean air force currently boasts 153 F-16s, 185 F-5s, and 135 older F-4s.¹⁵ In addition, South Korea is currently purchasing 40 advanced F-15K American-made aircraft that it will fully integrate into its arsenal by 2008.¹⁶ Arguably, however, aircraft provided by the US Seventh Air Force represent the most important factor in the suppression of North Korean airpower. Several squadrons of US F-16Cs and F-16Ds as well as A-10s (ideal for taking out massive formations of armor and self-propelled artillery) can deter large-scale North Korean forces from successfully executing an invasion—and quickly destroy most or all of North Korea's air bases (fig. 3).



Figure 3. North Korean air bases. (From ROK Ministry of National Defense, 2000.)

Clearly, US and South Korean airpower serves as a strong deterrent against the traditional aggression that North Korea wanted to initiate prior to the economic collapse that put its formidable armored and mechanized forces into a state of decline. But airpower also would play a major role (perhaps an even more important one) in stopping aggression from North Korea's asymmetric capability that built up during the 1990s.

As discussed previously, North Korea has now moved a large number of long-range artillery systems close enough to the DMZ to threaten virtually all of Seoul and many areas of Kyonggi Province (the northernmost province in South Korea; it contains the largest concentration of that country's ground forces) with little warning time to US and ROK forces. Currently, the ground-based mission of providing counterfire to this long-range artillery falls to the 2d US Infantry Division, which operates 30 multiple-rocket-launcher systems and 30 M109A6 Paladin self-propelled howitzers. During April 2005, as part of the ongoing shift of defense responsibilities on the Korean Peninsula between South Korean and US forces, leadership announced that the South Korean army would assume responsibility for this mission. Integration of South Korean units into the combined ROK-US command, control, communication, computers, and intelligence (C4I) system on the peninsula will be key to the success of this new mission.¹⁷ Regarding the current state of readiness of South Korean forces on the peninsula, however, the United States has concerns about the unwillingness of Seoul to spend money to upgrade its own C4I infrastructure—or to help with the costs of the current structure.¹⁸ Integrating these newly assigned units into a modern C4I system is vital because of the importance of quick reaction time in pinpointing North Korean artillery units with radar and destroying them before they fire or shortly thereafter.¹⁹

Even if all of these systems could operate at peak efficiency and immediately integrate effectively into current or future C4I infrastructures, they would still need heavy augmentation by effective airpower in both their offensive and defensive postures. North Korea simply has more long-range artillery systems deployed along the DMZ than ground-based systems could destroy all at once—particularly in a first-strike scenario. Of course, this is exacerbated by the concerns about C4I, which will probably remain an issue in ROK-US alliance talks for the foreseeable future. Thus, in terms of the first element of North Korea's asymmetric triad (long-range artillery), airpower will continue to play an essential role in deterring and destroying that threat. Because of the unique and unmatched capability of US fighter and attack aircraft to suppress this type of target, American airpower has become extremely important to countering this growing threat—and will likely remain so for many years as Seoul continues to upgrade its C4I and airborne-strike capabilities.

Regarding the second element of the triad (missiles), US airpower is an absolutely vital deterrent, now and in the future, against a first strike by the North Koreans, who have a large number of dispersed missile facilities (as well as mobile launchers, which they have not only deployed but also proliferated to other nations, such as Syria).²⁰ In case of war, ROK-US forces would need to take out Scud missile sites and launchers as well as longer-range missiles because North Korea might use the latter to launch a retaliatory strike at Japan (perhaps at US bases located at Okinawa or elsewhere) (fig. 4). To do so, the US Air Force would use its assets on the Korean Peninsula (Seventh Air Force), in Japan (Fifth Air Force), on Guam (bombers), and elsewhere in Pacific Air Forces, where US airpower possesses unique and vital capabilities for the defense of the Korean Peninsula.²¹



Figure 4. North Korean missile sites. (From ROK Ministry of National Defense, 2003.)

US airpower will continue to play a key role as well in countering special forces, the third element of North Korea's asymmetric triad. Clearly, US Air Force aircraft would figure prominently in the suppression and destruction of North Korean airfields, from which platforms (most of them AN-2s) carrying SOF troops would deploy, and in support of the South Korean air force's aerial interception of enemy transport aircraft conducting paradrop missions into the South. But this represents only part of the story. Because North Korea has far more SOF troops than aircraft to carry them, many of these forces would attempt to infiltrate South Korea through weaker areas of the DMZ. Two such locations include the inter-Korean transportation corridors, where roads and rail lines are being repaired for future transportation routes and where barbed-wire barriers and mines have been cleared away (fig. 5). Airpower would track and kill attempted infiltrations through these zones.



Figure 5. Inter-Korean transportation corridors. (From *Statement of General Leon J. LaPorte, Commander United Nations Command, Commander, Republic of Korea–United States Combined Forces Command and United States Forces Korea before the 108th Congress House Armed Services Committee, 12 March 2003, 108th Cong., 1st sess.*, <http://armedservices.house.gov/openingstatementsandpressreleases/108thcongress/03-03-12laporte.pdf>.)

Another extremely important factor in answering the asymmetric threat (particularly as it relates to airpower) involves the suppression of North Korea's old (dominated by SA-2s) Integrated Air Defense System (IADS) to permit strikes on facilities deep in North Korea.²² Pyongyang has made efforts to adapt this system to modern allied capabilities, sending observers to Serbia during Operation Allied Force and possibly integrating some relatively inexpensive, new-generation,

infrared-guided surface-to-air missiles into its air defense network.²³ In fact, experts have recently maintained that the presence of these missiles means that Pacific Air Forces will need the new F/A-22 to “knock down the door so the rest of the forces can flow in.”²⁴ Modern US airpower, flying with our allies, will carry out this IADS-suppression mission—an important part of the destruction of North Korea’s tripartite asymmetric threat.

How Will Transformation Change the Role of Airpower on the Korean Peninsula?

Transformation has come to the Korean Peninsula. The Global Posture Review has prompted a major reduction in the number of ground forces in Korea, and plans call for a withdrawal of 12,500 American troops from Korea (mostly ground forces) by the end of 2008. In addition, Headquarters Command for United States Forces Korea/Combined Forces Command is scheduled to move most of its infrastructure and personnel south, to Camp Humphries (near the city of Pyongtaek) during the same time period.²⁵ The primary American ground forces in Korea, the 2d Infantry Division, should transform into a next-generation combat unit during the summer of 2005, becoming a “unit of employment X” two years ahead of schedule.²⁶ Furthermore, numerous command and funding issues in the ROK-US alliance will remain in flux during completion of the ongoing moves, but a discussion of those matters lies beyond the scope of this article.

One must then consider the question of how all of this affects the role of airpower on the Korean Peninsula. The answer is obvious. The ROK-US alliance will now rely more than ever on the unique capabilities of US airpower to deter the North Korean threat. In fact, with all of the effort under way to reorganize US Army forces on the peninsula and move ground-combat units, headquarters facilities, and personnel south, the disposition of US Air Force units has remained relatively unchanged. Gen Leon LaPorte, commander of US Forces Korea, recently stated that the mission of our forces in Korea remains clear (despite taking on a regional role): to defend South Korea against an attack from the North. He also discussed US plans to improve combat capabilities by spending \$11 billion over the next three years and to establish five or six Stryker brigades focused on the Pacific region that could deploy to Korea quickly.²⁷ But US forces—especially airpower—remain the best way of enhancing security on the Korean Peninsula. Indeed, in 2003 former Georgetown University professor (and current senior member of the National Security Council) Victor Cha observed that the most reasonable arrangement for the alliance would entail an increased emphasis on US naval and airpower presence with a reduction in ground forces. We are now seeing this happen.²⁸

Conclusions

The threat from North Korea has evolved but remains no less ominous either to US interests or to those of Washington's important allies South Korea and Japan. Because the threat and geopolitical situation in Asia have changed and, perhaps just as important, because the US military is now transforming, traditional paradigms regarding how we face threats throughout the world no longer apply in many cases—such as Korea.

Although a large, forward-deployed ground presence on the Korean Peninsula may no longer be necessary, providing military support to the ROK-US alliance remains as important as ever. In fact, the deterrence provided by a strong airpower presence continues to have an effect on our enemies, as evidenced by a manual published by the North Korean People's Army in 2004, which warns that the United States will target North Korea's military leadership during a time of war.²⁹ The types of US forces that support freedom in South Korea have changed, but Washington's commitment to the security of that country has not. For the foreseeable future, airpower will continue to play a major (and now a more prominent) role on the Korean Peninsula.

[**Feedback?** [Email the Editor](#)]

Notes

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