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**The North Korean Military Threat  
in Perspective**

Edward B. Atkeson

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IN PERSPECTIVE**

**by**

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**The Institute of Land Warfare**

**ASSOCIATION OF THE UNITED STATES ARMY**

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#### **The North Korean Military Threat in Perspective**

by Edward B. Atkeson

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## FOREWORD

While never formally at war with North Korea, the United States has been in an adversarial posture with the “Hermit Kingdom” for over 45 years. The relationship has varied from open conflict with hundreds of thousands of troops involved in the early 1950s to incidents of small but intense hostility — such as in the USS *Pueblo* crisis of 1968. More recently, it has settled into a prolonged period of icy tension.

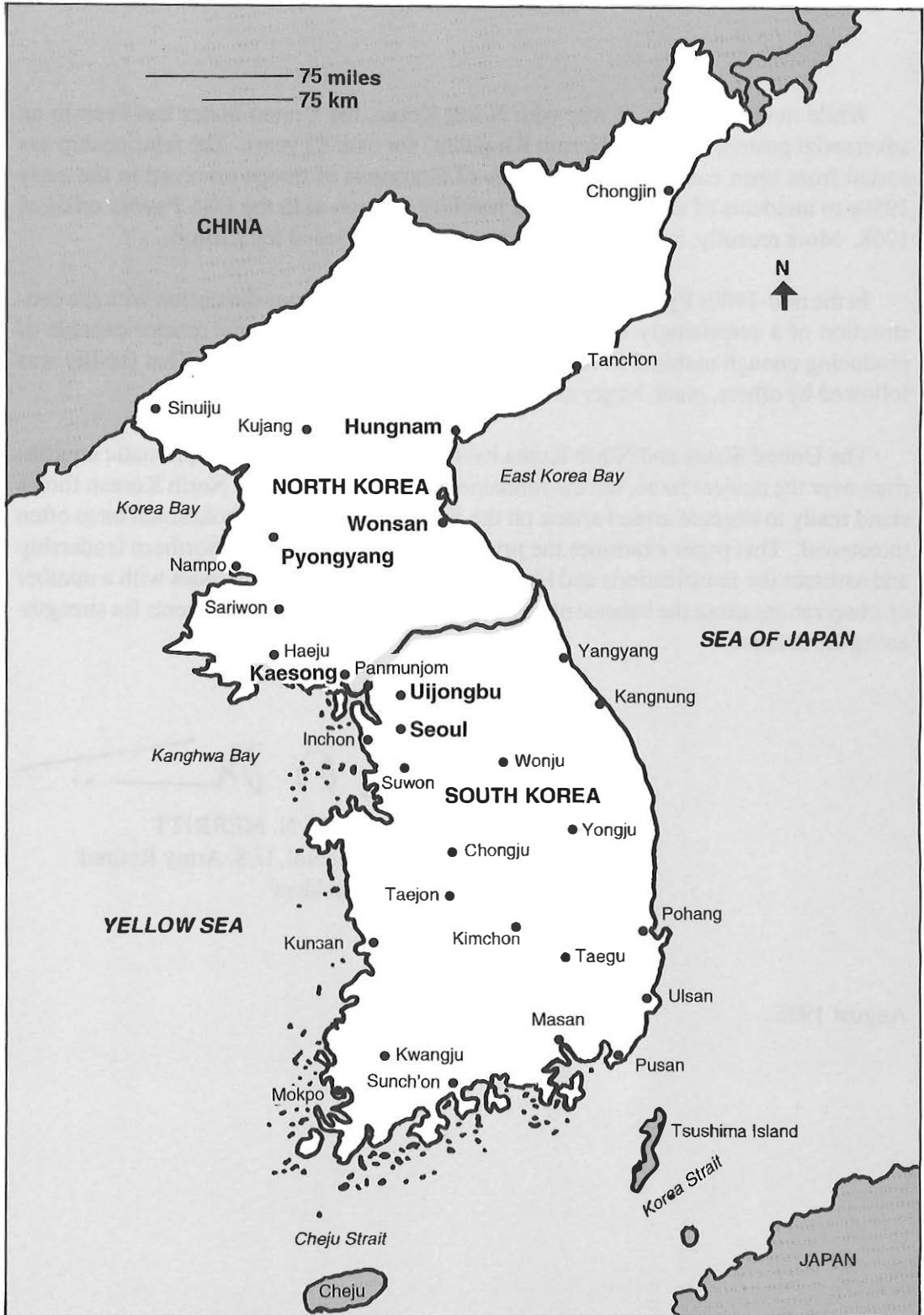
In the mid-1980s Pyongyang introduced a new and ominous dimension with the construction of a surprisingly large 30-megawatt gas-graphite nuclear reactor capable of producing enough material to fashion one nuclear weapon each year. That facility was followed by others, much larger and even more menacing.

The United States and North Korea have achieved a temporary diplomatic equilibrium over the nuclear issue, but the fundamental hostility remains. North Korean forces stand ready to execute armed attack on the South as Pyongyang spokesmen have often threatened. This paper examines the principal options open to the Northern leadership and assesses the ramifications and likely outcomes of each. It concludes with a number of observations about the balance of power on the peninsula and requirements for strengthening the defense.



JACK N. MERRITT  
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August 1995



## **THE NORTH KOREAN MILITARY THREAT IN PERSPECTIVE**

In 1994 former Secretary of Defense Richard B. Cheney described Korea as “the place in the world where you could wake up tomorrow and find U.S. troops actively engaged in conflict.” The comment is no less true today.

Compared to the South, North Korea has half the population and less than one-tenth the gross domestic product. Barely two percent of its roads are paved, while South Korea has a complete network of modern highways. Moreover, the South has three times as many airports, ten times as much merchant marine tonnage, and over 23 times as many TV stations.<sup>1</sup> The Northern economy has been declining by five percent annually since 1989, and the country has defaulted on a number of loans from European banks. Pyongyang’s foreign trade was down to \$2.4 billion in 1993, mostly with China, Japan and Russia.<sup>2</sup> The North is, in fact, little more than a huge war machine, albeit one better suited for conflict in the 1950s than the 1990s.

### **How Great is the Military Threat?<sup>3</sup>**

The principal threat in Korea today is one of conventional attack posed by massive Northern ground and air forces largely concentrated along the intra-Korean border. The ground forces are organized into 26 infantry divisions, 14 armored brigades, and 23 separate motorized and mechanized infantry brigades. These forces are aggregated into 16 corps, including one “capital defense,” and one “special purpose.” The portion of the force deployed close to attack positions between Pyongyang and the frontier consists of some 650,000 troops with about 17 divisions and 30 separate brigades. The attack force is augmented by about 5,000 artillery and rocket pieces, many buried deep inside mountain caves between 20 and 40 kilometers north of the border. Most of the North Korean multiple rocket launchers are committed to the Seoul sector.<sup>4</sup>

The “special purpose” corps contains commando, reconnaissance, river crossing, amphibious and airborne units, as well as 22 separate light infantry battalions. It is estimated that the North Koreans have some 100,000 troops organized into special warfare teams trained in spreading confusion, terror, death and destruction behind South Korean lines. In wartime the teams would be expected to make multiple attempts at surreptitious insertion by air, sea and land (including transborder tunneling) deep into South Korea, to interrupt military movements, destroy key communications networks, neutralize air- and seaports, assassinate key political and military leaders, and immobilize the defensive effort. The expected enemy effort to infiltrate the South Korean interior is often referred to as the “second front.”<sup>5</sup>

The threat also includes the possible use of chemical or biological weapons. Recent estimates of North Korean chemical stocks run as high as 1,000 tons. North Korea may

also produce small amounts of biological agents. Since the 1960s research has focused on 13 different strains of bacteria and toxins.<sup>6</sup> A defector from the North Korean Army in 1994 reported that the North lacks the technology for mounting nuclear weapons on Scud missiles, but that it has no difficulty in attaching chemical warheads. Long-range versions of the missiles, he said, are capable of reaching Okinawa and Guam.<sup>7</sup>

The primary mission of the air forces is to protect the homeland from hostile air attack. Ten fighter regiments and some 300 surface-to-air missile units exist for this purpose. Over two-thirds of the missile batteries are equipped with old Soviet SA-2 "Guidelines," but there are also 36 SA-3 "Goas" and 24 SA-5 "Gammon" long-range, high altitude units. The air force also has six fighter-bomber regiments for support of the ground forces and three light bomber regiments for deeper strike missions.

However, the threat posed by North Korean forces cannot be measured simply in terms of numbers of men or numbers of weapon systems. Much of the equipment of the North Korean armed forces is obsolete. The best tank in their inventory, for example, is the old Soviet model T-62, first placed in service over 30 years ago. They have some 2,500 armored personnel carriers, many of old design, but they totally lack modern armored infantry fighting vehicles.<sup>8</sup> Two-thirds of North Korean fighter aircraft are MiG-17s and -19s, first flown during the Korean War of 1950-1953.

A general perspective of the balance of combat power between the forces of the North and the South can be obtained with the use of a model, such as TASCFORM (The Analytic Sciences Corporation's "Technique for Assessing Comparative Force Modernization"), which provides indices of qualitative as well as quantitative factors. Tables 1 and 2 present both the inventory of equipment stocks on each side and the "designated force potential" (DFP) indices of the various categories of equipment, affording a glimpse of the relative combat effectiveness values. It should be noted that the figures for South Korea include U.S. air and ground forces presently deployed in the country, but not those which might be scheduled to deploy in case of emergency. From these tables, it is apparent that the effective balance of currently deployed forces is approximately 5:4 in favor of the North on the ground, but fairly even in the air. The balance at sea, of course, is heavily favorable to the South when U.S. naval forces are considered. Only the 25 North Korean conventional submarines and the large number of small missile and torpedo craft merit serious concern.

The concentration of large forces in the vicinity of the intra-Korean border is daunting to the South, but it also entails a measure of risk for the North Korean leadership. The combined U.S. and South Korean Marine forces number almost 100,000 troops, posing a serious amphibious threat to Pyongyang and other vital centers north of the demilitarized zone. As a U.S. Marine commander has commented, "They remember Inchon."<sup>9</sup> The threat of amphibious counterattack is a major challenge to the North Korean "capital defense" corps. Further, it likely poses an important inhibition to the movement of large reserve contingents in case of war, whether or not a landing is actually attempted.



TABLE 1

**NORTH AND SOUTH KOREAN GROUND FORCES:  
GROSS NUMBERS AND COMBAT POTENTIAL \***

Category	North Korea		South Korea	
	Numbers	DFP*	Numbers	DFP*
Infantry Squads	14,229	12,806	5,508	4,958
Main Battle Tanks	3,700	5,920	1,900	5,378
Light Tanks	500	400	0	0
Armored Infantry Fighting Vehicles	0	0	1,500	1,950
Armored Personnel Carriers	2,500	2,500	500	572
Towed Artillery	2,300	5,290	3,500	9,660
Self-Propelled Artillery	4,500	12,150	900	5,340
Multiple Rocket Launchers	2,280	2,964	140	1,540
Mortars	9,000	9,360	6,000	7,200
Surface-to-Surface Missile Launchers	84	134	12	11
Antitank Guided Weapons	500	325	500	500
Antitank Guns	1,500	450	208	72
Air Defense Guns	8,800	880	600	120
Surface-to-Air Missile Launch	10,300	278	1,020	734
Subtotal Ground Force Potential *		53,457		38,038
U.S. Ground Forces in South Korea				1,588
Total Ground Force Potential *		53,457		39,626

\* Numbers from IISS *Military Balance 1994-1995*; effectiveness measured in terms of TASCFORM "Designated Force Potential."

TABLE 2

**NORTH AND SOUTH KOREAN AIR FORCES:  
NUMBERS OF AIRCRAFT AND COMBAT POTENTIAL \***

Category	North Korea		South Korea	
	Numbers of Aircraft	DFP*	Numbers of Aircraft	DFP*
Bombers	80	536	0	0
Ground Attack				
Fighters	330	1,172	238	2,337
Air Superiority				
Fighters	360	3,740	119	1,642
Attack Helicopters	50	100	133	231
Subtotal Air	_____	_____	_____	_____
Power	820	5,548	447	4,210
U.S. Air Forces in South Korea			72	1,130
Total Air Power Potential *		_____	_____	_____
		5,548		5,340

\* Numbers from IISS *Military Balance 1994-1995*; effectiveness measured in terms of TASCFORM "Designated Force Potential."

**How Well Prepared is the North for an Attack on the South?**

The very size of the North Korean war machine is a prime indicator of Pyongyang's readiness for war. With 1,128,000 persons in the active forces and 115,000 in the security forces and border guard, the country ranks as the most highly militarized society in the world. Its soldier-to-citizen ratio of 1:18 is almost double that of even the most heavily militarized states in the Middle East.<sup>10</sup> About 65 to 70 percent of the forces are within close striking range of the South. Huge stocks of fuel, ammunition and other supplies, sufficient for at least 30 days of offensive warfare, are believed to be stored in hundreds of depots within 75 kilometers of the demilitarized zone.<sup>11</sup> Estimates of the warning time which U.S. and South Korean forces might expect if the North were to attempt a surprise attack vary from 24 to 72 hours.<sup>12</sup>

North Korea's military reserves are very large, numbering perhaps six million troops. Those best trained and ready are the 1.2 million troops of the Paramilitary Training Units. Most others would require extensive training and then might be fit only as reserves or individual replacements for the Korean People's Army (KPA).<sup>13</sup>

The tactical positions now held by the KPA, while well prepared and protected, are not as favorable for launching an attack as those occupied by the North in 1950. Northern forces hold the city of Kaesong and are situated within 20 miles of Seoul on the north bank of the Imjin River, but the avenues of approach to the Southern capital have been altered by the planting of forests and the construction of blocking devices on highways and at other critical points. Moreover, the North lost key positions overlooking the Uijongbu corridor to Seoul in the 1953 armistice accord. East of Kaesong, the inter-Korean border turns sharply northward, stretching some 25 miles north of the 38th parallel in the central part of the peninsula. Here the South holds substantially more defensible terrain than it did 45 years ago.

The most critical difference for the North Koreans between their military situation in 1950 and their current one is the collapse or estrangement of their patron allies, the Soviet Union and China. Pyongyang has built a large domestic arms industry, but the industry lacks technology for production of many modern weapons. Particularly, it produces no combat aircraft. On the other hand, it is a leader in the Third World for adaptation of older models of tactical missiles. But even here its inability thus far to provide accuracy to its weaponry inhibits its capacity for providing missiles of practical military value. This will, of course, be overcome in time.

Another aspect of North Korea's isolation, which has not been overcome, is its thirst for oil. Previously amply supplied by Russia and China, North Korean forces are currently starved for fuel for training, and could experience critical shortages for operations in the event of war. Pyongyang has little hard currency for meeting suppliers' demands under current circumstances.<sup>14</sup>

A critical weakness in North Korea's military machine is believed to be its highly centralized system for command and control. As one U.S. Army official has pointed out, "It's important to remember this is a communist country with very rigid command and control." Certain ambiguities about the status of the new president, Kim Jong Il, compound the problem. Kim has long enjoyed the touching title "Dear Leader," but not as yet his father's more distinguished "Great Leader." The difference may reflect some doubt about his position. Allied war plans focus on severing Pyongyang's command and control system, which under these circumstances may be the Achilles' heel of the entire apparatus.<sup>15</sup>

## How Might the North Attack the South?

Most analysts envision a heavy artillery and rocket bombardment along the entire front to neutralize South Korean forces in the forward defensive area and to traumatize the population. Some 80-100 Scud and Frog missiles might be fired. Seoul, it is expected, would be a particular target for both long-range artillery and missiles. The enemy would hope by this means to drive large numbers of people out of their homes, clog the highways, and inhibit the movement of Southern reinforcements from the rear. At the same time, special forces infiltrators would emerge from secret tunnels, from the sea, or by parachute to disrupt vital Southern command and control systems, destroy bridges, and lay ambushes for military convoys. Attacks on airfields would be high-priority missions to inhibit defensive and retaliatory flight operations and to block American reinforcements by air.<sup>16</sup>

The main attack might be led by massed infantry formations all along the front, but they would likely be concentrated at the most favorable points for achieving breakthroughs of the defenses. Armor and mechanized infantry would surge forward rapidly to exploit successes achieved. Heavy artillery and rocket fire would compensate for weaknesses in Northern close air support. Some analysts believe that the North has two basic attack options:

- Stake everything on a single thrust with the objective of doing major damage to the South's industrial and cultural hub around Seoul, seize the city if possible, and then sue for peace on Northern terms.
- Bypass Seoul and seek deep penetrations into the heart of the country, targeting especially air- and seaports to block the deployment of U.S. forces from abroad. The invading spearheads would be rich in armor and self-propelled artillery. Mechanized infantry would follow closely behind the armor, under cover of an armada of fighter aircraft. The objective would be to seize the entire peninsula before significant American reinforcements could arrive.<sup>17</sup>

The first option is given some credence by General John M. Shalikashvili, chairman of the Joint Chiefs of Staff. The general has refrained from any public statement that the capital city can be defended from Northern attack, expressing only the "hope" that such might be possible. On the other hand, he has said that he is "very confident" the combined forces of the Republic of Korea (ROK) and the United States could stop a North Korean invasion "far short of their reaching their war objectives."<sup>18</sup>

A third option might be somewhat less ambitious than the first two. It should be remembered that the 1950 attack on South Korea was not quite the "bolt from the blue" often mentioned. It was preceded by almost a year of limited assaults and bombardment. In June 1949, and again in August, North Korean forces made limited attempts to seize Kaesong, northwest of Seoul.<sup>19</sup> Following this pattern, Pyongyang might choose to en-

gage its adversary in an exchange of blows without significant ground maneuver or attempt to invade the South. Such an option would stress the ROK government without exposing Northern forces to the full play of allied air or ground fire. Northern artillery and rocket forces could engage forward ROK forces while remaining under the protection of prepared positions.

Such an option might carry many risks and make little sense in the eyes of objective observers, but we cannot dismiss it out of hand. Few analysts have great confidence in our understanding of Pyongyang's objectives or of its views of how such an initiative might play out. In any event, the historic example of North Korean behavior in 1949 suggests that we are prudent to consider it.

### **How Strong are South Korea's Defenses?**

As noted above, most of the South Korean forces in which General Shalikashvili places his confidence are substantially smaller than their Northern counterparts. But they are far from insignificant. The South Korean defense budget is over twice that of the North. The Southern army, while half the size of that of the North, roughly matches it in the combat potential of its armor. The Southern DFP indices are inferior in most categories but the combined scores of infantry fighting vehicles and armored personnel carriers closely match those of the North. The South Korean army may thus enjoy a measure of combat equivalency in tactical mobility, considering its size.

South Korea has 22 line divisions, three heavily armored, each having three brigades, evenly balanced with tanks and mechanized infantry. The remainder of the divisions are organized with three infantry regiments, an artillery regiment, and separate tank, reconnaissance and engineer battalions. Air force combat aircraft are grouped into 12 squadrons: eight for support of ground forces and four for air defense.<sup>20</sup> It is expected that in wartime, much of the air defense role would be assumed by the U.S. Air Force.

### **Southern Deployments**

The bulk of ROK active ground forces are deployed in the northern part of the country in a succession of defensive positions stretching across the peninsula. Political considerations demand that the defense be staged as far forward as feasible. The infantry divisions are grouped under two ROK army headquarters responsible for the defense, the Third ROK Army on the west, the First Army on the east. In the rear of the main defensive lines is a zone in which the three ROK mechanized divisions and the U.S. 2nd Infantry Division are deployed. These four units form a pool of highly mobile forces which could be used for counterattacks against enemy forces penetrating the defenses.<sup>21</sup>

Still further to the rear the Second ROK Army serves as the controlling headquarters for the 4,500,000 troops of the reserve. There are 13 divisions in the Mobilized Reserve (MR) and 12 in the Home Reserve (HR). The MR divisions are trained and equipped for conventional military operations, and in wartime many of them might be deployed forward as reinforcements for the First and Third ROK Armies. The HR units would remain under regional control for static guard duties around airfields, ports, and other high-value facilities and for local operations.<sup>22</sup>

The depth of the main defensive belt would require the enemy to displace his artillery forward from protected positions in order to support a continuing attack. This would increase his units' vulnerability to counterbattery fire and air attack. Some ROK artillery, on the other hand, is emplaced in concrete shelters from which it could engage enemy forces through the depth of their echelons without having to displace.

The various defense sectors take advantage of the highly defensible terrain on the peninsula, while permitting dismounted and small mobile forces to conduct local counterattacks all along the line. Terrain analyses indicate that attacking forces would have difficulty massing overwhelming combat power at many points. In most cases, the exploitable defiles constrain maneuver by large formations.

The terrain tends to become more restrictive in the depth of the defense belt. Enemy artillery and air defense forces moving to support or exploit a local breakthrough of the forward lines would be vulnerable to attack by stand-off surface-to-surface missile systems, artillery, and ground attack airborne platforms, as well as to small ground unit counterattacks throughout the entire battle area. The organic tank battalion in each ROK division serves as a core element for aggressive defense at that level.

The ROK mechanized divisions would be employed where most suitable for operational level counterattack or to lead a counteroffensive. These might be reinforced by MR units from the reserve.

Are there deficiencies? Of course. General Gary E. Luck, commander in chief of the United Nations and Combined (U.S. and South Korean) Forces Commands, identified four specific shortages to the U.S. Senate Armed Services Committee on March 2, 1994. The South Koreans, he said, need additional counterbattery radars, more night-vision goggles, more radios capable of netting with American equipment, and more defensive chemical warfare gear. To this list U.S. Defense Secretary William J. Perry added attack helicopters and advanced antitank munitions. South Korean officials have given assurances that improvements would soon be made in night fighting and special forces equipment and communications gear.<sup>23</sup>

Especially mentioned for acquisition in the future were global positioning systems (GPS) for individual soldiers and nine additional counterbattery radar sets.<sup>24</sup> Indeed, much of this equipment is now on hand. South Korea has also expressed interest in acquiring Apache helicopters, but that might require considerable time.<sup>25</sup>

It appears that ROK forces will soon receive some quantities of equipment from Russia, possibly including MiG-29 aircraft, S-300 air defense missiles, and T-80 tanks. Moscow is anxious to reduce its outstanding debt to South Korea through deliveries of military materiel. In August 1994 Seoul agreed to the arrangement, in spite of anticipated difficulties in training and logistical programs. In consequence, it is expected that about \$209 million worth of military equipment will be delivered.<sup>26</sup>

The South Korean air force is smaller than its Northern counterpart, but rather better equipped. While the gross count of combat aircraft is 770 for the North and 447 for the South,<sup>27</sup> qualitative factors do much to level the balance. Moreover, Southern pilots are better trained. Due largely to fuel shortages, Northern pilots fly about 4-5 hours per month, compared to the standard 18-20 hours for NATO, or 14.5 hours for U.S. Army flight crews.<sup>28</sup> Combined U.S. Air Force, Navy and Marine air reinforcements working with the South Korean air force might destroy or neutralize the Northern air arm in a short period of time, perhaps as quickly as two or three days.

### **What Reinforcements Could be Expected in an Emergency, and When?**

No one contemplates South Korea having to withstand a Northern assault alone. The United States maintains a forward garrison in the country of 37,000 troops, including the 2nd U.S. Infantry Division and three squadrons of F-16 fighter aircraft. Six batteries of Patriot missiles have been deployed to bolster the air defenses.

The U.S. 2nd Infantry Division is an extraordinary hybrid organization containing both heavy and light units. The 1st Brigade, with two tank battalions (soon to be equipped with M1A1s) and a mechanized infantry battalion, provides the core counteroffensive reserve for allied forces defending the principal threat corridor running through Uijongbu. The 2nd Brigade, with one mechanized and two airmobile infantry battalions, is capable of dispatching troops virtually anywhere across the front on short notice. The flying time to the most distant point on the front is about 35 minutes. The 3rd Brigade, stationed at Fort Lewis, Washington, will soon have 140 M1A1 tanks in war reserves in Korea for its use.<sup>29</sup>

The division artillery is armed with 48 155mm self-propelled howitzers and 36 multiple launch rocket systems (MLRS), providing unprecedented firepower for a unit of this size. The MLRS batteries are capable of engaging targets with high accuracy up to 32 kilometers distant. The division also has an aviation brigade and is reinforced with the ROK 5th Brigade, composed of two medium tank (M48A5) battalions and a mechanized infantry battalion. The division is subordinated to the ROK VI Corps, which provides the principal mobile striking force of the U.S./ROK Combined Forces Command.<sup>30</sup> Recent equipment enhancements for U.S. ground forces in Korea include 36 AH-64 Apache attack helicopters and 200 Bradley M2 infantry fighting vehicles.<sup>31</sup>

Close by in Japan are two Air Force wings with an additional 78 combat aircraft. It is anticipated that the first of a total of 20 U.S. fighter squadrons earmarked for South Korean reinforcement would arrive within a day of its order. All 20 could be in the country within 10-12 days. These would include missile-equipped F-117 stealth fighter, F-15E and F-111 aircraft.<sup>32</sup> The United States has prepositioned supplies and materiel in South Korea for its reinforcing aircraft as part of an overall strengthening of U.S. forces in case of emergency.<sup>33</sup> Aircraft munitions for 60 days' combat, along with special antichemical protective gear, is stockpiled in the area.<sup>34</sup>

The U.S. Navy could rapidly bring at least one, and probably two, carrier battle groups to bear in the theater. The carrier USS *Independence*, homeported at Yokosuka, Japan, is usually kept within one week's sailing time of the Korean Peninsula in periods of tension.<sup>35</sup> The U.S. Marine Corps has a Marine expeditionary force and a maritime prepositioning ship squadron for a brigade-size force close by.<sup>36</sup> In addition, the Army has deployed a heavy brigade-size set of equipment afloat<sup>37</sup> at a location convenient for meeting requirements in either Northeast Asia or the Middle East. The Department of Defense assesses the capabilities of deployed forces for Phase I contingency operations in Northeast Asia (halting an invasion) as "good."<sup>38</sup>

U.S. Army reinforcing objectives call for the deployment of a light infantry or airborne brigade within four days. The remainder of a light or airborne division would be expected eight days later, and the personnel of a heavy brigade, matching up with prepositioned ships, two days after that. Two heavy divisions, or one heavy and one air assault division, would be expected to arrive by the end of the first month of fighting. Two and a half months from the decision to go, there could be as large a force as two U.S. corps, with the equivalent of five or six Army and Marine divisions, including most essential support, on the ground.<sup>39</sup> General Luck has testified to Congress that current plans call for the eventual dispatch of a total of 400,000 troops to Korea in case of war.<sup>40</sup> Each of the two Army heavy divisions involved in the reinforcement would be slated for assignment of an additional (fourth) brigade from the reserves, but such assignment would likely occur considerably later.<sup>41</sup>

The capabilities of current air- and sealift forces for fulfilling Phase II requirements of a Korean contingency (buildup of forces in theater for counteroffensive operations) are rated "fair."<sup>42</sup> The U.S. Air Force Air Mobility Command (AMC) could sustain an airlift of about 49 million ton-miles per day when reinforced with crews and aircraft from the reserves and from the Civil Reserve Air Fleet (CRAF). An effort of this magnitude could transport all personnel and equipment planned for air delivery in the initial buildup of U.S. forces in South Korea in a period of 62 days.<sup>43</sup> However, while AMC airlift capability is adequate for meeting the needs of a single contingency in Northeast Asia, it probably could not fulfill anticipated requirements if a second crisis were to erupt elsewhere in the world during the 62-day period.



The Military Sealift Command has long been faulted for having inadequate resources for meeting lift requirements for more than one major contingency, but there is little reason to believe that it could not fulfill the needs for a Korean emergency alone. The present national sealift capability is about 800,000 short tons, but this may be as much as 20 percent short of meeting all contingency requirements.<sup>44</sup>

In addition to the U.S. effort, there is a possibility of Japanese participation. Some Japanese officials have expressed the view that the emerging regional nuclear threat from Pyongyang could lead to a fundamental shift in Japanese policy toward the use of Self-Defense Forces abroad, and even toward the acquisition of nuclear weapons.<sup>45</sup> As a consequence, some Japanese forces might be made available to cooperate with U.S. forces — particularly those operating offshore — possibly under United Nations auspices.

### **How Might the Scenarios Play Out?**

**The Seoul Grab.** If North Korea were to concentrate its entire effort on the seizure of the greater Seoul area, it might well realize some success. If the move did not result in great destruction, and more especially if the population remained largely in place, the allies might be loath to counter with heavy bombardment or a counterattack on the city. The terms of settlement offered by the invader might emerge as the dominant factor affecting allied decisionmaking. If they were modest (but included North Korean withdrawal) and appeared to be aimed largely at face-saving for the Northern regime, the allies might be tempted to accept the deal. If, on the other hand (as would seem more likely), the terms were seriously injurious to South Korea, the allies would probably elect to continue the conflict. If they wished to limit further damage and loss of life in the Seoul area, they might choose to mount an assault on North Korea, either in the central or western sectors of the front, or further north on the peninsula with airborne, air assault and amphibious forces.

Offensive land operations in the central or eastern sectors would not appear to offer many opportunities for rapid decision. On the contrary, without clear objectives (other than the eventual destruction of enemy forces) the action could become prolonged and costly. More promising would appear to be an encirclement of either the eastern or western flank of the enemy forces. Potential targets might be the Pyongyang area on the west coast or the Wonsan-Hungnam area on the east. A successful lodgment in either area would threaten to cut North Korea in two, and might be enough to force the regime to withdraw its forces from Seoul. Because an attack from the west would not only threaten the enemy's capital, but would also threaten to entrap his forces in the Seoul enclave, the western option might prove more attractive. In any event, it would appear prudent to ensure that sufficient territory north of the operational area was undisturbed to reassure China that no threat was intended toward its border.

**KPA Blitzkrieg.** In the event of a major breakthrough of the ROK defenses east of Seoul, a different strategy might be applicable. The situation could resemble the play of early actions in the 1950 campaign, and might again lend itself to a similar solution. Allied first priority would likely be given to halting the advance and inflicting as much damage as possible on the leading elements.

If insufficient U.S. maneuver forces had arrived, heavy responsibility would fall on the Third ROK Army to stem the flow with reserve forces on the ground. Land- and sea-based tactical aircraft would deliver round-the-clock attacks on enemy columns. The most severe blows might be delivered by as many as 200 B-1s, B-2s and B-52s, operating initially from the United States but thereafter from forward bases in the Pacific.

The North Korean Army is not well equipped for operations over great distances. The workhorse of its transport is the 2 1/2 ton utility truck for all classes of supplies. Each armored division has an organic transport capacity of about 2,300 tons.<sup>46</sup> In comparison, a U.S. mechanized division transport capacity is about 3,600 tons, not counting tanker vehicles for fuel. North Korean armored forces are thus no more than two-thirds as robust as U.S. forces for long-distance operations, and probably considerably less considering that they must use general cargo vehicles for hauling fuel.<sup>47</sup> Accordingly, it might be expected that North Korean armored units and their support forces attempting to penetrate deep in South Korea would prove highly vulnerable to friendly air and ground interdiction operations.

U.S. naval forces would likely employ Tomahawk missiles to attack fixed North Korean value targets and to disrupt transportation systems over the length of the country. Antisubmarine warfare forces would aggressively seek and destroy the North Korean submarine force while other surface and air forces operated against North Korean coastal traffic, patrol craft and seaborne special operations forces.

The struggle would place maximum stress on the Pyongyang regime. Whether or not the government would collapse under the pressure or whether it might attempt to employ a nuclear device in some manner in order to alter the situation is impossible to foresee. Undoubtedly the government would sooner or later come to realize the magnitude of the opposition and the improbability of success.

**KPA Sitzkrieg.** Finally, the possibility of a static bombardment of the Seoul area, or of military targets in the vicinity without significant transborder operations on the ground, is of sufficient substance to merit some exploration. For whatever reason, the Pyongyang leadership may calculate that a transborder artillery duel could serve its political interests. North Korean forces in the border area are well entrenched, and the leaders may feel that they have a capability for inflicting greater damage upon Southern targets than they might sustain in return.

Much might depend upon the degree to which allied leaders felt constrained to reply in kind. If only military targets were engaged by the North, the allies might feel inhibited from responding with more telling blows. On the other hand, serious damage to South Korean property or the infliction of significant loss of life among the population could furnish political impetus for more vigorous and extensive engagement. Allied leaders would have the option of escalating the exchange to a level on which the trade would favor the South. Alternatively, they might sense an opportunity to mount an attack on the ground with the objective of unseating the Pyongyang government. None of the options would be likely to appear particularly attractive in view of the possible costs. An offensive operation aimed at overthrow of the North Korean government could prove most expensive of all in lives and property.

### **How Costly Might a Second Korean War Be and What Might Be the Outcome?**

Regardless of the scenarios which they consider likely, most analysts recognize that human and material losses in a war between North and South Korea could be very high. Seoul, they point out, with its large concentration of industry and population, is so close to the border that it would be vulnerable to heavy bombardment and possible occupation, at least for a short period of time.

One analysis depicted a North-South conflict breaking out in Korea in mid-July 1994. Using a wargame model, it determined that the initial Northern offensive would likely be halted along the Imjin River on the western side of the peninsula, but only after a retreat to a second line of defense in the east. Remarkably, it projected that this might occur in less than a week. Thereafter, Southern forces, reinforced by U.S. and some Japanese forces, prepared to go over to the offensive. Ten days into the war, they were on the attack, and by August 26 had essentially destroyed the Northern army as a coherent command. The conflict ended with Southern forces 30 miles into North Korean territory. Total casualties on both sides reached about 194,000 in killed and wounded. Northern losses were about double those of the Southern alliance. U.S. killed were about 500, with some 2,600 wounded.<sup>48</sup>

Other analysts believe that casualties might be much higher. According to some, U.S. killed and wounded could run as high as 20,000, with North and South Korean casualties being proportionately higher.<sup>49</sup> Still others have cited "hundreds of thousands [of casualties] including civilians."<sup>50</sup> It is difficult to assess the higher estimates without some idea of the scenarios the analysts were using (some may envision use of nuclear weapons). In any event, virtually all responsible U.S. and South Korean officials who have expressed an opinion on the prospect of hostilities indicate confidence in the ultimate success of the defense.

## **Is the Defense of South Korea Likely to Improve in the Future?**

The 1993 Department of Defense “Bottom-Up Review” (BUR) illuminated programs planned or currently under way which should impact favorably on the security of South Korea. In general terms the BUR established force levels and support objectives for two near-simultaneous major regional contingencies (MRC). Each of these would include the following:

4 - 5 Army Divisions

4 - 5 Marine Expeditionary Brigades

10 Air Force Fighter Wings

100 Air Force Heavy Bombers

1 - 5 Navy Carrier Battle Groups

Special Operations Forces

The argument went that if the forces were maintained in a high state of readiness and furnished with commensurate strategic lift and logistical support, they would be able to defeat two sets of hostile forces comparable to those of Iraq in 1991, or of North Korea today.<sup>51</sup> Ideally, defense budgets would be tailored to fulfilling these goals. Secretary of Defense William Perry has since redefined the BUR, insisting that the United States is unlikely to engage in two wars at the same time.<sup>52</sup>

The BUR identified the need for prepositioning an Army heavy brigade set of equipment in Korea and an additional maritime prepositioning ship squadron for a second Marine brigade in the theater. It also pointed out that improvements in airlift and sealift would raise the capability of Phase II operations (buildup of forces for a counteroffensive) from “fair” to “good.”<sup>53</sup> The Air Force currently has authority for purchase of 40 C-17 airlifter aircraft, six of which are budgeted for procurement in 1995. Sealift, for which the Joint Chiefs of Staff have identified requirements for nine prepositioning ships and 11 large, medium speed roll-on/roll-off (LMSR) vessels, has been allocated about \$3 billion through 1999.<sup>54</sup>

It is also important to note certain technological advances expected to come to fruition in the next few years which might help to resolve some of the theater-specific operational problems in Korea. General Luck has requested acceleration of a new high technology program especially designed to deal with the North Korean rocket artillery threat. Referred to as “Precision/Rapid Counter-Multiple Rocket Launcher,” the program is designed to link existing battlefield sensors with standoff missile units and, employing modified tactics, to locate and entrap hostile missile launchers once they emerge from

their underground shelters. Once trapped outside their caves, the launchers would become vulnerable to U.S. strike operations. The conceptual weapon of choice for destroying the enemy launchers is the Army's Enhanced Fiber Optic Guided Missile (EFOG-M), which is expected to be ready for fielding in 1997.<sup>55</sup>

Another advantage is expected to accrue to the relative combat effectiveness of South Korean forces, measured in the quality of equipment. Between 1990 and 1994 the size of the North Korean tank fleet increased at a rate almost double that of the South; however, the combat effectiveness of South Korea's armor increased at a rate over twice that of the North because of the technical superiority of later U.S. models over the older Soviet designs available to Pyongyang.<sup>56</sup> Further, we have noted Seoul's interest in acquiring Apache attack helicopters and other modern equipment. It seems highly unlikely that Pyongyang will be able to keep abreast of the South's equipment acquisition programs considering both their limited sources and the enormous difference in the sizes of the two countries' military budgets. There is good reason to believe that the combat effectiveness of the Southern forces will overtake those of the North before the end of the decade, and that the qualitative difference between the two will widen thereafter.

On the other hand, if current questions regarding North Korea's nuclear weapons stature are not resolved, the threat could become substantially larger and more complicated. While the issue centers on the possibility of one or two nuclear weapons now, the numbers could rapidly escalate. North Korea could have a capability for producing a weapon every four to six weeks after 1995 from its new 200-megawatt reactor at Sangdong.<sup>57</sup> At that rate Pyongyang could amass an arsenal of some 60 weapons by the end of the decade. It is possible that the North Koreans could adapt a nuclear warhead to their 1,000 kilometer range No Dong missile any time between now and the year 2000.<sup>58</sup> Considering North Korea's hostility, its need for foreign exchange, and its penchant for sharing high technology with other pariah states, the thought is daunting. Without a nuclear limiting agreement, the advantages expected to be gained by allied conventional forces over time might be more than offset by an increased risk of North Korean nuclear arms.

## **Observations and Conclusions**

The foregoing discussion leads to a number of insights, thoughts, and conclusions regarding the military situation in Korea. The most important are summarized below.

1. North Korea lags behind the ROK in virtually all aspects of national wealth and influence, but maintains a strong military as an instrument of control over its society and a lever of potential coercion in relations with Seoul and the United States. However, with the collapse of the Soviet Union, and shaky relations with China, Pyongyang's ability to maintain a conventional military edge over the South is eroding.

2. Much of the equipment of the North Korean military forces is a generation older than that of the South, and Northern forces are likely to fall further behind as time goes on. The forces are poorly equipped and improperly structured for accomplishing a quick victory in depth.

3. In recent years the North has increasingly concentrated its military forces along its southern border in an effort to remind Seoul and Washington that it still counts for something. In doing so, however, it has increased the country's vulnerability to attack from the sea behind the bulk of its army.

4. North Korea has sought to leapfrog ahead of the South, and to strengthen its international leverage through heavy investment in the development of weapons of mass destruction and corresponding long-range missile systems. It has also demonstrated an inclination to share its missile technology with states in sensitive and unstable regions of the world, including some believed to support international terrorism. There is a risk that Pyongyang will come to provide nuclear technology, and perhaps complete weapons, to these types of countries if its long-range missile and mass destruction weapons programs are not soon curtailed.

5. North Korea holds a threat of seizure of the Seoul area over South Korea, but the threat is not existential to the state as long as U.S. forces retain their current reinforcing capabilities. Thus the threat has not proven to have the leverage for which it was designed. On the other hand, the threat of widespread destruction and loss of life is of keen concern. Southern civilian losses could prove particularly heavy in such a conflict. Nevertheless, with projected U.S. reinforcement, the area could probably be quickly recovered, and the aggression would likely provoke a strong transborder counteroffensive, perhaps culminating in the seizure of Pyongyang by allied forces.

6. The above points notwithstanding, South Korea needs to undertake a major modernization program for its ground forces. It should seek early parity with the North in conventional ground force combat effectiveness in order to enhance deterrence and to reassure allied and other friendly countries of its readiness to carry its share of the defense burden. (The United States could assist South Korea in the short term by loaning available equipment excess to its needs.)

7. It is likely that the relative strength of U.S. and South Korean forces will increase over time vis-à-vis North Korean forces. However, the growing danger of North Korean nuclear and long-range missile armaments may offset the advantages gained.

8. In case of war instigated by the North, the U.S.-South Korean alliance might not be able to liberate all of North Korea without provoking hostile reaction from either China or Russia. However, it would probably be able to seize enough territory to set Northern nuclear weapons programs back by many years.

9. The North Korean nuclear and long-range missile developments are alarming to the people and governments of neighboring states, especially Japan. This may prompt Japan to seek a more active role in insuring the security of Northeast Asia.

## ENDNOTES

1. U.S. Central Intelligence Agency, *The World Factbook 1994*, pp. 216-219.
2. Bill Gertz, "N. Korea as Nuclear Exporter?" and "N. Korea Sanctions May Flop, U.S. Says," *Washington Times*, 8 June 1994, p. A9.
3. International Institute of Strategic Studies, *The Military Balance 1994-1995*, pp. 178-179.
4. Barbara Opall, "DoD Plans to Stymie N. Korean Rockets," *Defense News*, 16-22 May 1994, p. 3.
5. Jim Tice, "Korea: At the Ready," *Army Times*, 27 June 1994, p. 12.
6. "Special Report No. 2," *Jane's Intelligence Review*, April 1994, p. 8.
7. "Chemical-Armed Scuds Said Aimed at Okinawa," *Washington Times*, 29 April 1994, p. 15.
8. APCs (armored personnel carriers) are distinguished from AIFV (armored infantry fighting vehicles) in that the soldiers are required to dismount APCs in order to fire their weapons. AIFVs provide the means for troops to remain mounted in fast-moving combat situations.
9. Jon Yoshishige, "Halawa General Outlines Sea Strategy," *Honolulu Advertiser*, 22 March 1994, p. 2.
10. Syria and Israel rank numbers 1 and 2 in soldier-to-citizen ratio in the Middle East with figures of 1:32 and 1:34 respectively. See Edward B. Atkeson, *A Military Assessment of the Middle East, 1991-96* (Carlisle, Pa.: Strategic Studies Institute, U.S. Army War College, 1992), p. 5.
11. Jack Anderson and Michael Binstein, "Scenarios for a War in Korea," *Washington Post*, 31 March 1994, p. C11.

12. Robert Hall and Ian Kemp, eds., "North Korea: The Final Act," *Jane's Intelligence Review*, Special Report No. 2, April 1994, p. 22.
13. *Ibid.*, p. 21.
14. Tony Clifton, "Inside a New Nuclear Nemesis," *Newsweek*, 21 February 1994, p. 28.
15. Sean D. Naylor, "U.S. Army: N. Korean Ground Forces Pose Biggest Threat," *Defense News*, 20-26 June 1994, p. 24.
16. Jim Mann, "Scenarios for a 2nd Korean War Grim for U.S., South," *Los Angeles Times*, 22 February 1994, p. 1.
17. Mann, "Scenarios for a 2nd Korean War"; Michael Gordon, "General Defends Military Exercises in Korea," *New York Times*, 3 March 1994, p. 12; David Fulghum, "U.S. Pressures North Korea to Shed Nuclear Weapons," *Aviation Week & Space Technology*, 28 March 1994, p. 22; David Sanger, "North Korea's Huge Military Spurs New Strategy in South," *New York Times*, p. 1; and Anderson and Binstein, "Scenarios for a War in Korea".
18. Bill Gertz, "General: Attack by N. Korea Would Fail," *Washington Times*, 19 December 1993, p. A1.
19. Matthew B. Ridgway, *The Korean War* (Garden City: Doubleday & Co., Inc., 1967), pp. 15-16.
20. IISS, *Military Balance*, pp. 180-181.
21. Author interview with knowledgeable former U.S. military officer.
22. "Reservist Call-Up Issued," *Jane's Defence Weekly*, 18 June 1994, p. 4.
23. R. Jeffrey Smith, "US-South Korean Exercise Put Off as Gesture to North," *Washington Post*, 21 April 1994, p. A18.
24. Barbara Starr, "South Korea Pledges to Boost Self Defense," *Jane's Defence Weekly*, 30 April 1994, p. 3.
25. "South Korea Looking to Beef Up Forces With Apaches," *Defense Marketing International*, 29 April 1994, p. 5.



26. "This Week," *Defense News*, 8-14 August 1994, p. 2; and "Moscow to Repay South Korea in Arms," *Washington Times*, 25 April 1995, p. A14.
27. IISS, *The Military Balance 1994-1995*, pp. 179 & 181.
28. Gregory R. Copley, ed., *Defense and Foreign Affairs Handbook 1990-1991*, (Alexandria, Va.: International Media Corporation, 1990) p. 549; and Institute of Land Warfare, Association of the U.S. Army, "Army Budget Fiscal Year 1995: An Analysis," May 1994, p. 28.
29. Institute of Land Warfare, Association of the U.S. Army, *Washington Update*, March 1995, p. 2; and Barbara Opall, "South Korea Defenses Get New Muscle," *Army Times*, 20 March 1995, p. 9.
30. Tice, "Korea: At the Ready."
31. ABC News, 13 June 1994.
32. Fulghum, "U.S. Pressures North Korea."
33. Barbara Starr, "'No Crisis' Says USA as it Plans Stockpile," *Jane's Defence Weekly*, 9 April 1994, p.4.
34. Barbara Opall and Naoaki Isui, "Allies Put Squeeze on North Korea," *Defense News*, 28 March - 3 April 1994, p. 52.
35. Barbara Starr, "USA Steps Up Carrier Presence off Korea," *Jane's Defence Weekly*, 28 May 1994, p. 1.
36. Les Aspin, "Report on the Bottom-Up Review," Department of Defense, October 1993, p. 20.
37. Lt. Gen. John H. Tilelli, U.S. Army Deputy Chief of Staff for Operations and Plans, in remarks to the Institute of Land Warfare, Association of the U.S. Army, 2 June 1994.
38. Aspin, "Report on the Bottom-Up Review."
39. Headquarters U.S. Army, Office of the Deputy Chief of Staff for Military Operations and Plans, "Strategic Mobility Program," unpublished staff briefing chart reflecting Army requirements for strategic air and sealift (unclassified); and estimates of the author.

40. Gordon, "General Defends Military Exercises in Korea."
41. Institute of Land Warfare, Association of the U.S. Army, AUSA Background Brief No. 57, "Army Issue: Strategic Mobility, Sustainment and Army Missions," May 1993, p. 2.
42. Aspin, "Report on the Bottom-Up Review."
43. John Boatman, "C-17 Shortfall Threatens to Widen Looming U.S. Airlift Gap," *Jane's Defence Weekly*, 21 May 1994, p. 18.
44. Association of the U.S. Army, special report, "Strategic Mobility: Getting There is the Big Problem," December 1989; and Tim Shorrock, "Senate Examining Sealift Command's Lease Oversight," *Journal of Commerce*, 12 May 1994, p. 1.
45. On April 22, 1994, the Japan Defense Agency (JDA) announced the adoption of an agreement with other branches of the government for the facilitation of Japanese response to UN directives pertaining to North Korea. Japanese concern over the emergence of a nuclear threat from Pyongyang is running high (70 percent of the population according to one poll). Some government officials believe that the new agreement is broad enough to permit Japanese acquisition of nuclear weapons. If the JDA move develops into a trend, it should not be surprising to see the beginning of discussions for the employment of Japanese forces in event of hostilities on the peninsula. It may, for example, not be too difficult to integrate some U.S. and Japanese air and naval contingents for early combined operations in the defense effort. If the North Korean threat is sufficiently disturbing, it could become a strong stimulus for the reemergence of Japan as a military power of respectable proportions. See Naoaki Usui, "Japanese Will Follow UN Action in Korea," *Defense News*, 25 April - 1 May 1994, p. 18.
46. U.S. Department of Defense, *North Korean Handbook*, PC-2600-6421-94, 1994, pp. 5-31 and 5-37.
47. U.S. Department of the Army Field Manual 101-10-1, *Staff Officers' Field Manual: Organizational, Technical and Logistical Data* (Unclassified Data), July 1976, Change 1, 10 February 1978, p. 2-140.
48. Trevor N. Dupuy, *Future Wars* (New York: Warner Books, 1993), pp. 179-205.
49. Mann, "Scenarios for a 2nd Korean War."

50. Anderson and Binstein, "Scenarios for a War in Korea."
51. Documentation, "The Bottom-Up Review," *Joint Force Quarterly*, Winter 1993-1994, p. 105.
52. Stephen C. LeSueur, "Perry Defends U.S. Firepower," *Defense News*, 18-24 July 1994, p. 60.
53. Aspin, "Report on the Bottom-Up Review."
54. Institute of Land Warfare, Association of the U.S. Army, "Army Budget Fiscal Year 1995: An Analysis," p.14.
55. Opall, "DoD Plans to Stymie N. Korean Rockets."
56. The South Korean tank inventory expanded from 1,600 to 1,800 vehicles between 1990 and 1994, while their combat effectiveness (measured in TASCFORM designated force potential [DFP]) grew from 3,260 to 5,050. In the same period North Korea increased its tanks from 3,200 to 3,700, but the DFP grew only from 4,800 to 5,900 due to the old designs acquired or manufactured.
57. Paul Beaver, "Flash Points: North Korea," *Jane's Defence Weekly*, 21 May 1994, p. 15.
58. Barbara Starr, "No Dongs May Soon be Nuclear, Warns USN," *Jane's Defence Weekly*, 18 June 1994, p. 1.