

THE UNIVERSITY OF HULL

Military Transformation on the Korean Peninsula:  
Technology Versus Geography

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# Thesis Summary

This thesis provides an explanation of one RMA issue: the effectiveness of contemporary military technology against tough geography, based upon case studies in the Korean peninsula. The originality of the thesis is that it will provide a sound insight for potential foes' approach to the dominant US military power (superior technology and sustenance of war). The North Korean defence strategy – using their edge in geography and skill – tried to protect themselves from the dominant US power, but it may be impossible to deter or defeat them with technological superiority alone. This research also provides a valuable example, through Stephen Biddle's technology and skill theory, which claims that, in the future of war, the skills of the unit (tactical readiness) are as important as the technology involved.

By examining three case studies, the thesis aims to reveal that technological superiority alone cannot guarantee military success against the foe that possesses the geographic advantage and the capability to use its benefits. The first case study of the *Imjin* Wars will examine the significance of geography and capability to using the geographic edge in the Korean peninsula. The second case study of the Korean War will examine how technology alone failed to overcome the skilled and geographically advantageous defenders in modern warfare. Finally, by examining possible conflict scenarios of US-ROK alliance and North Korea, this research will seek to prove that contemporary military technology alone would not guarantee military success and deterrence against North Korea, which is both geographically advantaged and highly skilled.

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## Chapter 7 Conclusion

# ABBREVIATIONS AND ACRONYMS

ACMs - Advanced Conventional Munitions  
ATG - Advanced Tactical Group  
AUP - Advanced Unitary Penetrator  
BCT - Brigade Combat Team  
C3 - Command, Control, and Communications  
C4I - Command, Control, Communication, Computer, and Intelligence  
CALM - Conventional Air Launched Missile  
CAS - Close Air Support  
CEC - Cooperative Engagement Capability  
CEP - Circular Error Probable  
CFC - Combined Force Command  
DMZ - Demilitarized Zone  
DOD - Department of Defence  
DOE - Department of Energy  
DPRK - Democratic People's Republic of Korea  
EEZ - Exclusive Economic Zone  
EPW - Earth-penetrator weapon  
FAS - Federation of American Scientists  
FEAF - Far East Air Force  
FEBA - Forward Edge of Battle Area  
FECOM - Far East Command  
FMS - Foreign Military Sales  
FOFA - Follow-on-Forces Attack  
GBU - Guided Bomb Unit  
GPR - Global Posture Review  
HDBTs - Hard and Deeply Buried Targets  
IAEA - International Atomic Energy Agency  
ICBM - Intercontinental Ballistic Missiles  
IMHC Institute for Military History Compilation  
ISAF - Israeli Air Force  
ISR - Intelligence, Surveillance, and Reconnaissance

JASSM - Joint Air-to-Surface Stand-off Missile  
JCS - Joint Chiefs of Staff  
JSOW - Joint Standoff Weapon  
KIDA - Korea Institute for Defence Analysis  
KRIS - Korea Research Institute for Strategy  
KWP - Korean Worker's Party  
MAD - Mutual Assured Destruction  
MAP - Military Assistance Program  
MD - Missile Defence  
MLRS - Multiple Launch Rocket System  
MND - Ministry of National Defence  
MOP - Massive Ordnance Penetrator  
MRC - Major Regional Conflict  
MTCR - Missile Technology Control Regime  
MTR - Military Technical Revolution  
NAS - National Academy of Sciences  
NEP - Nuclear Earth Penetrator  
NKPA - North Korean People's Army  
NNSA - National Nuclear Security Administration  
NPR - Nuclear Posture Review  
NRDC - Natural Resource Defence Council  
OMG - Operational Manoeuvring Group  
PC - Pacific Command  
PDD - Presidential Decision Directive  
QDR - Quadrennial Defence Review  
PIP - Performance Improvement Plan  
PLA - People's Liberation Army  
PRC - People's Republic of China  
PVA - People's Volunteer Army  
RDO - Rapid Decisive Operation  
RMA - Revolution in Military Affair  
ROK - Republic of Korea  
RSC - Reconnaissance-Strike Complex  
SBCT - Stryker Brigade Combat Team

SDB - Small-Diameter Bomb  
SLBM - Submarine-Launched Ballistic Missiles  
SLOC - Sea Lane of Communication  
SOS - System of Systems  
SSM - Surface to Surface Missile  
TACMS - Tactical Missile System  
UA - Unit of Action  
UNC - United Nations Command  
USAF - US Air Force  
USFK - United States Forces Korea  
USJFCOM - Joint Force Command  
US PACOM - United States Pacific Command  
WMD - Weapons of Mass Destruction

# Chapter 1 Introduction

The initial idea for this project came from the transformed military strategy that both the Koreans and the US implemented in response to the rapid change of the Korean peninsula's security circumstance at the end of the Cold War. After the Cold War, North Korea had to acclimate itself to the less warm relationship with Russia<sup>1</sup> and China. As a consequence, they suffered an economic crisis and major setbacks in their warfare capability, since they were not able to introduce new weaponry and train their forces properly for offensive purposes. On the other hand, even though ROK (Republic of Korea) suffered an economic crisis in 1997, it recovered quickly and enjoyed steady economic growth, which enabled it to produce more modernized and technologically advanced armed forces. Along with the economic growth that gave them a financial basis to improve their military forces, the ROK was prompted towards modernized and technology-centred armed forces due to their contemporary security circumstances.

Firstly, ROK will recuperate war time operation command in 2015.<sup>2</sup> Secondly, they have started to protect their national interest not only within the Korean peninsula but also along its outside. Under these circumstances, military authorities were urged to update independent and long-range operations capabilities. The ROK proposed two grand threats in the Defence White Paper of 2004. It suggested "the direct military threat" which was conventional weapons, Weapons of Mass Destruction (WMD), and front-line troop disposition of North Korea. In addition to the direct military threat, unspecified threats were added. Terrorism,

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<sup>1</sup> The Soviet Union and North Korea formed an alliance in July, 1961, which included The Mutual Military Aid clause but this treaty ceased in September, 1985 after the Cold War ended, allowing Russia and ROK to establish formal diplomatic relationship in 1990.

<sup>2</sup> The ROK forces' operation command was handed to the UNC (United Nation Command) during the Korean War (14<sup>th</sup> of July, 1950). Even though the peace time operation command recuperated in December, 1994, wartime command still belongs to the UNC. The significance of wartime command recuperation was not just restricted to the recovery of operation command independence. The ROK government will be required to improve their forces' quality especially in the weaker areas to achieve independent operation. Even though they possessed massive military power, there was a lack of information on warfare capability due to heavy US reliance. The modernization of forces to operate independently will be carried out for next few years.

WMD expansion and regional instability were mentioned as unspecified threats; however, due to their concern at friction with neighbouring countries, the ROK did not mention their neighbouring countries as a future threat. However, in The Navy and Air Force Vision of 2025 which mentions the ROK's future objectives, strategy, tactic and force improvement plan, it was stated that protecting the national interest involved securing the Sea Lane Of Communication (SLOC), the Exclusive Economic Zone (EEZ), the Fishing Protection Zone, the Continental Shelf, and the disputed *Dok-Do* island, which are vital to national security. This means their operations range will need to expand by at least 300-500km away from coastlines and borders. Although they are hesitant to speak of such matters directly, the ROK recognizes neighbouring countries as future threats to the pursuit of their national interests. Therefore, the ROK military authorities are also preparing and building up military strategy and capabilities against regional powers. Accordingly, their transformation to technology centred forces has progressed significantly in recent years.

The USFK (United States Forces Korea) has also transformed their strategy according to the GPR (Global Posture Review) and Flexibility agreement, which obviously aimed to transform their strategy in this area to a more technologically-centred one.<sup>3</sup> Consequently, the Korean peninsula is experiencing the biggest disparity in military technology since the Korean War. Much research is on-going regarding how the technological disparity itself may affect possible Korean peninsula conflicts, but most of the research is focused on the area of a possible North Korean invasion of the South and its defence. However, there is no guarantee that this will be the only possible conflict; the strategist has to research the entire gamut of possible situations and prepare solutions to meet the needs of whatever situation may arise. During the First North Korean nuclear crisis in 1994, the US prepared a surgical operation to the suspicious North Korean nuclear site (*Yongbyon*) similar to an operation performed in Libya (1986).<sup>4</sup>

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<sup>3</sup> See) Douglas J. Feith, Under Secretary of Defense for Policy, *REPORT TO CONGRESS: Strengthening U.S. Global Defense Posture*, September 2004

<sup>4</sup> The former ROK president *Kim Yongsam* gave testimony to the SBS radio (*Seoul*, ROK) on 13<sup>th</sup> of April, 2009 that there were 33 US battleships and 2 air craft carriers in the East Sea to bombard *Yongbyon* during the first crisis, and he phoned the US president (Bill Clinton) to avoid all-out war with North Korea which he believed led to the US decision not to bombard *Yongbyon*.

Firstly, one needs to look at the deterrence side of Korean peninsula security. North Korea started to adopt an asymmetric warfare strategy using WMDs, most notably surface-to-surface missiles (SSM) and long-range artillery, from the beginning of the 1980's. The missiles and long-range artillery were not easy to intercept and left devastating effects on the South once launched. In addition, the proliferation of those technologies and the increased range of missiles would become a direct threat to US security. This became a huge security burden to the US-ROK alliance. Under these circumstances, the US-ROK alliance requires the capability to neutralize such weapons before being launched. In turn, this capability will become a necessary element of North Korean deterrence, since it will debilitate the efficiency of North Korean military strategy. Considering the beneficial effects of deterrence, the US-ROK alliance should not rule out an offensive (pre-emptive strike) against North Korea

Secondly, it may be the case that the US-ROK alliance has to launch an offensive due to sudden changes in North Korea. At present, the US-ROK alliance has reportedly been engaged in discussion to flesh out OPLAN 5029; the ROK-US Combined Forces Command (CFC) operation plan to prepare for sudden changes in North Korea (Contingency plan). Based on the various statements given by Walter Sharp (The Chief of USFK), the operation plan currently under discussion by the ROK and the US includes plans for a military operation in response to five or six scenarios of upheaval in North Korea. These include: the outflow of nuclear weapons or other WMDs, a civil war resulting from a regime change or *coup d'état*, a South Korean hostage incident within North Korea, a large scale defection of North Korean residents, or a large scale natural disaster.<sup>5</sup> Consequently, this operation plan also considers the possibility of an offensive against the North Korean state.

Thirdly, in the case that the US-ROK alliance launches an all-out offensive, the all-out war plan (OPLAN 5027) has been developed by the ROK-US CFC. After the OPLAN 5026, an all-out war scenario reform (5027-94) was created since the North could retaliate, escalating the conflict to an all-out war. The all-out war operation plan (OPLAN 5027) experienced significant transformation in 1994 and has been updated every two years since that time (96, 98, 00, 02, 04, 06, and 08). Unlike previous issues which concentrated on how to defend the territory once the North launched the offensive, OPLAN 5027-98 is a much more offensive-minded plan, outlining a pre-emptive attack if North Korea showed unmistakable signs of

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<sup>5</sup> *The Hankyore (Seoul)*, 2<sup>nd</sup> of November, 2009

preparing to strike. It also includes a detailed operation plan to achieve the ultimate goal of abolishing North Korea as a functioning state – ending the rule of its leader (*Kim Jongil*), and reorganizing the country under the ROK control – as well as strategies for manoeuvring warfare north of the Demilitarized Zone and countering a sudden chemical and biological attack against *Seoul*. Based on the Iraq Freedom Operation success and further developments in Missile Defence (MD) especially sensor technology, OPLAN 5027-04 added new plans using the latest development of airpower and sensor technology to respond to North Korean missile launching or possible invasion without waiting for many ground forces to arrive. The latest OPLAN 5027-08 contained a minor correction of the plan due to the wartime command takeover.<sup>6</sup> Based on the development of OPLAN 5027, it is quite apparent that the ROK-US CFC's all-out war plan has developed in a way which is elaborate, aggressive, and which uses their technological dominance.

Michael O'Hanlon insisted in his book, "Defence Strategy for the Post-Saddam Era" that pre-emptive use of force by the US-ROK alliances against North Korea seems very unlikely. Consequently, the United States should reduce its conventional commitment in the Korean peninsula. O'Hanlon argues that the North Korean front line and military headquarters are well protected, and any pre-emptive action would trigger "a massive retaliation from the North"; there is no easy access of approach to *Pyongyang*; and the number of active duty NKPA is large and loyal, and will not "melt away like the Saddam's Iraqi forces."<sup>7</sup> As O'Hanlon observes, due to the immense cost and casualties they would suffer, the US-ROK alliance would not pre-empt North Korea.

However, the US-ROK alliance feared the potentially devastating effect of North Korea's asymmetric strategy and possible proliferation of their arsenal and technology. Therefore, the US-ROK alliance has been preparing the offensive strategy and the North Korean was warned by the ROK government that North Korea be facing military action if there were further provocation. Therefore, even though the US-ROK alliance wants to avoid the pre-

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<sup>6</sup> Excerpted and analysed from- Global Security; *OPLAN 5027 Major Theater War-West*, <http://www.globalsecurity.org/military/ops/oplan-5027.htm> (Accessed on the 2<sup>nd</sup> of November, 2009)

<sup>7</sup> M.E. O'Hanlon, *Defence Strategy for the Post-Saddam Era*, Washington, D.C, Brookings Institution Press, 2005, p.100-101

emptive action and following offensive, this is the conflict scenario that still exists in the Korean peninsula.

Whereas the NKPA was pursuing Soviet Union style military strategy, which involved breaking through to the front and eventually advancing to *Seoul* via a massive artillery support and mechanized power, the US-ROK alliance's main military strategy was to defend them in the North of *Seoul* which was clearly reflected in OPLA 5027-74.

However, the problem arose when North Korea proposed the idea of asymmetric warfare following their realization that they could no longer compete with the South in an arms race. The first point to consider is that the *Seoul* metropolitan area is located near the cease-fire line and the depth of Korean peninsula is relatively short. Secondly, North Korea possessed an elaborate military industry due to their self-reliance ideology. Therefore, the North started to develop and deploy WMDs, which became their main means of asymmetric warfare beginning in the middle of 1980s. Most notably, their missiles and nuclear weapon development plan became an international issue, bringing about the first nuclear crisis in 1994. At this point, the US-ROK CFC drafted OPLAN 5026 and OPLAN 5027-94. Both OPLANs included offensive elements unlike the previous ones. However, due to two previous ROK administrations' peaceful and diplomatic approaches to North Korea (Sunshine policy), the ROK military authorities were reluctant to confirm that a pre-emptive strike or planned offensive was part of their official military strategy.

The incumbent administration adopted the "non-nuclear, openness, 3000"<sup>8</sup> as their inter-Korea policy. This was pragmatic and reciprocal. *Kim Jongun*, who was appointed as the designated successor to *Kim Jongil*, wanted to bolster his military credentials.<sup>9</sup> Thus the tension between the North and South started to rise again. There was the sinking of the battleship *Chonan* on 26<sup>th</sup> of March, 2010, the bombardment of *Yeonpyong* Island on 23<sup>rd</sup> of November, 2010, and the change of the ROM minister of National defence on 4<sup>th</sup> of

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<sup>8</sup> If North Korea declared the denuclearization and opened the gate, the South would help them to reach 3000 US dollar per capita income in ten years. Excerpted from- *Hanguk Gyongjae* (*Seoul*, ROK), 20<sup>th</sup> of January, 2009

<sup>9</sup> ABC News (New York, United States), 26<sup>th</sup> of November, 2010

December, 2010.<sup>10</sup> As a result, the level of official comment from the ROK government had been seriously raised. The ROK minister of National Defence, *Kim Taeyong*, mentioned on the 20<sup>th</sup> of January, 2010 at an open forum (Subject: National Defence Reform and the Prospect of South and North Korea Relations) that, “even though there has been a debate on the lawfulness of pre-emptive strike, due to the severe damage caused once the North Korean nuclear weapons are launched, if there is an obvious sign of North Korean nuclear attack, we will pre-empt suspicious targets”.<sup>11</sup> This comment officially confirmed that ROK would pre-empt the North Korean WMDs targets if there is an obvious signs of attack, which was also the spine of OPLAN 5026. In addition, after the *Yonpyong* Bombardment, *Kim Taeyong* was replaced by the hardliner *Kim Kwanjin*.<sup>12</sup> In his inaugural speech on 4<sup>th</sup> of December, 2010, he declared that 1) ROK was experiencing the worst crisis after the Korean War, 2) They needed to react strongly and immediately against the North Korean provocation and must continue until North Korea yielded completely, 3) They did not like war but would not be afraid of wage it against the North. The second comment in his inaugural speech, confirms that once the North attacked them, they would retaliate immediately and break down the North Korean regime in the end, the core of OPLAN 5027-94. However, the most significant comment is the third. In this comment, he officially declared that ROK would consider the offensive to North Korea as a possible conflict scenario unlike two previous administrations who had not been eager to comment on this matter.

The offensive scenario, including pre-emptive strike and all-out war was emerged after the North Korean asymmetric threat (WMDs) became a reality. It did not become an official policy due to two previous administration’s peaceful approach to inter-Korea relationship. However, after the *Yonpyong* Bombardment and Sinking of the *Chonan* battleship, those

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<sup>10</sup> The *Chonnan* sinking cost the lives of 46 soldiers and the *Yonpyong* bombardment was the first direct attack on the South territory. It caused the first civilian casualties after the armistice in 1953.

<sup>11</sup> *Jungang Ilbo (Seoul)*, 10<sup>th</sup> of January, 2010

<sup>12</sup> After the incident on *Yonpyong* Island, the ROK government was asked why there was no air-strike on North Korea's coastal artillery positions. *Kim Taeyong* replied that such an airstrike risked prompting a "full-blown war". Excerpted from- ABC News (New York, United States), 26<sup>th</sup> of November, 2010 His comment was heavily criticized and he was quickly replaced by the hardline minister. It also shows that the ROK government would no longer tolerate the North Korean provocation and considered the offensive as the possible option.

offensive scenarios no longer existed in the document alone and became an official policy by incumbent government.

However, the question remains as to whether the technologically advanced US-ROK joint force could achieve a successful and decisive strike against the North Korean defence, once they have launched the offensive. In the history of the Korean peninsula, the potent Chinese and Japanese expedition forces in many cases suffered because of the Korean defenders who used their geographic edge.<sup>13</sup> During the Korean War stalemate, the technologically advanced US forces also struggled to achieve their limited target (Dominant Hill) against the communist forces that were able to use the Korean peninsula's geographic advantage.<sup>14</sup> Moreover, in contemporary warfare, especially in Afghanistan where the mountainous topography is as dominant a feature of the landscape as the Korean Peninsula, the technologically advanced NATO forces are struggling against *Al-Qaeda*, which has the capability to use their knowledge of the local geography to their advantage. Consequently, it would be rash to assume that technological dominance alone would lead to military success against the North Korean defenders who have a similar advantage.

## Methodology and literature review

This thesis will adopt Stephen Biddle's works as the conceptual base to examine the core claim of the research: military technology alone may not result in successful outcome in war once the defender is skilled enough to maximize their geographic defensive edge. In addition, it will also rely on Sun Tzu's "Art of War" which indicated the importance of geographic dimensions of war in the orient. Biddle insisted in his writings after the First Gulf War (1991) that the skill imbalance between the Coalition and Iraqi forces enhanced the efficiency of military technology and broke down the Iraqi regime easily.<sup>15</sup> After a careful review of the

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<sup>13</sup> Detailed research on traditional Korean peninsula defensive warfare strategy will be given in Chapter 3.

<sup>14</sup> The concrete analysis of positional warfare to capture the dominant hill during the stalemate of Korean War will be given in Chapter 5.

<sup>15</sup> See) S. Biddle, *Victory Misunderstood: What the Gulf War Tells Us About the Future of Conflict*, *International Security*, 21(2): Fall, 1996, p.139-179

Afghan campaign, Biddle published additional writings and insisted that in the early phase of war, when the NATO forces met the inexperienced and less skilled *Taliban*, due to the skill imbalance, they enjoyed a technological advantage. In the later phase of war when the skilled and resolute *Al-Qaeda* fighters were introduced, the NATO forces were struggling to maximize the technological advantage and the significance of skill stood out.<sup>16</sup> In other words, Biddle analyses contemporary Afghan and other campaigns and insists that the offender's superiority of technology and its efficiency will depend upon the defender's capability of using their geographic edge.

In the contemporary Korean peninsula, a few military agreements and operation plans between the US and ROK such as OPLAN 5026, 5027, 5029, GPR, Flexibility Agreement, Wartime command takeover clearly show that they have transformed their strategy to a technology-centred one. According to their military doctrine, North Korea has improved their

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S. Biddle, M. Fischerkeller, and W. Hinkle, Skill and Technology in Modern Warfare, *Joint Force Quarterly*, 22: Summer, 1999, p.18-27

S. Biddle, The Past as Prologue: Assessing Theories of Future Warfare," *Security Studies*, 8(1): Fall, 1998, p.1-74

S. Biddle, *Chapter 7 in Military Power: Explaining Victory and Defeat in Modern Battle*, Princeton, Princeton University Press, 2004

S. Biddle, The Gulf Debate Redux: Why Skill and Technology are the Right Answer, *International Security*, 22(2): Fall, 1997, p.163-174

<sup>16</sup> Referred Biddle's works are

S. Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle*

S. Biddle, Afghanistan and the Future of Warfare, *Foreign Affairs*, 82 (2): March/April 2003, p.31-46.

S. Biddle, M. Fischerkeller, and W. Hinkle, The Interaction of Skill and Technology in Combat, *Military Operations Research*, 7(1): 2002, p.39-56.

S. Biddle, Rebuilding the Foundations of Offense-Defense Theory, *Journal of Politics*, 63(3): August, 2001, p.741-774

S. Biddle, M. Fischerkeller, and W. Hinkle, Skill and Technology in Modern Warfare

S. Biddle, The Past as Prologue: Assessing Theories of Future Warfare

S. Biddle, Victory Misunderstood: What the Gulf War Tells Us About the Future of Conflict

S. Biddle, Explaining Military Outcomes, in R.A. Brooks and E. A. Stanley, eds., *Creating Military Power: The Sources of Military Effectiveness*, Stanford, Stanford University Press, 2007, p. 207-227

S. Biddle, Toppling the Taliban in Afghanistan," in J. Engstrom, ed., *Understanding Victory and Defeat in Contemporary War*, London, Routledge, 2007, p.187-205

defensive strategy using the geographic merit and skill.<sup>17</sup> Therefore, according to Biddle's insistence, the efficiency of military technological dominance of the US-ROK alliance in case of an offensive against the NKPA (North Korean People's Army) would not be as great as the US-ROK alliance would expect, since the NKPA has accumulated vast experience of defensive warfare using their geographic edge, has fortified their territory, and has trained their entire force to use this advantage.

Significant questions to be raised are whether Biddle's argument on skill and technology is correct and whether it can be applied to possible Korean peninsula conflict. The questions to be answered in this thesis are as follows: First, can Biddle's insights about modern military technology, skill and geography apply in regards to possible Korean Peninsula conflict? Second, if Biddle's argument can be applied to a possible Korean conflict, does the technological dominance of the offender (US-ROK alliance) guarantee their success against the defender (North Korea) who have a home-terrain advantage? The main question of this thesis – whether the technologically dominant US-ROK alliance can have ultimate success against the North who is ready to use their defensive edge – is also closely linked with one of the RMA (Revolution in Military Affairs) debates concerning the efficiency of newly-developed military technology to the geography and the limits of contemporary technology.

Accordingly, before examining Biddle's argument and its application to a possible Korean conflict, it needs to first be demonstrated that the Korean peninsula conflict meets all of his applicable criteria. Therefore, the second chapter of this research will start by examining the contemporary debate on the technological effectiveness and skill which is associated with the capability to use the geographic edge, through Biddle's claims and *Sun Tzu's* Art of War. The second and third section will provide the historical overview on the RMA and show that the US-ROK joint forces have been transformed into high-tech forces and developed strategies and tactics to use their strength in military technology dominance.

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<sup>17</sup> North Korea accumulated the vast experience of defensive warfare using the mountainous terrain of Korean Peninsula during the Korean War and developed it through the fortification of territory and training the entire army as a “cadre army” under the four military guideline which was espoused by *Kim Il-sung* at the Fifth Plenum of the fourth KWP (Korean Workers Party) Central Committee in December, 1962. Therefore, North Korea has a capability to maximize their geographic defensive edge.

The historic overview of RMA will be divided into two sections: before and after 9/11. The research for this chapter will consult the MTR (Military Technical Revolution), SOS (System-of-Systems), Joint Vision 2010, and a few writings on the issue of what the RMA is and how the RMA had developed before 9/11. This will reveal that the US military strategy had transformed and concentrated on technology after the Cold War ended. For that purpose, the following works will be consulted,

- T.W. Galdi, *Revolution in Military Affairs? Competing Concepts, Organizational Responses, Outstanding Issues*, CRS (Congressional Research Service) Report for Congress, 11<sup>th</sup> of December 1995. Posted on Federation of American Scientists (FAS) Website; <http://www.fas.org/man/crs/95-1170.htm>,
- M.C. FitzGerald, *The New Revolution in Russian Military Affairs, RUSI Whitehall paper series*, 1994
- M. Patrick, *The Impact of the Revolution in Military Affairs, Journal of Strategic Studies*, 23 (1), March 2000
- J.R. Blaker, *Understanding the Revolution in Military Affairs: A Guide to America's 21<sup>st</sup> Century defence, progressive policy institute Defence Working Paper No.3*, January, 1997
- E. Cohen, *A Revolution in Warfare, Foreign Affairs*, 75(2): March/April, 1996
- Admiral W.A. Owens, *The Emerging U.S. System-of-Systems, Strategic Forum*, National Defense University Institute for National Strategic Studies, 63: February, 1996
- Admiral W.A. Owens and E. Offley, *Lifting the fog of war*, New York, FSG, 2000
- C.S. Gray and G. Sloan, *Geopolitics, Geography and Strategy*, London, Frank Cass Publishers, 1999
- C.S. Gray, *Strategy for Chaos: Revolutions in Military Affairs and Other Evidence of History*, London, Frank Cass, 2002
- D.J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future*, London, Routledge, 2004

After that, the chapter will explain that the US-ROK joint forces have been further developed to face newly emerged threats<sup>18</sup> during the War on Terror era. To review the general US

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<sup>18</sup> The US threat recognition in the War on Terror will be reviewed in the next chapter in detail.

The newly emerged threats are

military strategy, in which it can be seen that the US military has been transforming towards technology-centred forces, the US defence review and military strategy review are consulted.<sup>19</sup> In addition, to review WMDs, HDBTs, GPR, and the US new nuclear strategy which have influenced the Korean peninsula security immensely in the last few years, the importance of the following works will be considered.<sup>20</sup>

- The US DOD, *Report to Congress on the Defeat of HDBTs (Hard and Deeply Buried Targets)*, July, 2001
- The US DOD, *Nuclear Posture Review Submitted to Congress on 31 December 2001*, January 2002. Excerpts are available from the Global Security Website: <http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm>
- The US DOD, *Nuclear Posture Review*, April, 2010
- Douglas J. Feith, op.cit.,
- Chairman of the JCS, *National Military Strategy to Combat Weapons of Mass Destruction*, 13 February 2006

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1) Adversaries – Rogue States and Terrorist Organizations

2) The major threat – WMD and its proliferation

3) The style of conflict – Small wars and Counter-Insurgency which emphasized the flexibility and mobility

<sup>19</sup> The following are dominantly reviewed

The US Department of Defence (DOD), *Quadrennial Defense Review Report*, Washington, 30<sup>th</sup> of September, 2001

The US DOD, *Quadrennial Defence Review Report*, Washington, 6<sup>th</sup> of February, 2006

The US Joint Chiefs of Staff (JCS), *The National Military Strategy of the United States of America*, 2004

The President of United States, *National Security Strategy 2002*, Washington, The White House, September, 2002

The President of United States, *National Security Strategy 2010*, Washington, The White House, May, 2010

<sup>20</sup> WMDs became the major asset for the NKPA and those WMDs are usually HDBTs; therefore, the US stance on the WMDs and HDBTs is significant security concern in the Korean Peninsula. To face the small wars and counter-insurgency flexibly, the US military authorities had a full defence posture review and materialized as GPR. Due to the fact that GPR would allow the USFK flexibly, it will also influence the Korean peninsula security severely.

In the third chapter, the research will detail why the geographic element of war is so important to Korean peninsula strategy by examining traditional defence strategies using the geographic edge. To review the traditional Korean military strategy, the choice is restricted to Korean sources. Among various resources, “HanGukGoDaeSaHwaeEuiGunSaWaJungChi (the Military and Politics of ancient Korean kingdoms)” will be used as a primary source to research ancient Korean kingdoms’ military strategies.<sup>21</sup> In addition, the history books commissioned by the Institute for Military History Compilation (IMHC) of ROK to research the traditional military strategies of the Korean kingdoms will also be consulted.<sup>22</sup>

The later part of the third chapter will also examine the NKPA strategy, particularly defence strategy, to show that North Korea has already fortified their territory using the geographic edge and has the capability to use this geography to their advantage. The NKPA military strategy transformed dramatically to asymmetric warfare strategy using WMDs after the Cold War ended. Therefore, selecting sources reflecting the contemporary development is very important. The US and western military societies have done much research on WMDs and their proliferation. However, regarding the North Korean asymmetric strategy and warfare capability, the detailed and contemporary knowledge is better researched in the ROK military society which has to face the North Korean WMDs directly if there is a conflict. Therefore, the Korean resources will mainly be consulted. For that purpose, the following books are consulted predominantly for the NKPA military strategy research.

- M.S. Jang, *BukHanGunSaYeonGu*, Seoul, Palbokwon, 1999
- Bukhanyeonguhakhwae, *BukHanEuiGunSa*, Seoul, Gyonginmunhwasa, 2006

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<sup>21</sup> Y. H. Kim, *HanGukGoDaeSaHwaeEuiGunSaWaJungChi*, Seoul, Korea University Press, 2002

<sup>22</sup> I.H. Seo, *HanKukGoDaeGunSaJeonRyak (The military strategy of Ancient Kingdoms)*, IMHC, ROK Ministry of National Defence (MND), 2005

B.O. Choi, *HanMinJokJeonJangTongSa1-GoDae (The military history of Ancient Kingdoms)*, IMHC, ROKMND, 1994

J.S. Yoo, *HanMinJokJeonJangTongSa2-GoRyeoSiDae (The military history Goryeo Kingdom)*, IMHC, ROKMND, 1993

H.K. Jang, *JoSeonSiDaeGuSaJeonRyak (The military strategy of Joseon Dynasty)*, IMHC, ROKMND, 2006

J.S. Yoo, *HanMinJokJeonJangTongSa3-JoSeonSiDaeJeonPyeon (The military history of early stage of Joseon Dynasty)*, IMHC, ROKMND, 1996

- Graduate School of North Korean Studies, Kyungnam University, *BukHanGunSaMunJeEuiJaeJoMyong*, Paju, Hanwool, 2006
- M.R. Lee, *KimJeongIlCheJeEuiBukHanGunDaeHaeBu*, Seoul, Hwanggeumal, 2008

Following the third chapter research which aims to show that Biddle's arguments on modern technology, skill and geography can be applied to the possible Korean conflict, the second part of the research aims to examine the validity of his argument, which leads to the conclusion that a modern military itself cannot guarantee military success against the defender who has a capability to use their local knowledge of the landscape to their advantage.

The methodology of the thesis planned interviews and three case studies. Interviews were planned to examine the NKPA military strategy and contemporary development of US-ROK military strategy. In addition, since most case studies materials were not easy to access in the UK, a field study in Korea was also planned, which inevitably led to the time-consuming translation procedure.<sup>23</sup> Initially, it was believed that interviewing intelligence officers in the ROK Armed Forces would be ideal to examine the NKPA military strategy because they are the ones dealing with the most up-to-date information about the movements of the North Korean military. However, from the start, this met several problems. Most of the e-mail contacts were not successful. To solve this problem, human contact was used. After the initial contact with possible interview targets, it was found that they were either reluctant or not passionate due to the sensitive nature of the questionnaire. At the end, the researcher failed to get any relevant information.

Following the failure of the interview plan, the remaining options were considered. The only possible solution was to rely on the published literature. There was an initial hesitation to depend upon published literature such as news article and research report as it is usually slightly outdated. In addition, it was initially thought that the published literature tended to slightly favour the government position and did not research deeply in the certain areas since

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<sup>23</sup> 1) The focus of the Korean War case study is technology and geography. However, especially the significance of geographic dimension in this war has not been researched enough in the western military studies, and the geography of the Korean peninsula has also not been well-informed.

2) The *Imjin* Wars are not well-known in western military research.

the information was distributed by the government. However, that was the only option left and the adoption of literature analysis was ultimately successful. For the fledgling researcher, it was difficult to get up-to-date information through interviews, but there was an abundance of published literature. This, at least, was a starting point. It was initially thought that since the reports were mostly government official documents, there would be restraint. However, in fact, even though I failed to get up-to-date information, because military experts reinterpreted the given source; there were various in-depth research papers. Therefore, the case study was adopted based on published literature reviews and field studies as a major research method of the second part of the research.

The first case study is the seven year war between Korea and Japan (1592-1599, *Imjin Wars*). The reasons for choosing this case were: it is an ideal case to show that the geographic factors are an important part of Korean peninsula warfare; the Korean peninsula is an adequate place to wage a defensive warfare using topography; and the Koreans have developed defensive strategy and tactics using their geography.<sup>24</sup>

Therefore, the focus on the *Imjin Wars* research is not related to broad and international issues such as how the war had been transformed into international warfare following the Chinese engagement, or how the Chinese and Japanese regimes were changed due to the fatigue of prolonged war effort. Instead, the focus of this case study will be given to the detailed military operation and action by *Joseon* and Japan as well as the *Joseon* defence strategy and tactics whose contents are mostly published in Korea. For that reason, the *Imjin Wars* military history book published in Korea will be the main source used. The following books and articles are predominantly consulted for the research in this chapter:

- I.H. Seo, *ImJinWaeRanSa*, Seoul, IMHC, ROKMND, 1987
- J.S. Yoo, *HanMinJokJeonJangTongSa3*

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<sup>24</sup> The traditional Korean defensive strategy however, can be examined in many cases; the *Imjin Wars* are the case that can prove many decisive points. Most of all, analysing the initial military fiasco of the *Joseon* dynasty (the Korean dynasty at that time) can explain the outcome of direct combat with the well-trained and outnumbered enemy due to strategic mistakes of commanders without applying the traditional defensive warfare strategy using terrain. Secondly, analysing the strategic and tactical change of *Joseon* using defensive terrain and guerrilla warfare can explain the advantage of traditional defensive warfare strategy.

- W.R. Cho, *SaeRoUnGwanJeomEuiImJinWaeRanSaYeonGu*, Seoul, Aseamunhwasa, 2005
- The second edition of *ImJinJeonRanSa* series (*Sang–Jung-Ha*) published by ROK Imjinwaeransayeonguhwae (*Imjin Wars Research Committee*) in 1994: H.S. Lee, *ImJinWaeRanSaSang*, Seoul, Imjinwaeransayeonguhwae, 1994, H.S. Lee, *ImJinWaeRanSaJung*, Seoul, Imjinwaeransayeonguhwae, 1994, and H.S. Lee, *ImJinWaeRanSaHa*, Seoul, Imjinwaeransayeonguhwae, 1994

By examining the initial military fiasco of the Koreans which did not approach the war by using their traditional defensive warfare strategy based around the Korean peninsula's steep mountains and deep and wide rivers, it is revealed that the defensive strategy using geographic edge is an integral part of Korean peninsula warfare strategy. Meanwhile, examining their gradual transformation of military strategy to use their geographic potential, and the ultimate withdrawal of the Japanese which was contributed by the Koreans' masterful application of defensive strategy using the Korean peninsula topography, demonstrates the main argument of thesis.

The second case is the Korean War. The reasons for choosing this case were that the Korean War lends a unique opportunity to evaluate the efficiency of modern military technology against the Korean peninsula's mountainous topography. We can also examine the course of action for the possible Korean peninsula conflict as well as the origin of both Korea's military strategies. Like the first case study, its focus does not lie in international politics and diplomatic matter such as why the war broke out, how the war accelerated into the international war, how the regimes in both Korea's were supported by communists and capitalists and eventually why the cease-fire status in the Korean peninsula was solidified. For the purpose of research, it is required to consult the detailed military action and operations. The mainstay of Korean War military operation research such as the NKPA western front operation, *Naktong* River line defence campaign, *Inchon* landing operation and Marching North, the PVA offensives will refer to both Korean and American resources. However, the newly spotlighted cases such as the NKPA invasion plan and strategy, the battle of *Chunchon* in the initial phase of the war, and the communist defence strategy and operation during the stalemate will be predominantly researched by consulting the Korean sources. The following books and articles will be the spine of this part of research:

- Department of Military History, Korea Military Academy (KMA), *HanGukJeonJaengSaBuDo*, Seoul, Hwanggeumal, 2005
- R.E. Appleman, *South to the Naktong, North to the Yalu*, Centre of Military History, Washington D.C, the US Government Printing Office, 1992
- B.C. Mossman, *Ebb and Flow November 1950–July 1951*, Washington D.C, Centre of Military History, United States Army, 1990
- Official military history of Korean War series- IMHC, *HanGukJeonJaengSang*, Seoul, Guningongjehwae (Military Mutual Aid Association), 1995, IMHC, *HanGukJeonJaengJung*, Seoul, IMHC, 1996, and IMHC, *HanGukJeonJaengHa*, Seoul, IMHC, 1997

In this case study, examining the battle of *Chunchon* in the initial stage of war and the position warfare during the stalemate reveals that technological dominance alone cannot guarantee military success against the defender who can use their geographic edge through adequate training, fortification and command. In addition, examining the western front campaign during the initial phase of war and the UN forces' marching north campaign will demonstrate that once the defender loses the capability to use their geographic defensive edge, the offender's dominance in technology will increase and become a decisive factor in the war.

The final case will be the application of contemporary military technology to the strategically important North Korean targets. Chapter Three already examined the North Korean defence strategy using their mountainous geography, based on the instruction of the Korean War and their tactical preparedness regarding this edge. Now we will directly evaluate the contemporary military technology's eventual effectiveness against the North Korean HDBTs. Accordingly, this chapter confirms Stephen Biddle's argument that, even though an offender may possess the upper hand in military technology, this will not guarantee ultimate military success against a defender who has a capability to use the local geographic defensive edge.

## Purpose and originality of research

The security circumstance in the Korean peninsula has been drastically transformed during the post-Cold War era. The major North Korean threat has been shifted from the NKPA mechanized troops to the asymmetric assets which challenge the US-ROK alliances

weaknesses such as WMDs and guerrilla warfare capability. The US-ROK alliance's approach to the possible conflict has also been transformed from a forward defence strategy denying the NKPA mechanized troops breakthrough to *Seoul* to a technology and capability centred strategy which aims to equip the capability to neutralize the North Korean asymmetric warfare assets and the centre of gravity targets for the ultimate deterrence and nullification of the North Korean strengths in possible conflict. However, the contemporary research is still focusing on the issues of thwarting North Korean Two-Front and High-Speed warfare strategy drafted during the Cold War to ensure the North Korean armoured troop's breakthrough to *Seoul*.<sup>25</sup> In addition, even though there have been a few articles regarding the possible collision between the US-ROK alliance's technological approach and the North Korean asymmetrical warfare strategy, the focus of ROK academia has been how to neutralize the North Korean long-range artillery – which is the most devastating of North Korean WMD assets – while the US and western articles have mainly been focused on how to curb the proliferation of North Korean WMDs as well as the North Korean missile which could threaten their homeland security. In other words, the US and ROK respectively have been researching a solution aimed at their individual strategic dilemmas.

However, this thesis will focus on the fundamental question of whether or not the US-ROK alliance's technological approach to the North Korean asymmetrical strategy using WMDs could effectively deter or defeat the North Koreans. The North Korean WMDs would bring an exorbitant cost to the US-ROK alliance and would be hard to neutralize once launched.<sup>26</sup> In this circumstance, from the US-ROK alliance perspective, the capability to pre-empt or

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<sup>25</sup> For example, Michael O'Hanlon in his article, "Stopping a North Korean Invasion: Why defending South Korea is easier than the Pentagon thinks" *International Security*, 22(4), concluded that the contribution of NKPA mechanized troops would not be decisive as the North Korean expects for the following reasons.

- 1) They should advance through the central highland to reach Seoul which means massive mechanize troops manoeuvre is almost impossible. (Geographic restraints)
- 2) The US-ROK alliance has prepared the anti-mechanized troops warfare based on the painful experience during the Korean War
- 3) Due to the geographic restraints, the NKPA mechanized troops has to use the narrow and winding pass which would become a easy prey for the US-ROK defending troops.

<sup>26</sup> North Korean long-range artillery shells could rain down in the Seoul metropolitan area while the North Korean missiles could reach Japan and the US's Pacific coast.

prevent the reload of the North Korean WMDs is the key for deterrence and ultimate success in the battlefield. On the contrary, North Korea would naturally try to increase the survivability of their WMDs. For the better survivability of their WMDs and centre of gravity targets, North Korea has vehemently pursued the fortification of territory using their mountainous topography while enhancing the capability to use the geographic advantage which has been a sound success in Korean peninsula military history. Ultimately, the issue (US-ROK alliance's technology centred strategy vs North Korean asymmetric warfare strategy) boils down to technological prowess against geographic advantage. Therefore, this thesis will focus on the question of whether the technology centred US-ROK alliance strategy can achieve deterrence and ultimate success in possible conflict against the North Koreans who possess geographic advantage and capability to maximize the advantage.

Biddle claims that technology and skill will be equally important in future wars by examining various cases from the Great War to the Afghan Campaign. He commented after analysing the Afghan Campaign that due to the *Al-Qaeda* fighters' capability to use their geographic edge, the efficiency of military technology was seriously damaged and eventually, offender skills such as special manoeuvring was required to break the *Al-Qaeda* defence line. In the contemporary Korean peninsula, based on the enhanced the ROK economy and the demands of the War on Terror, the US-ROK alliance transformed their force to a technology centred one. However, after they realized that they could not compete with the South in the arms race, North Korea has been focusing on improving the asymmetric warfare capability through WMDs. To enhance the survivability of WMDs and centre of gravity targets against the advanced US military technology, they have been engrossed in fortification of their territory using their geographic edge. In this circumstance, Biddle's insight on skill and technology appear beneficial to the research into contemporary Korean peninsula security since it suggests that to achieve ultimate military success and deterrence against North Korea, the US-ROK alliance would need more than a technological dominance as was the case in the Afghan campaign. Therefore, this thesis will investigate using of Biddle's skill and technology theory to analyse the circumstances of contemporary Korean peninsula security.

There are several possible benefits of this research. Firstly, it could bolster Biddle's empirical research into military technology and skill by analysing past wars and contemporary security circumstances in the Korean peninsula. Secondly, it could prove Sun Tzu's claim that "geography and capability to use this geographic edge is a strategically significant

consideration in the oriental warfare” is still important in contemporary warfare. Thirdly, this text may serve as a means to examine the gamut of possible courses of action in the event that a Korean peninsula conflict breaks out. Fourthly, through the 1<sup>st</sup> and 2<sup>nd</sup> case study it is shown that the topography of the Korean peninsula, which boasts a portfolio of steep mountains inlaid with a wide, deep river, makes it an ideal place to host a defensive war. Fifthly, through the 2<sup>nd</sup> and 3<sup>rd</sup> case study, it is argued that even though the offender holds technological dominance, there is no guarantee that this would lead to ultimate victory against a defender who has skill and commitment to use their geographic edge. Also demonstrated through the 2<sup>nd</sup> and 3<sup>rd</sup> case study is that, even though military technology is one of the most important elements of war, the ultimate success of war is not decided by the technology alone but by a mixture of many important elements, such as the preponderance, command, tactics, training and strategy used by the military.

# Part 1 The US-ROK Technology-centred Military Strategy and Posture, and the North Korean Tactical Readiness, Focusing on Terrain and its use

## Introduction

War is an art composed of a myriad of elements that interact together to ultimately decide the fate of the engaged parties. However, in the Korean peninsula, the geographical features, along with tactical preparedness to maximize the geographic edge, have been major factors that have decided the outcomes of war. The defensive strategy using the Korean peninsula geography with reasonable tactical preparedness gives an incentive to the technologically inferior defender even in modern conflicts like the Korean War.

In this thesis, the significance of geographical factors and tactical preparedness in the Korean peninsula will be evaluated against the technologically-advanced counterpart. It will also emphasize that technology alone cannot guarantee an eventual military success against the defender who possesses a geographic edge as well as the capability to maximize its worth. The implication of this thesis is that if the technologically-advanced US-ROK joint forces decide to launch an offensive campaign against the NKPA, there is no guarantee that they will be able to easily break down the NKPA, who have heavily fortified their territory by maximizing their steep mountainous topography, and who possess quality training on how to get the best out of this natural fortress.

Part 1 will first evaluate Biddle's argument that in future warfare, combat skill (tactical readiness) and military technology will be just as important as they were in the past. Biddle also claims that once the defender is motivated and highly trained, the offender's technological superiority alone cannot guarantee a military success – as can be witnessed through the case study of contemporary Iraq and Afghan campaigns. To apply the Biddle

argument to the subject of Korean peninsula security, it must first be established that the US-ROK force is transforming itself into a technology-centred force.

Therefore, Chapter 2 will demonstrate that the US-ROK alliance has gradually become technology-centred military forces and it will examine how the contemporary RMA has been influencing the US-ROK joint forces to develop technologically. After that, the main strategies and tactics that have been built around the technological prowess of the contemporary US-ROK forces will be examined.

Chapter 3 will explore the geographic dimensions of war and explain the traditional Korean defence strategy to show how the Korean forces developed this strategy using their geographic edge; this will demonstrate the significance of the geography and tactical preparedness factor in the Korean peninsula security. Finally, it will evaluate the North Korean military strategy. By doing so, it can be revealed that like previous Korean kingdoms, and, based on the bitter experience of the Korean War and careful research on several modern conflicts, North Korea has tried to develop their defence strategy while using their geographic advantage and improving their tactical preparedness to get the best out of their defence strategy.

In the end, it can be shown that, once the US-ROK joint force is involved in an offensive whose scenario will be discussed in Chapters 3 and 6, it will be a conflict between the technologically-advanced offender and the defender who is equipped with the defensive strategy using their geographic edge and having the capability to maximize it. In addition, at the end of this part, it could examine Biddle's claim that, once the geographically advantageous and highly skilled defender is in defence, the technological superiority of the offender alone cannot guarantee any military success.

# Chapter 2 The Military Transformation of US-ROK Alliance

## 2-1 Skill and Technology in Modern Warfare, and its Implications on Korean Peninsula Security

The extensive and historic research on RMA will be carried out in the next part of this research. Here, it will examine why RMA advocates believe that technology could overcome geographic constraints and bring ultimate success in the battlefield. After that, by examining Stephen Biddle's skill and technology theory and Sun Tzu's view on geography in the oriental warfare, it will support the argument of the thesis that, even though there has been a significant improvement in the military technology, the geographic element of war is still the important element in the contemporary battlefield.

William Owens, the former Vice Chairman of US JCS, analysed the Soviet RSC and suggested a New System-of-Systems theory. According to the New System-of-Systems, once the (1) ISR (Intelligence, Surveillance, and Reconnaissance), (2) Precision force and (3) advanced C4I (Command, Control, Communication, Computer, and Intelligence) systems interact with each other there will be an inevitable synergy at work to create the new mega system. This will function to help boost the efficiency of modern military technology on the battle field. Once the ISR and advanced C4I joined together, there will be a (4) dominant battlespace awareness. The perfect Mission Assignment (5) will be acquired through the combination of advanced C4I and precision force. The clear Battle Assessment (6) will be created through a combination of Precision Force and ISR. It also insists that due to the New Systems of System, carrying out the combat action cycle of (4) →(5) →(6) will be quicker and eventually lead to a better performance on the battlefield.<sup>27</sup>

Vice Admiral Arthur Cebrowski went further than the Owen's System of Systems theory and proposed the Network Centric Warfare (NCW) concept. He believed that once the Armed

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<sup>27</sup> Admiral W.A. Owens and E. Offley, op.cit., p.98-103

forces were successfully adopting innovation from the business sector by using information technology, they would achieve a military transformation.<sup>28</sup> The NCW concept permeated into the entire military after Rumsfeld appointed Cebrowski as the director of Office of Force Transformation on October, 2001. Network-centric warfare is the concept that by 1) connecting and networking all the components dispersed in the battlespace 2) sharing the information, and boosting situational awareness (Sensor) 3) enabling self-synchronization by the commander and speedy command (Command and Control)<sup>29</sup> 4) this will eventually increase the combat power and effectiveness of the mission dramatically.<sup>30</sup> In this NCW concept, perfect situational awareness will be reached due to the development of high-tech sensor technology and the commander's self-synchronization and speedy command will be accomplished by the development of information technology. In addition, the orders of the commander will be carried out accurately through the development of stand-off precision guided bombs.

The Effect-Based Operation (EBO) is another spine of RMA advocates along with the NCW. Major General David Deptula has argued that, during the second Gulf War, development of airpower, especially stealth aircraft and PGMs, enabled the first application of EBO. He insisted on changing targeting paradigm and focusing on desired effects instead of target destruction.<sup>31</sup> Deptula defined EBO as a tool to support parallel attacks on critical targets to cause paralysis in an enemy's system of systems. In addition, the desired effect of EBO is to control an enemy by eliminating his capability to employ forces, and EBO improves on current war fighting methods because it reduces force requirement, casualties, forward basing

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<sup>28</sup> Vice Admiral A.K. Cebrowski and J.J. Garstka, *Network-Centric Warfare: Its Origin and Future*, *Naval Institute Proceeding*, 124(1), January, 1998

<sup>29</sup> NCW concept emphasize the role of C2 (Command and Control) as it process the information collected by sensors and assign the duty to various precision force. In addition, it also emphasize the prompt combat action by swift processing of gathered information as it will guarantee the better performance in the battlespace.

<sup>30</sup> D.S. Alberts, J.J. Garstka, and F.P. Stetin, *Network Centric Warfare: Developing and Leveraging Information Superiority*, CCRP (Command and Control Research Program), 1999, p.88-103  
Office of Force Transformation, *The Implementation of Network-Centric Warfare* Washington, D.C, Department of Defense, 2005, p.3-26

<sup>31</sup> Lieutenant Colonel B.T. Williams (United States Air Force), *Effect-Based Operations: Theory, Application and the Role of Airpower*, *U.S. Army War College Strategy Research Project*, 2002, p.2

needs, and conflict duration.<sup>32</sup> According to the JFCOM (Joint Force Command), “EBO is knowledge-based process that predicts enemy reactions. By predicting enemy behaviour and understanding his system, effect-based planning can direct attacks against critical nodes and links that should cause a breakdown in cohesion and destroy the adversary’s ability to resist.”<sup>33</sup>

In conclusion, EBO advocates insists that, in an total war era, the armed forces concentrated on direct and physical effects such as total destruction of enemy military power and occupation of enemy territory. In the EBO concepts, though, they are targeting and neutralizing the key military system which had become possible due to the development of stand-off PGMs to paralyze the enemy forces, debilitate enemy warfare capability and eventually get the desired outcome. The key to the success of EBO depends upon selecting the most adequate targets and offensive means.

RMA advocates insists that, along with the NCW and EBO, the consolidation of Jointness to avoid the battlespace overlapping, rapid power projection capability to meet the newly emerged threats by adjusting the overseas residential army, and strengthening the logistic capability, lighter troops (Stryker Brigade Combat Team; SBCT) has been targeted. They have proceeded smoothly and transformed the military.<sup>34</sup>

According to RMA advocates, the Second Gulf War was the first full scale implementation of NCW and EBO. They insisted that, instead of total destruction and decimation of Iraqi forces, they were selecting and attacking targets which brought the desired effects.<sup>35</sup> In addition, the troops in the battleground enjoyed the almost real-time information sharing and absolute superiority in information. They also insists that the effectiveness of NCW and EBO, based on their superiority in technology, was proved in the Second Gulf War. They substituted EBO

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<sup>32</sup> D. A. Deptula, *Effects-Based Operations: Changes in the Nature of War*, cited in *Ibid.*, p.3

<sup>33</sup> USJFCOM J9 Concepts Department, *A Concept Framework for Effects-based Operations*, White Paper Version 1.0, Suffolk, VA: JFCOM, 18 October 2001 cited in *Ibid.*, p.4

<sup>34</sup> Rapid power projection, SBCT, and battlespace overlapping problem will be discussed in the RMA section.

<sup>35</sup> They selected political and military headquarters, C4I installations, and republican guard. Their desired effect was to break down their systems and willingness to fight.

for the Airland Battle concept, which emphasized the massive mechanize forces duel and which was successfully implemented in the First Gulf War.

This contemporary warfare interpretation of RMA advocates is also reflected in the relevance of technology and geography, which are the core subject of this project. Martin Libicki, during his debate on geography and military technology in *Orbis*, in Spring, 1996, insisted on the following: He argued that “1) the application of information to military power has three fundamental elements; perceiving reality and representing it in bits (Intelligence), processing and distribution bits, and using bits to act on reality which are almost close to the suggestion of Owen’s system of systems, and 2) As cyberspace expands, the impact of geography on each segment declines apace”.<sup>36</sup>

In his writing, as a supporting argument for the declining impact of the geography in the information age, he argued that, if the information dominance is extended to the allies, processing and distributing information would not be constrained by the geography. However, geographic considerations will nevertheless matter for the collection of information, since the contemporary sensor technology would still need to be closer to the battlespace, except for the satellite technology. He also insisted that, as the technology develops, these matters will be eventually overcome.<sup>37</sup>

In terms of acting on reality, he argued that PGMs are guided by three types: which are active manned guidance, chasing given signatures and travelling with specific coordinates. PGMs are being developed that can hit moving targets by adjusting their own flight path to continually updated coordinates.<sup>38</sup> Therefore, the need for on-the-spot guidance (geography) has been decreased. He also mentioned that the burden of logistics would have been severely reduced. The massive size cross-border attack would be suicidal against the US because the invader would be exposed and the US possessed an edge in technology to punish them. Also, due to the development of PGMs, the needs of ordnance has been significantly decreased. Finally because of the development of sensor and information technology, the need for on-

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<sup>36</sup> M.Libicki, A debate on Geopolitics, The Emerging Primacy of Information, *Orbis*, 40: Spring. 1996, p.274

<sup>37</sup> Ibid., p.268-269

<sup>38</sup> Ibid., p.263

the-spot guidance has been decreased and remote control is possible. Therefore, for precision targeting, fewer humans would be required and the burden of logistics would be reduced.<sup>39</sup>

In conclusion, according to the RMA advocates, the strategic and tactical value of geography has been diminished due to the development of technology. Because of the development of C4I, quality information would be delivered and shared without the geographic restraints. Owing to the development of sensor technology, surveillance and reconnaissance capability has been increased drastically and, although there is a limited geographic constraint, it will soon be overcome. Finally, due to the development of guidance technology, the hidden target would be easily neutralized with relatively less ammunition. This would mean that the defensive worth of geography and logistic burdens would be severely reduced.

Based on the results of the First Gulf War, the RMA advocate's argument, that the smashing Coalition victory was due to modern military technology and that new technology will revolutionize the battlefield, was gathering momentum in the security society. At that point, the counter-argument was raised that the technological advantage was not the only reason for the Coalition success, and that future warfare may be decided not only by military technology but also by the skill of units – as it was in the past.

Following the sweeping victory of the First Gulf War, there was euphoria in regards to modern military technology and especially information technology. Biddle questioned that euphoria and published the article "Victory Misunderstood" which argued that in the First Gulf War, Iraqi errors created opportunities for new Coalition technology to perform at proving ground effectiveness levels.<sup>40</sup> Biddle also argued that "(1) the advanced technology raised the cost of error dramatically<sup>41</sup>, (2) the skilful defender would be able to erode the

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<sup>39</sup> Ibid., p.265

<sup>40</sup> S. Biddle, *Victory Misunderstood: What the Gulf War Tells Us About the Future of Conflict*, p.140

<sup>41</sup> Ibid., p.163

For example, if the force had not been warned or had to defend the position without proper fortification, they would be exposed to the incoming air and mechanized power. These exposed forces would be punished more heavily than they had been before because of the increased accuracy and firepower.

technological advantage markedly<sup>42</sup>, and (3) even advanced technology and defensive errors, however numerous, cannot provide victory at very low losses unless the attacker is highly skilled.”<sup>43</sup>

He examined “the battle of 73 Easting” conducted by the US 7<sup>th</sup> Corps and Iraqi Republican Guard during the First Gulf War and explained that the Iraqi errors stemmed from (1) the fact that the Iraqi defensive lines were very poorly prepared<sup>44</sup>, (2) the Republican Guard failure to coordinate the efforts of different arms at its disposal, especially artillery<sup>45</sup>, and (3) that the Iraqi covering forces systemically failed to alert their main defences to an impending US approach, allowing even the Republican Guard units to be taken completely by surprise.<sup>46</sup> By contrast, Biddle also admitted that, along with technological superiority, the Coalition forces also fought extremely well. In this battle, consecutive Iraqi force employment errors caused by lack of skill and the Coalition force’s tight, efficient combat battle formation brought about a major skill imbalance in battle, which was intensified by the efficiency of technology, producing the stunning Coalition victory in the end. Biddle’s main argument in this article and other Gulf War-related articles was that technology alone could not explain all the losses that resulted from the First Gulf War; a considerable skill imbalance also caused the Iraqi military debacle.<sup>47</sup>

The implication of these initial period writings on the Korean peninsula security is that, if technologically inferior NKPA chose the open field as a battlefield<sup>48</sup> or defended unprepared positions against the US-ROK alliance force, the efficiency of the advanced US-ROK alliance’s military technology would be maximized. Therefore, the North Korean invasion of

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<sup>42</sup> For example, while the contemporary military technology would allow the offender to neutralize the exposed target in a long distance engagement, once the defender could conceal and fortify the target, it is highly unlikely that they would be able to neutralize the target with ease even with cutting edge technology.

<sup>43</sup> Ibid., p.164

<sup>44</sup> Ibid., p.158

<sup>45</sup> Ibid., p.159

<sup>46</sup> Ibid., p.160

<sup>47</sup> S. Biddle, W.P. Hinkle, and M.P. Fischerkeller, *Skill and Technology; Modern Warfare*, p.20

<sup>48</sup> Once the North decides to invade, their mechanized unit would be under this fate.

the South would be an almost suicidal mission with only a mechanized force-centred invasion, since their mechanized troops would be exposed on the way to the main target (*Seoul*).

After the war in Afghanistan broke out, Biddle researched the Afghan campaign and expanded his research scope regarding the relation between modern military technology and skill. In other words, he was able to research the capabilities of technologically-advanced forces once they met a highly skilled foe and ask what modern technology efficiency looks like and whether it is required to overcome those foes.

In the initial period of the campaign, the indigenous Afghan *Taliban* targets were ill-prepared and exposed even though the terrain and conditions present were extraordinary. Therefore, as was the case in the First Gulf War, the Coalition forces were able to detect and destroy the *Taliban* targets with stand-off precision air strikes. The instruction was also the same as the First Gulf War: that modern military technology would heavily punish the foe that did not possess a decent level of battle skills.<sup>49</sup> For example, during the strategically important fight for *Mazar-e-Sharif*<sup>50</sup>, the indigenous Afghan *Taliban* showed immaturity and the western forces enjoyed great success until the foreign *Al-Qaeda* soldiers were introduced in *Bai Beche*. The *Taliban* were poor in morale and motivation since they were fighting only to prevent the extradition of a foreigner, *Osama bin Laden*.<sup>51</sup> They were often very poorly trained since many of them had little or no formal military instruction and the size of the forces had been steadily fluctuating depending on the crop cycle and apparent military need.<sup>52</sup> Their regime's unpopularity also did not encourage support. Therefore, the Afghan *Taliban* was not a good standard force and suffered a severe imbalance of combat skills along with their lack in standards of technology.<sup>53</sup> As a consequence, by the time the massive numbers

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<sup>49</sup> S. Biddle, Iraq, Afghanistan, and American Military Transformation in *Strategy in the Contemporary World*. Edited by J. Baylis, J. Wirtz, C.S. Gray, and E. Cohen, Oxford, Oxford University Press, 2007, p.276

<sup>50</sup> A Series of battles followed; Village of *Bishqab* on 21<sup>st</sup> of October, *Chapical* (23<sup>rd</sup>), *Oimetan* (25<sup>th</sup>), and *Bai Beche* on 5<sup>th</sup> of November.

<sup>51</sup> S. Biddle, *Afghanistan and the Future of Warfare; Implications for Army and Defense Policy*, Strategic Studies Institute, U.S. Army War College, November 2002, p.13-15

<sup>52</sup> *Ibid.*, p.15-16

<sup>53</sup> *Ibid.*, p.16-17

of foreign *Al-Qaeda* fighters were introduced in *Bai Beche*, the outcome of the battle was almost the same as the First Gulf War.

However, later in the campaign (most notably from the battle of *Bai Bache*), when the better trained foreign *Al-Qaeda* fighters<sup>54</sup> were introduced into the battle, exposed targets were less common because of better concealment, overhead cover and camouflage. The stand-off precision became less effective because the target became difficult to find and neutralize, and close combat became more frequent.<sup>55</sup> In this later period of the campaign, while precision bombing was necessary, it was not sufficient. Hence Biddle argued that “1) the earth’s surface remains an extremely complex environment with an abundance of natural and manmade cover and concealment available for those militaries capable of exploiting it<sup>56</sup>, and 2) overcoming a skilled and resolute defender who has adopted standard countermeasures to high-firepower airstrikes will still require close combat by friendly ground forces whose own skills are sufficient; enabling them to use local cover and their own suppressive fire to advance against hostile survivors with modern weapons”.<sup>57</sup> For example, during the battle of *Bai Bache*, *Al-Qaeda*’s local cover and concealment were good enough to prevent the US special operation forces on the ground from locating the entirety of the enemy’s individual fighting positions, many of which could not be singled out for a precision attack.<sup>58</sup>

At operation *Anaconda* in March 2002,<sup>59</sup> *Al-Qaeda* possessed the geographic edge and fortified the rough terrain. Therefore, once the infantry waged close combat without

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<sup>54</sup> *Al-Qaeda* fighters are highly motivated and skilled. First, the *Al-Qaeda* troops were committed and full-time soldiers unlike the indigenous *Taliban* soldiers. *Osama bin Laden*’s infamous training camps served primarily to prepare these troops for combat in front line and taught them a curriculum not radically different from orthodox Western Armies. Excerpted from– *Ibid.*, p.15-17

<sup>55</sup> S. Biddle, *Iraq, Afghanistan, and American Military Transformation*, p.277-282

<sup>56</sup> S. Biddle, *Afghanistan and the Future of Warfare; Implications for Army and Defense Policy*, p.28

<sup>57</sup> S. Biddle, *Iraq, Afghanistan, and American Military Transformation*, p.281

<sup>58</sup> S. Biddle, *Afghanistan and the Future of Warfare; Implications for Army and Defense Policy*, p.26

<sup>59</sup> Operation *Anaconda* was part of the ongoing effort in Afghanistan to root out *Taliban* and *Al-Qaeda* forces holed up in the *Pakitia* Province area of the country. Rough terrain, an altitude of 8,000 to 12,000 feet, and a temperature in the evenings between 15 and 20 degrees Fahrenheit, made a very tough operating environment for soldiers. *Al-Qaeda* troops entrenched along ridges and mountainside caves used heavy machine-gun, mortar and rocket-propelled grenade fire to immobilize allied Afghan

neutralizing those targets, it was expected that there would be a massive casualties. A stand-off precision attack was planned and achieved on this sector. However, due to the efficient enemy fortification, fewer than 50 percent of all the *Al-Qaeda* positions were ultimately identified prior to ground contact. This was made possible since the *Al-Qaeda* troops were capable of using their geographic edge.<sup>60</sup>

In conclusion, during the Afghan Campaign, precision firepower did not manage to annihilate well-prepared opponents at stand-off range. Overcoming skilled, resolute opposition required both precision firepower and ground manoeuvre; neither alone was sufficient.<sup>61</sup> As will be analysed in the Korean War case study, during the stalemate (position warfare), even though the US possessed absolute dominance in fire and airpower, the tenacious and highly motivated communist forces handed severe blows to the US in several cases. However, as one can see from the Battle of Heartbreak Ridge, once the technological dominance is harmonized with the manoeuvre (the Tank Battalion cut off the enemy retreat route) the technologically advanced forces could win the battle without much cost. The First Gulf War articles stressed that although technology gave the Coalition forces an edge, the skill imbalance between the Coalition and Iraqi forces enhanced the efficiency of modern military technology and contributed to a smashing victory. Biddle's research after the Afghan Campaign expanded upon this scope and argued that in future war, skills of the unit (tactical readiness) such as manoeuvres are as important as the technology involved, since technology has its limits and harmony of skill and technology is the crucial element of military success. This has been shown in previous wars.<sup>62</sup>

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forces and to pin down US soldiers as they disembarked from helicopters. Excerpted from– Global Security Website- *Operation Anaconda*, <http://www.globalsecurity.org/military/ops/oef-anaconda.htm>, (Accessed on 12<sup>th</sup> of April, 2010)

<sup>60</sup> S. Biddle, *Afghanistan and the Future of Warfare; Implications for Army and Defense Policy*, p.28

<sup>61</sup> S. Biddle, *Afghanistan and the Future of Warfare*, p.45

<sup>62</sup> In his book “Military Power”, Biddle examined the Operation *Michael* –The Second Battle of *Somme* (21<sup>st</sup> of March–9<sup>th</sup> of April, 1918) and Operation *GOODWOOD* (18<sup>th</sup>–20<sup>th</sup> of July, 1944) as the supporting case study. In his writings, he continuously mentioned that once the opponent is high in morale and well trained, the target which could apply toward the stand-off precision technology would be reduced due to the concealment, decoy, and cover, and it would eventually lead to close combat; meaning the efficiency of those technologies would be reduced since both sides would be mingled.

What is the implication of Biddle's argument in regards to Korean peninsula security? The US-ROK alliance is transforming to a technology-centred force and the North Korean asymmetric strategy using WMDs has become a serious security burden for the alliance. For the ROK forces, this served as a direct threat to their security since *Seoul* is only 40 km away from the cease-fire line. For the US, who aimed to build capability based deterrence that demanded equipping the forces with the capability to neutralize potential foes' targets that might threaten their homeland and allies' security, the potential adversary, North Korea's WMDs and their proliferation, is a direct threat to their security. Consequently, they have actively pursued and developed the capability to neutralize the North Korean WMDs targets.

However, North Korea has fortified their territory using steep and rigid mountainous topography while enhancing tactical readiness to maximize its worth through four military guidelines; especially to train the entire army as a "cadre army" and "to fortify the entire country" as a part of an asymmetric strategy which strengthens their edge in WMDs by enhancing survivability and weakening the US-ROK edge in stand-off precision technology.<sup>63</sup> This circumstance represents a duel between a technologically-advanced offender and a geographically-advantageous, motivated and well-trained defender. In this case, according to the Biddle argument, technological dominance alone would not necessarily guarantee ultimate military success against the skilled defender and may result in heavy cost. Biddle points out the consecutive battles after the battle of *Bai Beche*, where the motivated and highly trained *Al-Qaeda* fighters were engaged in combat.

Biddle's notion of skill was quite broad: it included command, morale, training, deception, decoy, manoeuvre, and fortification using the geographic advantage. In Biddle's writings, the geographic dimension has also been considered; however, in oriental military society, due to the severe weather conditions (hot and humid summers and cold winters) and rough terrain

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<sup>63</sup> During the 5<sup>th</sup> Plenum of the Third KWP Central Committee, they put out "Three Military Guidelines" which became the military doctrine of NKPA and spine of their military strategy. In there, there were "To arm the entire population; to fortify the entire country; to train the entire army as a cadre army" In 1966, it added the "Modernizing weaponry, doctrine, and tactics under the principle of self-reliance in national defence", and became Four Military Guidelines. The detail of why it was drafted and how it had developed will be discussed in the NKPA military strategy section.

(deep and wide rivers, and steep mountainous topography) there has been a significant consideration of geography and climate in waging war.

Harold Winters also mentioned in “Battling the Elements” that “despite the evolving technology in warfare, physical geography has a continuous, powerful, and profound effect on the nature and course of combat.”<sup>64</sup> By examining several cases in which geography and climate affected the outcome or course of combat, this book claims that the geographic consideration is still an important dimension in modern warfare. Especially, case studies on the American Civil War’s Eastern Theatre and World War I’s Battle of Verdun where the combat was conducted amid severely deformed rocks is closely related to the Korean peninsula combat research. Even though the terrain of the Korean peninsula is rumpled and mountainous, most of rocks are of Precambrian origin and they are not located between major plates, which mean that the rocks have eroded for a significant period of time and the mountains are usually low. Once an offender meets a defender who is capable enough to use their geographic edge and chooses direct approaches due to their advantages or urgent strategic concerns, there is no guarantee that the offensive will be successful. Ultimately, to break down enemy defence lines with little cost, the offender would need to have a proper plan, skill, and command, as proved in the confederate General Lee’s offensive manoeuvre using the terrain during the American Civil War’s Eastern Theatre campaign.<sup>65</sup> Even though the technology factor was not eminent in those cases, they proved that mountainous topography could give the advantage to the defender and prove a formidable challenge to the offender.

In addition, *Sun Tzu* in his “The Art of War” mentioned that the one who understands the geographic characteristic of the battlefield would have a significant advantage and careful preparation and shrewd command are required to break down the enemy who possesses the geographic edge. He claimed that “Advantageous terrain can be a natural ally in battle, and superior military leadership lies in the ability to assess the enemy’s situation and create conditions for victory, to analyse natural hazards and calculate distances.”<sup>66</sup> He also said that,

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<sup>64</sup> H.A. Winters, *Battling the Elements: Weather and Terrain in the Conduct of War*, Baltimore, The Johns Hopkins University Press, p.4

<sup>65</sup> *Ibid.*, p.112-140

<sup>66</sup> Sun Tzu, *Sun Zi Says*, compiled by Cai Xiqin, Beijing, Sinolingua, 2006, p. 37

“If we know that the enemy is open to attack, and also know that our men are in a condition to attack, but are unaware that the nature of the ground makes fighting impracticable, we have still gone only halfway towards victory.” Another piece of related advice is, “If you know the enemy and know yourself, your victory will not stand in doubt; if you know Heaven and Earth (Geography), you may make your victory complete”.<sup>67</sup> In addition to the terrain chapter, *Sun Tzu* also mentioned in the nine situations chapter the importance of the psychological status of troops, how to lead troops, and what kind of tactics have to be adopted in the nine different topographies.

For Biddle, geography and its adequate application is one of the military skills, but it is not considered as important as the oriental military society. In the oriental military thought, as mentioned in the “Art of War”, the geographic dimension and the capability to use the geographic edge are major elements in military skills. *Sun Tzu*’s “Art of War” can provide the missing link to applying Biddle’s skill and technology theory into the Korean peninsula. Under the specific security circumstances of the Korean peninsula<sup>68</sup>, Biddle’s theory on skill and technology contains the problem that the geographic consideration is not the major consideration of skill. However, once Biddle’s research is combined with the insights of *Sun Tzu*’s “Art of War” which mentions the significance of geography and skill to use the geographic edge following the research of specific oriental topography and climate, one can create a skill and technology theory proper to the Korean peninsula. In other words, because geography and skill to use the geographic advantage are as important as other major skills such as training, manoeuvre and military technology in the Korean peninsula security, skill and technology theory’s general understanding that the offender’s military technological

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<sup>67</sup> Sun Tzu, X. *TERRAIN in The Art of War*, translated by. L. Giles, London, Luzac and Co, 1910, p.23-26

<sup>68</sup> 1) Cutting-edge military technology is deployed and US-ROK alliance enjoy the technological superiority

2) Due to the mountainous topography, Geographic consideration is a significant element of war and is favourable to the defender

3) Both North and South are good at tactics and strategy using the geographic advantage since the Koreans have developed a traditional defence strategy using their geography, are accustomed to it and realize the potential in the modern battle due to the Korean War experience.

4) Both North and South keep up decent skill levels.

superiority alone cannot guarantee the military success against the skilled defender could be reinterpreted to reflect the specifics of the Korean peninsula security situation. (The offender's military technology superiority alone cannot guarantee military success against the geographically advantaged and skilled defender). Therefore, once the specific model of skill and technology theory reflecting the specialty of the Korean peninsula is applied, there is no guarantee that the technologically advanced US-ROK alliance would have military success against the North Korean defenders, who have the capability and willingness to use their geographic edge – as was the case in the later Afghan Campaign (*Al-Qaeda*).

In the chapters below, through the case study of the *Imjin* Wars and the Korean War as well as the examination of modern technology application in the strategically important North Korean target, Biddle's claim "for the skilful and resolute foe, they would need more than advanced technology to win their conflict and reduce the cost" will be examined. Before that, this section will examine how the US–ROK alliance has been transformed into a technology-centred force (Chapter 2), how the geographic dimension has been an important element of war in the Korean peninsula and how North Korea developed military strategy using their geographic edge and enhanced the capability to use this edge (Chapter 3). These are prerequisites to apply and analyse the claim of this thesis which is based on Biddle's arguments on skill and technology.

## 2-2 RMA

The most circulated concept of the RMA, as defined by Andy Marshall of US Net Assessment, is that the RMA would occur once the characteristics of warfare and the way that the war was being carried out was fundamentally transformed. This would happen through developing appropriate concepts (evolving military system) of operations (operational innovation), appropriate organizations (organizational adaptation), and doctrine and practices to take advantage of emerging technologies.<sup>69</sup> Therefore, the contemporary RMA placed significant weight upon operational innovation and organizational adaptation.

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<sup>69</sup> T.W. Galdi, op.cit.,

In the contemporary Korean peninsula security, RMA has also significantly influenced the strategic thinking of the US-ROK alliance. What exact influence has been made on the contemporary US-ROK joint forces by the contemporary RMA? Is it simply to develop the military technology to neutralize the most dominant North Korean threat (WMDs hidden in fortified trenches as part of their asymmetric warfare strategy)? The influence of the RMA has been much more than that; the US-ROK alliance has also developed a military system to get the best out of emergent technology, which included the operational innovation (OPLAN 5026-5030) and organizational adaptation (GPR and Flexibility agreement).<sup>70</sup> This chapter will examine the contemporary RMA first, and then evaluate how the contemporary RMA has influenced the security of the Korean peninsula.

## Historical Overview of RMA

The origin of the current RMA is hard to fix precisely and its original architects are obscure. Some people believe that the current RMA can be traced back to the 1970's, when the notion of an electronic battlefield emerged alongside early versions of relevant technologies in the Vietnam War – people sniffers, air-dropped battlefield sensors, and early smart bombs.<sup>71</sup>

However, the origin of the contemporary RMA is more commonly regarded as the Ogarkov's RSC (Reconnaissance-Strike Complex) that was developed in 1984.<sup>72</sup> From the late 1970's,

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<sup>70</sup> OPLAN as well as the GPR and Flexibility Agreement will be analysed below.

<sup>71</sup> M. Patrick, op.cit., p.133

The argument that the contemporary RMA could be tracked back to the 1970's also has a reasonable base since Orgarkov's RSC theory was also inspired by the US military technology development during and after the Vietnam War

<sup>72</sup> To review the Former Soviet Union and their RSC concept as well as the 1990's soviet military transformation,

See) M.C. FitzGerald, *The New Revolution in Russian Military Affairs*,

R.E. Franck Jr, and G.G. Hildebrandt, *Competitive aspect of contemporary Military-Technical Revolution: Potential military rivals to the US*, *Defense and Security Analysis*, 12(2): 1996, p.239-258

D.R. Herspring, Nikolay Ograkov and the Scientific – Technical Revolution in Soviet Military Affairs, *Comparative Strategy*, 6(1): 1987, p.29-55

J.W. Kipp, Russian Military Forecasting and the Revolution in Military Affairs: A case of the Oracle of Delphi or Cassandra?, *the Journal of Slavic Military Studies*, 9(1): March,1996

Soviet military writers wrote about a possible military technical revolution. Relatively lower ranking officers had begun to argue that computers, space surveillance, and long-range missiles were merging into a new level of military technology – significant enough to shift the correlation of forces between East and West.<sup>73</sup> With the development of the Airland battle/FOFA (Follow-on-Forces Attack) concepts that incorporated the combat deployment of advanced conventional munitions (ACMs), Moscow started to perceive that the west was gaining an edge in the qualitative arms race.<sup>74</sup> In late 1990, *Military Thought (Voennaya myzl)*, a journal in Russia, explained that the Airland Battle concept was based on 1) highly effective ground, air, and space-based reconnaissance, surveillance, and target acquisition systems 2) powerful fire with great precision, range, and destructiveness, and 3) automated C3 (Command, Control, and Communications) systems that were to ensure the delivery of strikes in real time.<sup>75</sup>

From the early 1980s, the interest in military technology had been diffused into Soviet Forces' headquarters. They believed that advanced conventional weapons would be as effective as small tactical nuclear weapons on the field.<sup>76</sup> Indeed, the central message from a decade of Soviet military thought was that these technologies would be able to revolutionise military doctrine, operational concepts, training, force structure, defence industries and R&D priorities.<sup>77</sup>

The development of Soviet RSC was stimulated by the development of precision deep strike systems associated with NATO's Airland Battle doctrine and FOFA concept.<sup>78</sup> Ironically, the US Airland battle doctrine reflected their military failures during the Vietnam War and the fear of Soviet Armoured troops. During and after the Vietnam War, the US began research on

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M.C. FitzGerald, Russian Military Doctrine: program for the 1990's and beyond in R.F. Kaufman and J.P. Harat for the Joint Economic Committee, Congress of the United States, *The Former Soviet Union in transition*, London, M.E. Sharpe, inc, 1993, p.689-713

<sup>73</sup> J.R. Blaker, op.cit., p.5

<sup>74</sup> M.C. FitzGerald, Russian Military Doctrine: program for the 1990's and beyond, p.689

<sup>75</sup> Colonel A.A. Zhuravlev, on the air operation, *Voennaya myzl*, 6, 1990, p.79 cited in M.C. FitzGerald, Russian Military Doctrine : program for the 1990's and beyond, p.689

<sup>76</sup> E. Cohen, op.cit., p.39

<sup>77</sup> M.C. FitzGerald, The New Revolution in Russian Military Affairs, p.1

<sup>78</sup> J.W. Kipp, op.cit., p.3

the Soviet strength for the possible conflict with them. The US realized that if the Soviet OMG (Operational Manoeuvring Group) were able to succeed in making a breakthrough, waging a deep battle into their rear line followed by the operation breakthrough manoeuvre of FOFs (Follow-on-Forces), the NATO force would be paralyzed within a short time. Accordingly, the US understood that deep battle would be unavoidable in order to neutralize the Soviet's strength in fire and mobile power. In addition, they also realized that for ultimate victory against the Soviet armoured troops, they should get rid of the Soviet FOFs through deep battle (Follow-on-Forces Attack). According to this recognition, they drafted the Airland Battle Doctrine. The key element of the Airland Battle Doctrine is to spot the enemy in their rear, command a wide operation area, and neutralize the target in a deep area (stand-off accurate strike capability). To be able to carry out this doctrine, the US needed a capability of Deep See, Deep Control, and Deep Attack/Strike; they believed that their technological edge, especially in C3, would make it happen.<sup>79</sup>

The Soviet military authorities realized that their formidable armoured troops would be vulnerable to the US Airland Battle Doctrine and the developed US military technologies would allow a deep attack on the Soviet Armoured troops as well as the spearhead troops. They feared that NATO's stand-off self-guided anti-tank weapons, which they thought would be as powerful as tactical nuclear weaponry, would bring disaster to their armoured troops. Under this circumstance, the Soviet military authorities believed that once they had succeeded in producing a new strategic level Reconnaissance-Strike Complex combining a new control system with long-range precision weapons, this system would have a revolutionary power which could only be compared to the nuclear weapon.<sup>80</sup> The pursuit of the Soviet RSC is commonly regarded as the origin of the contemporary RMA.

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<sup>79</sup> To review the Airland battle doctrine

See) Headquarters Department of the Army, *Field Manual 100-5*, Washington, DC, 14<sup>th</sup> of June 1993. Accessed from -<http://www.fprado.com/armorsite/US-Field-Manuals/FM-100-5-Operations.pdf>

R.R. Tomes, *US defense strategy from Vietnam to Operation Iraqi Freedom- Military innovation and the new American way of war, 1997-2003*, New York, Routledge, 2007, p.111-125

D.W. Skinner, Airland Battle Doctrine, *Professional Paper 463*, Centre for Naval Analyses Office of Naval Research, September 1998.

<sup>80</sup> R.E. Frank, Jr, and G.G. Hildebrandt, Competitive Aspects of the Contemporary Military Technical Revolution, *Defense Analysis*, 12(2); August, 1996, p.239-258 cited in T.Y. Kwon and H. Roh, *21SeGiGuSaHyeokSinGuaMiRaeJeon*, Seoul, Bobmunsa, 2008, p.49

However, their pursuit of military transformation through adopting newly developed military technology failed to bear fruit. Since the Soviet Union suffered financial constraints and clung to the materialism of Marxist-Leninist ideology, they focused only on one type of warfare, armoured conflict in Central Europe, and invested solely in technology and weapons. Their narrow understanding of revolution and financial limitation failed to revolutionize the Soviet forces and the fundamental technology gap was not overcome.<sup>81</sup>

The Soviet RSC crossed the Atlantic Ocean and influenced the US. The US was familiar with the technological revolution; they initially adopted the Soviet RSC as the MTR concentrated on the technological transformation. The initial stage of the US MTR was developed to maximize the military technology efficiency on the battle field. As founding fathers of the current RMA, one can name former Defence Secretary Bill Perry, Director of Net Assessments Andy Marshall, former Vice Chairman, Joint Chiefs of Staff Admiral William Owens, and Chairman, Joint Chiefs General Shalikashvili.<sup>82</sup>

Among these members of the RMA, William Owens (the former Vice Chairman of US JCS) who analysed the Soviet RSC suggested the New System-of-Systems theory. According to the New System-of-Systems, once the (1) ISR (Intelligence, Surveillance, and Reconnaissance), (2) Precision force and (3) advanced C4I (Command, Control, Communication, Computer, and Intelligence) systems interact with each other there would be an inevitable synergy at work to create the new mega-system which would function to help boost the efficiency of modern military technology on the battle field. In other words, once the ISR and advanced C4I joined together, there will be a (4) dominant battlespace awareness. The perfect Mission Assignment (5) will be acquired through the combination of advanced C4I and precision force. The clear Battle Assessment (6) will be created through a combination of Precision Force and ISR. It also insists that due to the New Systems of System, carrying out the combat action cycle of (4) → (5) → (6) will be quicker and eventually lead to a better performance on the battle field.<sup>83</sup> The New System-of-Systems developed with much consideration on the maximization of their information technology dominance in

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<sup>81</sup> E. Cohen, op.cit., p.39

<sup>82</sup> J.R. Blaker, op.cit., p.3-4

<sup>83</sup> Admiral W.A. Owens, op.cit., p.1-6

the battlefield. This information technology centred future war concept is described as Information warfare, Information-based warfare, and Network-centric warfare.

By the middle of the 1990s MTR, which emphasized the military technology and support system, had been developed and settled into an RMA which also included the operational innovation and organizational adaptation as a significant element of military transformation.

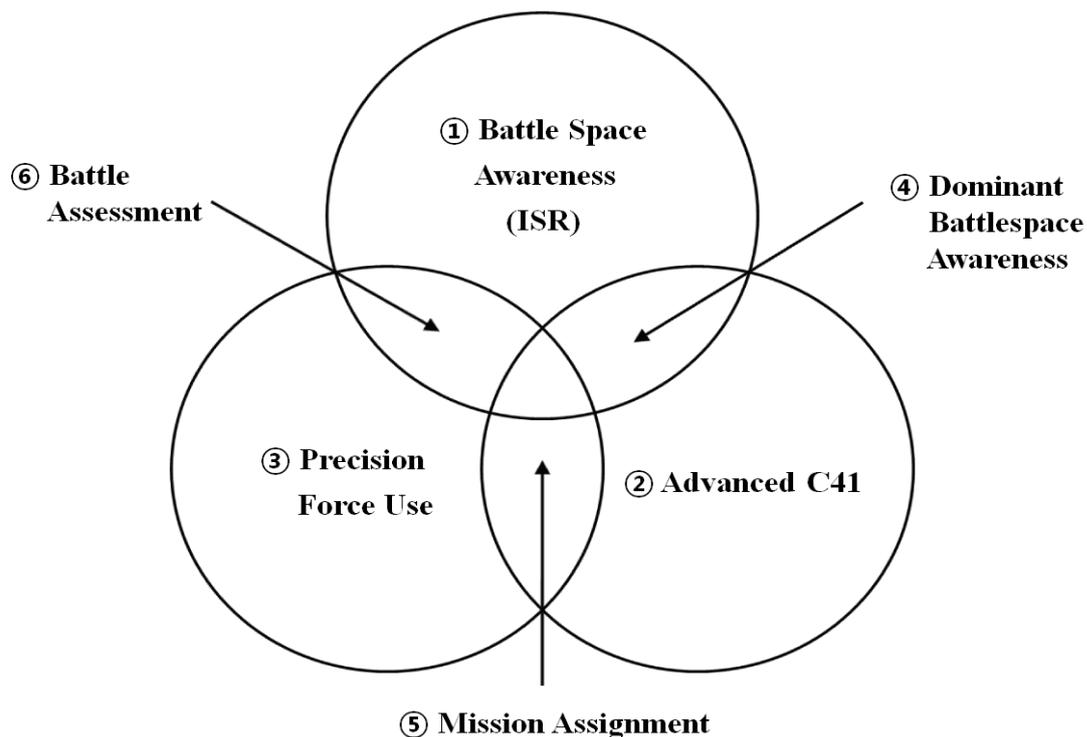


Diagram 2-1 A New System-of-Systems

However, Owens’s New System-of-Systems theory also influenced each armed force’s new visions of future warfare during the 90’s. This included the Former Chief of Staff of the Army, General Gordon R. Sullivan’s FORCE XXI<sup>84</sup>, the Former Chief of Naval Operations,

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<sup>84</sup> See) Global security website; *Force XXI*  
<http://www.globalsecurity.org/military/agency/army/force-xxi.htm> (Accessed on the 12th of January, 2010)

E.A. Stanley, *Evolutionary Technology in the Current Revolution in Military Affairs: The Army Tactical Command and Control System*, Strategic Studies Institute of the United States Army War College, March: 1998

Jeremy M. Boorda's CEC (Cooperative Engagement Capability)<sup>85</sup>, and the Air Force's SPACECAST 2020.<sup>86</sup> Like the New System-of-Systems thinking, the core concept of these future war plans was creating a new combined system interconnecting ISR (sensor), a precision strike (shooter) and a C4I (network) which could help revitalize their dominance in information technology, while increasing their effectiveness and efficiency in the battlefield dramatically.

Furthermore, each of these armed forces endeavours during the 1990s were similar to the early MTR and RMA advocates who interpreted military transformation as producing the best possible outcome in the battlefield using their edge in military technology, especially information technology. However, their efforts had a very serious pitfall in the battlespace overlapping problem which inevitably led to the lack of joint warfare concepts and organization to maximize the advantage in technology.<sup>87</sup>

After each armed force's future warfare plan showed the weakness in the battlespace overlapping and joint war-fighting, the US JCS published "The Joint Vision 2010" to enhance their notions of jointness and to help avoid overlapping battlespace, as well as to achieve a full spectrum dominance using their advanced technologies and new operations concepts.<sup>88</sup> To that end, the vision was based on the information technology, which guaranteed superiority. They aimed to develop new operation concepts such as dominant manoeuvres, precise engagement, focused logistics, and full dimensional protection.<sup>89</sup>

This vision progressed from the early military transformation advocates' view, which utilized the advantages in military technology and helped create the supporting system to guarantee

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<sup>85</sup> See) Global security website; *Cooperative Engagement Capability* <http://www.globalsecurity.org/military/systems/ship/systems/cec.htm> (Accessed on the 12th of January, 2010)

<sup>86</sup> See) The USAF Center for Strategy & Technology website; <http://csat.au.af.mil/2020/index.htm> (Accessed on the 12th of January, 2010)

<sup>87</sup> Since each armed force was targeting the best outcome in the battlespace by maximizing their advantage in the military technology, they were able to have a similar level of information and striking technology. Therefore, they could all operate within the same battlespace.

<sup>88</sup> J.M. Shalikashvili (Chairman of the JCS), *Joint Vision 2010*, The US JCS, 1997, p.2-3

<sup>89</sup> *Ibid.*, p.20-27

the ultimate efficiency of military technology on the battlefield. It became the modern concept of the RMA which also emphasized organizational adaptation and operational innovation to maximize the advantages in technology. This vision set the agenda of the full spectrum dominance which would require a considerable amount of operational innovation along with technological superiority and supporting system. In addition, the vision also envisaged that in order to fulfil the full potential of their advantages in technology with operational innovation, they would also require agile, innovative and flexible organization, innovative leadership, and new joint doctrine and training.<sup>90</sup> Because this vision also aimed to reach full spectrum dominance through developing information technology and supporting systems, one cannot deny that it was also highly influenced by the New System-of-Systems thinking. Nonetheless, it was still considerable progress in terms of military transformation.

The US military transformation was based on their dominance in information technology, and it experienced another turn-around due to newly emerged threats such as terrorists, WMDs and their proliferation in the post-Cold War era, especially after 9/11. In other words, the US military transformation focused on improvement in the areas of new technology, deterrence strategy (capability based approach) and the defence posture from the Cold War-type forward deployment and static defence posture to much more mobile and agile forces dealing with the newly emerging threats. Since North Korea has been classified as a rogue state which can be attributed in part to their WMDs and their proliferation, the major part of the defence posture review was looking at the US residential force overseas and the relationship with coalition partners. The US military transformation during the War on Terror era would severely influence the US-ROK alliance compared to the RMA before the 9/11 attacks.<sup>91</sup> The following chapter will analyse how the US military transformation has come to terms with the newly emerged threats and their impact on the Korean peninsula.

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<sup>90</sup> Ibid., p.27-31

<sup>91</sup> See) C. Conetta, 9/11 and the meanings of military transformation, *project on Defense alternative*, 6<sup>th</sup> of February, 2006

D.J. Feith (Former US DOD under Secretary of Defense for policy), excerpt of Transforming the United States Global Defense posture–Speech presented to the Center for Strategic and International Studies, Washington, D.C., 3<sup>rd</sup> of December, 2003, *The DISAM Journal*, Winter 2003-2004, p.33-37

The US DOD, *Transformation Planning Guidance*, April 2003

## 2-3 The US Military Transformation after 9/11 and its Impact upon the US-ROK Alliance

### The US Military Transformation after 9/11

In QDR 2006, the US military authorities cautioned “Although U.S. military forces maintain their predominance in traditional warfare; they must also be improved to address the non-traditional, asymmetric challenges of this new century. These challenges include: irregular warfare (conflicts in which enemy combatants are not regular military forces of nation-states); catastrophic terrorism employing WMDs; and disruptive threats to the United States’ ability to maintain its qualitative edge and to project power.”<sup>92</sup> In the contemporary US National Security Strategy of 2010, it was also confirmed that WMDs and their proliferation would be the greatest challenge ahead of them.<sup>93</sup> The US military authorities had already warned before 9/11 that potential foes’ WMDs and their proliferation would be the new security threat to the US.<sup>94</sup> However, the US security threat recognition that “WMDs and their proliferation by potential adversaries as well as non-traditional small wars and counter-insurgency would be prime but newly emerged threats to their security” rose to the surface after 9/11.<sup>95</sup>

In short, the US military authorities recognized that the security threats they would face would stem from small-sized local war, terrorism, the proliferation of WMDs or regional instability rather than the traditional massive full-scale war, and that Cold War type deterrence would not work against the newly emerged threats. After the US recognized these newly emerged threats, they readjusted their ongoing military transformation to deal with these contemporary problems. Along with better accuracy of target acquisition (sensor) and

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<sup>92</sup> The US DOD, *Quadrennial Defense Review Report 2006*, p.3

<sup>93</sup> The President of United States, *National Security Strategy 2010*, p.1

<sup>94</sup> For example, Executive Order No. 12938 (Proliferation of Weapons of Mass Destruction) signed by President Clinton on November 14, 1994

<sup>95</sup> Those threat recognitions were continuously expressed in the US national security document after 9/11

See) The US DOD, *Quadrennial Defense Review Report 2001*, p.3

The President of United States, *National Security Strategy 2002*, p.1

stand-off precision technology, they targeted the actual capability to neutralize the potential foes' threats (usually WMDs and HDBTs) as a part of a capability oriented deterrence approach; such as both conventional and unconventional earth penetrating weaponry, as mentioned in the NPR (Nuclear Posture Review) of 2001 and the "Report to Congress on the Defeat of Hard and Deeply Buried Targets" in July, 2001.<sup>96</sup> However, the US move especially after 9/11 to effectively face the newly emerged threats was not restricted to the development of required technology and capability-centred operation and deterrence strategy. They have also transformed their grand strategy, global defence posture, and their military organization. This chapter will briefly explain the thoughts regarding these transformations.

The US grand strategy has been challenged and transformed. Until the 1990's, the US maintained a Win-Win strategy that aimed to wage two major regional conflicts (MRCs) simultaneously and win both of them.<sup>97</sup> However, this strategy was discarded by the Bush Administration after 9/11. Instead, in the "National Military Strategy of the United States of America (2004)", the 1-4-2-1 strategy emerged. Its military objective was to defend the homeland (1), deter forward in and from the four regions (4), and conduct two (2), overlapping "swift defeat" campaigns.<sup>98</sup> In addition, two years later, in the QDR2006, instead of the Four Regional Defence which was mentioned in the QDR2001 and National Military Strategy 2004, focus shifted towards global operation capability to 1) defend the homeland, 2) prevail in the War on Terror (terrorism) and conduct irregular operation, and 3) conduct and win conventional campaigns reflecting the challenge they had.<sup>99</sup>

Comparing this strategy to the Win-Win strategy in two major theatres of warfare from the 1990's and the 1-4-2-1 strategy of early 21<sup>st</sup> century where US military commitment was restricted to a two major theatre warfare, the QDR 2006 strategy extended their geographical coverage to a global scale since the possible conflict was not going to be the MRC but small wars and counter-insurgency due to changed security circumstances after 9/11. Therefore, they put a greater emphasis on military readiness, swift deployment and power projection

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<sup>96</sup> The detail of those developments will be dealt with below.

<sup>97</sup> L. Aspin (Secretary of Defense), Report on the Bottom-Up Review, October, 1993. Available from-FAS website: <http://www.fas.org/man/docs/bur>. (Accessed on the 10th August, 2010)

<sup>98</sup> The US JCS, *The National Military Strategy of the United States of America*, 2004, p.21

<sup>99</sup> The US DOD, *Quadrennial Defense Review Report*, 2006, p.36-39

capability as well as the effects and capability based approach to the operation. In other words, along with the technical challenge, the US was pushed to develop new operation strategies, complete a major revamp on foreign residential forces, and restructure their organizational adaptations to face these newly emerged threats.

In addition, as mentioned above, the RMA (military transformation) would not be effectively secured only by technological revolution. It also required operational innovation and organizational adaptation. Moreover, due to these newly emerged threats, the US military authorities would require developing a new deterrence approach and strategy which would become a crucial element of military transformation and help to culminate it. To deal with the newly emerged threat of the post-Cold War era especially after 9/11 and be prepared for the Fourth Generation War (4GW),<sup>100</sup> their operational innovation, global defence posture and organizational transformation which emphasizes the flexibility (military readiness, swift deployment and power projection), capability, and effect has been facilitated.

The US military doctrine was developed with careful consideration to the capability and effects against the newly emerged threats. The US already asserted in the Joint Vision 2010 that they would reshuffle their armed forces towards becoming a capability-centred one.<sup>101</sup> Rapid Decisive Operation (RDO) is the product of this approach. The RDO was first

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<sup>100</sup> The Fourth Generation War emerged in the late 1980s. It was first introduced in W. S. Lind, Colonel K. Nightengale, Captain J. F. Schmitt, Colonel J. W. Sutton, and Lieutenant Colonel Gary I. Wilson, *The Changing Face of War: Into the Fourth Generation*, Marine Corps Gazette, October, 1989, p.22-26. However, it has become popular due to twists in Iraq and Afghanistan campaigns, and terrorist attack worldwide. In brief, the theory holds that warfare has evolved through four generations: 1) the use of massed manpower, 2) firepower, 3) manoeuvre, and now 4) an evolved form of insurgency that employs all available networks—political, economic, social, military—to convince an opponent's decision makers that their strategic goals are either unachievable or too costly.

Excerpted from— A.J. Echevaria II, Fourth-Generation War and Other Myths, *Strategic Studies Institute (SSI) Monograph*, November, 2005, p.V

Available from - <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub632.pdf>

<sup>101</sup> It targeted the full spectrum dominance with their advanced technology which means they would be able to develop the capability to dominate the battlefield.

introduced in the April 1999 Defense Planning Guidance.<sup>102</sup> The RDO is a joint operational concept for future operations. A rapid decisive operation will integrate knowledge, command and control, and effects-based operations to achieve the desired political/military effect as quickly as possible without wasting many resources or suffering heavy casualties and physical destruction.<sup>103</sup> As can be witnessed from the RDO, they have also developed their operation strategy towards a capability centred one in order to cope with newly emerged threats.

In addition, a series of US nuclear posture reviews clearly show that the US deterrence strategy has also been transformed to a strategy based on effect and capability. In other words, they have transformed from the Cold War type threat based nuclear deterrence (MAD, Mutual Assured Destruction) using strategic nuclear weapons towards a capability-based deterrence. During the Cold War, the functioning of nuclear deterrence based on the MAD threat was guaranteed due to both sides' well-established communication, physical capacity to inflict unacceptable costs, and credibility to automatically retaliate. It was a reasonable and rational choice for both sides.<sup>104</sup>

After the former Soviet Union collapsed, the US faced many different kinds of military threats and there was a growing recognition of the fact that the Cold War threat based deterrence approaches against the newly emerged threats is inappropriate.<sup>105</sup>

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<sup>102</sup> USJFCOM (US Joint Force Command), *A Concept Framework for Rapid Decisive Operations in the 21<sup>st</sup> Century*, 22<sup>nd</sup> of October 1999, p.2 Available from– Global Security Website: <http://www.globalsecurity.org/military/library/report/1999/WP22Oct99.doc>. (Accessed on the 12th of August, 2010)

<sup>103</sup> USJFCOM, *A Concept for Rapid Decisive Operations*, RDO White Paper Version 2.0, p.8 Global Security Website: <http://www.globalsecurity.org/military/library/report/2001/RDO.doc>. (Accessed on the 13th of August, 2010)

<sup>104</sup> K.B. Payne and C.D. Walton, Deterrence in the Post-Cold War World in John Baylies (et al), *the Strategy in the Contemporary World: an Introduction to Strategic Studies*, Oxford, Oxford University press, 2002, p.173, and J, Baylis *et. al.*, *Contemporary Strategy*, New York, Holmes & Meier, 2<sup>nd</sup> Edition, 1987, p.117-120

<sup>105</sup> K.B. Payne, Nuclear Deterrence for a New Century, *The Journal of International Security Affairs*, 10: spring. 2006, p.52-54

As President Bush emphasized on 20<sup>th</sup> of May, 2003:

“The contemporary and emerging missile threat from these hostile states is fundamentally different from that of the Cold War and requires a different approach to deterrence and new tools for defence. The strategic logic of the past may not apply to these new threats, and we cannot be wholly dependent on our capability to deter them. Compared to the Soviet Union, their leaderships are often more risk prone .... Deterring these threats will be difficult. There are no mutual understandings or reliable lines of communication with these states ...”<sup>106</sup>

The typical newly-emerged threat for the US would be the regional rogue states such as Iran and North Korea as well as terrorist organizations such as *Al-Qaeda*; however, they may not be as prudent, attentive, and well-informed as was the case of the former Soviet Union. Therefore, the US had to develop new deterrence policies tailored to the newly emerged threats. These started from the better understanding of opponents and increasing the efficiency of deterrence by deploying a spectrum of activities aimed at improving their capability to deter diverse opponents and decimate the potential adversaries’ salience.<sup>107</sup>

Therefore, the Cold War nuclear triad of SLBMs, ICBMs, and long-range bombers were transformed to the capability-based new triad of Offenses, Defences, and Infrastructure to cope with newly emerged threats.<sup>108</sup> The three elements of the New Triad are tied together through command and control, intelligence, and planning capabilities. The New Triad has three elements: non-nuclear and nuclear strike capabilities (Offenses), active and passive defences (Defences), and defence-industrial infrastructure (Infrastructure), all supported by command and control, intelligence, and planning.<sup>109</sup> In addition, since the WMD is usually hard to intercept once launched and produces devastating havoc once exploded, the US

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<sup>106</sup> National Policy on Ballistic Missile Defense Fact Sheet, White House, Office of the Press Secretary, 20<sup>th</sup> of May, 2003, <http://www.whitehouse.gov/news/releases/2003/05/20030520-15.html>. (Accessed on 20<sup>th</sup> September, 2009)

<sup>107</sup> K.B. Payne, Nuclear Deterrence for a New Century, p.52-54

<sup>108</sup> K. Guthe, *The Nuclear Posture Review: How Is the “New Triad” New?* Washington D.C, Center for Strategic and Budgetary Assessments, 2002, p.2-3

<sup>109</sup> *Ibid.*, p.5

adopted the pre-emptive strategy against WMD-related targets to increase their efficiency in dealing with offensive means and to help reduce the possible cost on their forces.<sup>110</sup>

In other words, to help cope with the newly emerged threats, the US adopted capability and effect based operational and deterrence approaches. The US plans to develop an innovative operation strategy and new triad of deterrence with their advanced military technology to boost the capability and effectiveness against the newly emerged threat. Thus, the significance of technology has been enhanced while military technology has become an invaluable part of contemporary operation and deterrence strategy.

There also have been many concerns with the US in waging the “War on Terror”; but the chief concern of the US military authorities was the recognition of overstretched and inflexible forces. New types of threats in the post-Cold War era called for changes in several different areas: from forward deployment to rapid deployment; and, accordingly, relations with allies should be redefined, and policies related to American forces overseas should be reviewed. Therefore, their global defence posture has also been transformed.

The US government believed that force posture changes would strengthen their ability to meet their security commitments and contend with new challenges more effectively. As they transformed their posture, they were guided by the following goals:

- Expanding allied roles and building new security partnerships.
- Developing greater flexibility to contend with uncertainty by emphasizing agility and by not overly concentrating military forces in a few locations.
- Focusing within and across regions by complementing tailored regional military presence and activities with capabilities for prompt global military action.
- Developing rapidly deployable capabilities by planning and operating from the premise that forces will not likely fight in place.
- Focusing on capabilities, not numbers, by reinforcing the premise that the US does not need specific numbers of platforms or personnel in administrative regions to be able to execute its security commitments effectively.<sup>111</sup>

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<sup>110</sup> The US pre-emptive strategy will be fully reviewed in Chapter 6.

<sup>111</sup> The US DOD, *The National Defense Strategy of the United States of America*, March, 2005, p.18

This global defence posture transformation and doctrinal innovation (RDO) also confirms that the US is currently transforming their military by sharing its burdens with allies, developing flexibility, and focusing on effect and capability to deal with the newly emerged threats.

The organizational adaptation has also been pursued. The Forces' organization needed to be transformed from the forward deployment unit to carrying out the massive all-out war to the expeditionary unit equipped with quick despatching capabilities on a global scale to defend their national interest from these newly emerged threats. First of all, the units that possessed minimum independent joint operations capability were transformed from a division to a brigade to enhance their flexibility against newly emerged threats. The new concept behind these military units such as the BCT (Brigade Combat Team) and the UA (Unit of Action) emerged. In the US army, the reform of force organization to a SBCT (Stryker Brigade Combat Team) became one of the most important subjects. The US JCS General Eric K. Shinseki explained that the US army was organized into either light or heavy forces. He further mentioned that the light forces could respond rapidly as well as support operations but lacked any considerable staying power against heavy mechanized forces, while heavy ones were well equipped for war but difficult to deploy strategically.<sup>112</sup>

Therefore the Army has been developing the Stryker brigades, which are equipped with medium-weight armoured vehicles, and which, according to General Shinseki, "will meet an operational shortfall that currently exists between the capabilities of our early arriving light forces and our later arriving heavy forces."<sup>113</sup> These medium weight forces (SBCT) seek to combine the mobility and firepower of heavy forces with the deployability of light forces.<sup>114</sup> The SBCT was designed for rapid deployment; its goal was "to place a credible combat force on the ground anywhere in the world in 96 hours from liftoff."<sup>115</sup> Therefore the SBCT would

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<sup>112</sup> General E. K. Shinseki, *The Army Transformation: A Historic Opportunity*, Army, October 2000, p. 23

<sup>113</sup> General E. K. Shinseki, *The Army Vision: A Status Report*, Army, October 2001, p.33

<sup>114</sup> V. Alan, D. Orletsky, B. Pirnie, and S. Jones, *The Stryker Brigade Combat Team: Rethinking Strategic Responsiveness and Assessing Deployment Option*, Santa Monica, CA, RAND, 2002, p.4

<sup>115</sup> *Ibid.*, p.6

be transferred by transport airplane and due to the heavy weight of Tanks and Bradley Armoured Vehicle, the light weight Stryker armoured vehicle would be adopted.

In conclusion, the US military aimed to boost their flexibility (military readiness, quick deployment, and power projection) and capability to neutralize suspicious WMDs related targets. This was done to maximize their technological edge and effectively deal with the newly-emerged threats on a global scale and eventually deter the potential foe and prevent them from threatening their home land defence. Therefore, an operational innovation, the RDO, was introduced, and global defence posture was also transformed from the Cold War style static forward deployment forces to mobile and flexible forces. These were ready to be deployed during any global conflict swiftly as well as the new organizational adaptation of the SBCT. In addition, as one can see from the NPR, they vowed to develop both conventional and unconventional means to neutralize potential foes' WMDs. This means that they had long planned to develop the earth penetrator, as well as raise the efficiency of target acquisition and stand-off precision technology.

## RMA after the Second Gulf War

During the Second Gulf War, the US waged the EBO and NCW with their cutting edge information gathering assets (senior), C4I system and PGMs against the Iraqi forces who were armed with the typical conventional weapons for the mechanized battles. It was a massive success to the Coalition forces. However, the casualties have been soaring dramatically since Bush declared the end of the major combat action on 1<sup>st</sup> of May, 2003. In other words, information-centred, small-size high-tech forces revealed the fatal weakness in the newly emerging 4<sup>th</sup> generation war. Therefore, there was a big question mark on whether or not the contemporary military transformation is suitable for the complex irregular battlefield or not.<sup>116</sup>

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<sup>116</sup> In QDR 2006, the first sentence of introduction notes that “the 2006 review was conducted ‘in the fourth year of a long war’ – the report nonetheless represents a shift armed forces must be able to cope with threats emanating from ‘dispersed non-state networks’ rather than from the traditional military forces of an adversarial nation-state in US defence thinking”. In other words, QDR 2006 confirmed that contemporary military transformation was not suitable to wage the “War on Terror”. Excerpted

The Military Balance 2007 also commented the contemporary military transformation and their point of criticism was below.

Firstly, the contemporary military transformation concept was made reflecting the strategic circumstance before 9/11. Therefore, it is not adequate in the War on Terror era. It also mentioned that QDR 2006 already acknowledged “the need for US forces to engage in irregular warfare activities including long duration unconventional warfare, counterterrorism, counterinsurgency, and military support for stabilisation and reconstruction efforts”. In addition, the demands of counter insurgency efforts in Afghanistan and Iraq have inspired adaptations in the areas of equipment, operations, training and doctrine.<sup>117</sup>

Secondly, it mentioned the problem of light army and marines. Prior to the Iraqi and Afghanistan operation, it was widely accepted that information and surveillance technologies combined with stand-off PGMs would enable the smaller and lighter ground forces to have a similar power that larger and heavier forces had in the past. Light forces would be more efficient and cost effective, deploying more easily and requiring little logistical support. However, these light forces revealed the weakness in insurgent’s guerrilla tactics adopting Improvised Explosive Devices (IEDs) and suicide bomb.<sup>118</sup>

Thirdly, it also mentioned that the US would need to adopt a new counter insurgency doctrine and operation as well as integrate civil and military effort. The counter-insurgency doctrine was based mainly on the idea of a communist-inspired, rural-based ‘people’s war’ when they went into the War and was not suitable to urban and high-altitude combat. In addition, the previous counter-insurgency doctrine did not give much attention to defend and build nascent regimes that lacked institutional capacity and were striving to achieve legitimacy which was the case in Iraq and Afghanistan. Therefore, along with the training of urban and high-altitude combat skills, Army and Marine Corps have initiated cultural and language training, while leaders are trained on the development of human intelligence capabilities, civil affairs tasks and psychological operations. The new doctrine emphasises the need to secure the population,

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from- IISS (The International Institute for Strategic Studies), *The Military Balance 2006*, London, Routledge, 2006, p.13

<sup>117</sup>IISS, *The Military Balance 2007*, London, Routledge, 2007, p.15

<sup>118</sup> Ibid., p.15

develop precise intelligence and win the battle of popular perception, sometimes known as the campaign for ‘hearts and minds’.<sup>119</sup>

The US DOD has been readjusting the path of military transformation reflecting these criticisms. Firstly, QDR 2006 emphasized the importance of ground forces and marine.<sup>120</sup> The strategic significance of C4I asset, Air power, and stand-off PGMs has been relatively reduced and the new emphasis was given to the special forces, civil military relations, and understanding of local culture and language.

Secondly, even though, there was strong public opinion on withdrawal from Iraq and Afghanistan, the number of troops, especially ground forces and the marines has been increasing until the eventual withdrawal.<sup>121</sup> A major development of the Rumsfeld era was small-size high-tech forces; however the increase of number of troops is proof that they regard stability operation to be important as a military operation. According to DoD directive number 3000.05, they pledged that they would give significant attention to the stability operation. That directive mentioned that “Stability operations are a core U.S. military mission that DoD shall be prepared to conduct and support. They shall be given priority comparable to combat operations and be explicitly addressed and integrated across all DoD activities including doctrine, organizations, training, education, exercises, materiel, leadership, personnel, facilities, and planning”.<sup>122</sup> Recognition of stability operation significance also can be found in the Field Manual 3-0. Along with the typical traditional ground operation of offence and defence, the Army added the stability and support operation to the manual and upgraded their significance to a similar level to that of offence and defence. The stability

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<sup>119</sup> Ibid., p.15-16

<sup>120</sup> Excerpted From the Global Security Website; *Quadrennial Defence Review Report February 6, 2006*,

<http://www.globalsecurity.org/military/library/policy/dod/qdr-2006-report.htm>, (Accessed on the 10<sup>th</sup> of October, 2011)

<sup>121</sup> For example, there was a troops surge in Iraq in 2007 which was from total 132,000 to 168,000 in September according to the president order.

*Excerpted from - President Address to Nation* , 10<sup>th</sup> of January, 2007,

<http://georgewbush-whitehouse.archives.gov/news/releases/2007/01/20070110-7.html>, (Accessed on the 10<sup>th</sup> of October, 2011)

<sup>122</sup> The US department of Defence, *Directive Number 3000.5, November 28, 2005*, p.4

operation was transformed from the supportive military action to achieving the specific objectives of the strategically significant military operation.<sup>123</sup>

Thirdly, since the US army was focusing on the swift power projection capability, they became much more mobile and lighter forces. The original purpose of the army's military transformation was to solve the problem of the infantry's survivability and the mechanized force's mobility by transforming a lighter task force based on their edge in information technology.<sup>124</sup> However, to become lighter and mobile, they sacrificed the armour in the vehicles, most notably in a Humvee (High Mobility Multipurpose Wheeled Vehicle) which debilitated its survivability. Since the Humvee was not designed to offer protection against intense small arms fire, they exposed a critical weakness in urban combat and enemy IEDs. Therefore, they started to adopt the up-armour to have better survivability. But, the problem was not solved yet. Even though survivability has been increased,<sup>125</sup> mobility has been severely restricted and the heavily armoured doors tend to jam shut, trapping the troops inside. Therefore, Mine Resistant Ambush Protected (MRAP) was developed and deployed. US TODAY reported in 2008 that fatalities caused by IEDs were decreased by 88% in May, 2008 compared to May, 2007. In addition, in that article, it was reported that Defence Secretary Robert Gates had made obtaining at least 15,000 MRAPs his top priority last year.<sup>126</sup> The dramatic replacement of Humvee to MRAP shows that, instead of lightness and mobility to be despatched promptly which was the core concept of the Rumsfeld era's SBCT, the US army was going back to the traditional notion of armoured vehicle which gives enough protection and survivability to the infantry.

Fourthly, the US Army has also revised the counter-insurgency doctrine. Reflecting their lessons during the Iraqi and Afghanistan War, they published FM 3-24 Counterinsurgency.

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<sup>123</sup> Headquarters Department of the Army, *Field Manual No.3-0*, Washington, DC, 14<sup>th</sup> of June 2001, p.1-2 – 1-17

<sup>124</sup> See SBCT section above in the thesis.

<sup>125</sup> It is also questionable as it cannot give enough protection from the mine blast below the vehicle and Explosively Formed Penetrators (EFPs)

<sup>126</sup> USA TODAY, *Roadside bombs decline in Iraq*, 22<sup>nd</sup> of June, 2008  
<http://www.usatoday.com/news/world/iraq/2008-06-22-iedsN.htm>. (Accessed on 10<sup>th</sup> of October, 2011)

The manual clearly described counter-insurgency as a political-cultural-sociological struggle, a civic effort far bigger than a straightforward military problem. This shifted the core of counter-insurgency from the soldier to people. In addition, since the safety of civilians became the central issue of operations, the political, social, and cultural elements are reflected heavily in this doctrine.<sup>127</sup>

Fifthly, the US started to transform from Rumsfeld's defence strategy stressing unilateralism and pre-emptive use of forces with the dominant hard power, into a defence strategy using soft power such as international collaboration and economic aid. The US DoD published the National Defense Strategy in June 2008. In this document, they vowed to invest in the counter-insurgency warfare capability and instead of killing and capturing insurgents or terrorists, they would try to win the heart and mind of local people by economic aid which would uproot terrorism.<sup>128</sup>

Finally there has been a re-evaluation of EBO which was regarded as the core concept of future warfare along with NCW. James Mattis (Commander of JFCOM) mentioned in his article "USJFCOM Commander's Guidance For Effect Based Operation" that The US Army, US Marine Corps, and other observers have concluded that EBO:

- “▪ Assumes a level of unachievable predictability
- Cannot correctly anticipate reactions of complex systems (for example, leadership, societies, political systems, and so forth)
- Calls for an unattainable level of knowledge of the enemy
- Is too prescriptive and overengineered
- Discounts the human dimensions of war (for example, passion, imagination, willpower, and unpredictability)
- Promotes centralization and leads to micromanagement from headquarters
- Is staff, not command, led
- Fails to deliver clear and timely direction to subordinates

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<sup>127</sup> Headquarters Department of the Army, *Field Manual No.3-24 Counter Insurgency*, Washington, DC, 16<sup>th</sup> of June 2006

<sup>128</sup> The US DoD, *The National Defence Strategy*, June 2008, p.15-20

- Uses confusing terminology and is difficult to understand.”<sup>129</sup>

However, the US Air Force insisted that the EBO is battle-proven in Iraq and Afghanistan and to weigh down a meaningful operation concept (the EBO) to an unworkable software engineering approach to war was not correct.<sup>130</sup> Therefore, they still remained confident of the EBO and even though the EBO is no longer applied in ground operations especially close combat, the EBO would still be applied the US Air Forces’ strategic stand-off precision operation. In conclusion, the US army recognized that since small-size close combat is the mainstay of counter-insurgency, the utility of the EBO has been significantly reduced because it concentrated on parallel attacks on strategically important enemy targets to break down their systems and willingness to fight. The EBO debates showed that in the contemporary security situation, the entire conflict cannot be fixed by the dominant information and stand-off precision technology and traditional conventional approaches to the conflict are still the dominant form of warfare.

Briefly, after Bush’s declaration of ending major combat in Iraq, May, 2003, the US has been seriously self-scrutinizing its military transformation and has been trying to find a new readjusted path of military transformation. They realized that a light, mobile, and high-tech war, using their advantage in information and stand-off precision technology, was not a suitable answer to the 4<sup>th</sup> generation war. Instead, they found the utility of stability operations which requires more troops on the ground and an understanding of local culture and language, heavier armour, and small-sized close combat. The focus of readjustment of military transformation does not give away their edge in technology. Based on the edge, they are trying to integrate the useful lessons of traditional conventional warfare strategy, such as better survivability of infantry by beefing up the armour, civil military relationship, and small-sized troops’ command and training. The chapter below will discuss how the US military transformation has influenced the US-ROK alliances, especially after 9/11 and will show that the US-ROK alliance has been transformed to technology-centred forces.

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<sup>129</sup> J.N. Mattis, USJFCOM Commander’s Guidance for Effects-based Operations, *Parameters*, 38(3), Autumn.2008: p.20

<sup>130</sup> P.M. Carpenter and W.F. Andrews, Effect-Based Operations Combat Proven, *Joint Force Quarterly*, 52(1), 2009, p,78-81

How has US military transformation after the 9/11 attacks affected the US-ROK alliance? Discussed briefly in the chapter below, firstly, will be the traditional military partnership between the US and the ROK. Then, by researching US military transformation and its impact upon Korean peninsula security, it will be shown that the US-ROK alliance had been transformed to a technology-dominant force.

## US Military Transformation and Its Impact on the US-ROK Alliance

### The US Security Umbrella and Coordination during the Cold War Era

The USFK has kept its influential role in the defence of the Korean peninsula. This section will first examine the US role in the security of the Korean peninsula after the Korean War. This demonstrated that US commitment to the ROK defence has been a vital factor behind North Korean deterrence. After that, how the US military transformation especially after 9/11 has affected the US-ROK alliance will be analyzed to show that the joint forces have been transformed into technology-centred forces.

Eisenhower took power in 1953 and tried to reach the armistice as early as possible during the Korean War. He wanted to withdraw most of the residential army under the principle of a money-saving and long-haul policy. During the long and exhausting Korean War, the US analysed that it had not been effective in using conventional weapons against the Chinese human sea tactics, and needed to adopt a productive strategy from a new perspective.<sup>131</sup> Eisenhower largely endorsed NSC-68. He accepted its monolithic view of international communism and the dangers it identified as communist subversion. However, the prolonged and attrite Korean war asked for huge US commitment and Eisenhower warned that care had to be taken that waging containment did not impose so many demands upon the American economy that it might destroy the very system that it was trying to defend. Then he rejected the profligacy of NSC-68 with its assumption that 20% of GNP could be devoted to defence. The crux of the New Look was thus to accept the principles of NSC-68 but to prosecute them

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<sup>131</sup> R.F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy*, New York, Macmillan, 1976, p.402

in ways that did not overburden American society. The result was that Eisenhower's containment strategy had key themes: renewed focus on nuclear weapons, burden sharing with allies, and covert tactics and finally economic and psychological warfare. Eisenhower took the US back to a reliance on its supremacy in airpower and nuclear weapons.<sup>132</sup>

After the Korean War, there were 325,000 US troops in the ROK; however their force was curtailed to 70,000 by 1957 according to the New Look policy. Even though the number of troops were reduced, the US role in ROK defence has been pivotal. First, they strengthened the ROK forces<sup>133</sup> and had given the nuclear umbrella to ROK. On 28<sup>th</sup> of January, 1958, the UNC confirmed that the 280mm Howitzers and the Honest John SSM which could adopt a nuclear warhead were deployed in the Korean peninsula. In addition, one MGM-1 Matador surface-to-surface cruise missile (Range: 1,100 km) squadron was also dispatched in 1959. In 1961, the MGM-13 Mace missile (Range: 1,800km) was also introduced to the Korean Peninsula.<sup>134</sup> Secondly, the USFK also became a trip-wire to ignite the automatic US engagement in the potential North Korean invasion, since the US 8<sup>th</sup> Corps (US 2<sup>nd</sup> and 7<sup>th</sup>

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<sup>132</sup> A.P. Dobson and S. Marsh, *US foreign policy since 1945*, London, Routledge, 2001, p.26

<sup>133</sup> Under this US strategy, the US-ROK agreed upon the ROK war potential during a summit talk on 30 July, 1954, codified in the Agreed Minute of Understanding (Appendix B). After further settlement in 1958, the ROK armed forces consisted of 565,000 army soldiers, 16,600 navy sailors, 26,000 marines, and 22,000 air force soldiers, a total of 630,000 soldiers. Compared to 450,000 troops that they had just after cease-fire, the size of ROK troops expanded. In addition, with the force modernization of ROK troops was also pursued. Once the US force left Korea, most of their military equipment was handed over to ROK forces. Meanwhile, the US military aid to ROK was also agreed. From 1950, the US gave 5.47 billion free military aids according to the MAP (Military Assistance Program: no reimbursable grant). By 1974, when the US military aid method was transferred to FMS (Foreign Military Sales: No profit No loss basis), most of the received US military aid was in the form of MAP. Excerpted from- ROKMND, *HanMiDongMaengGwaJuHanMiGun*, Seoul, ROKMND, 2002, p.8

<sup>134</sup> D. S. Go, and G.E. Go,

*HaekDillema: MiGukEuiHanBanDoHaekJeongChaekEuiBburiWaJeonGaeGwaJeong*, Seoul, Hanul, 1993, p.86. The Korean Translation of P. Hayes, *Pacific Powderkeg: American Nuclear Dilemmas in Korea*, Lexington, Lexington Books, 1991

Infantry division: they were forward deployed and directly faced the NKPA in the cease-fire line) was in charge of the western front in front of *Seoul*.<sup>135</sup>

The burden-sharing<sup>136</sup> and its nuclear and airpower dependence was one aspect of the New Look Policy that influenced ROK security in general. The New Look policy contributed to the massive army-centric structure of the ROK armed forces and the lack of airpower whose objective was limited to the purpose of air base protection and CAS (Close Air Support), as well as information warfare capability, which became the stumbling block for the ROK forces to achieve an independent operation capability.<sup>137</sup> However, under the post-war reconstruction situation, the ROK forces were unable to develop the costly air, nuclear, and information power. Instead, the US gave the assurance of full scale engagement in the event of the North Korean invasion. They offered a nuclear umbrella and the strong air and information power support which contributed to deterrence success against North Korea. The US-ROK security cooperation (The US security guarantee) based on the New Look Policy was sustained during the Cold War era even though there was slight tension at times.

During the 1960s, though, there was immense improvement of the NKPA, the US aided the ROK's defence through the prolonged residence of US troops. Apart from that, through the Brown Memorandum (4<sup>th</sup> of March, 1966) as the compensation of ROK commitment to the Vietnam War, the US authorized and supported the economic aid and modernization of the ROK Armed Forces.

However, the shared burden policy in the Asia-Pacific region was intensified after the Nixon Doctrine instigated the ROK self-defence policy. Unlike the initial phase of the *Youl-Gok* plan in the early 1970s, which aimed at replacing the withdrawn US army's 7<sup>th</sup> Division, the second phase of the *Youl-Gok* plan quickly raised the ROK's own deterrence capability

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<sup>135</sup> I.Y. Kim and S.Y. Jo, *JuHanMiGunYeokSaJaengJeomJeonMang*, Seoul, Hanul, 2003, p.79

<sup>136</sup> While the US would give the nuclear umbrella and air, and information power, the ROK government was asked to take the most territorial defence roles, which meant that their force would be the army-centric one.

<sup>137</sup> J.T. Seo, *HanBanDoBangUiWaGongGunRyeokEuiYeokHal*:

*HanGukGongGunEuiUiSangGwaDangMyeonHyeonAnEulJungSimEuRo*, *Gusanondan in ROK*, 13: January, 1998: p.4-9

through SSM and nuclear weapons, due to the scheduled further withdrawal of US residential troops by the Carter administration.<sup>138</sup> However, the US commitment and security guarantee in the Korean Peninsula and their support to the ROK force modernization was not severely impaired. Because of the Nixon doctrine, the 7<sup>th</sup> Infantry division returned to the US in 1971 and the 2<sup>nd</sup> Infantry Division which guarded the DMZ in *Gaeseong-Munsan* Axis (one of the most important North Korean Invasion Route to *Seoul*) was repositioned to the North of *Seoul*. However, the 2<sup>nd</sup> Division was still within shooting-range of NKPA artilleries, which could act as the trip-wire for US automatic engagement. The US nuclear weapons were not removed at that time.<sup>139</sup>

Moreover, the pursuit of their own deterrence capability, in the end, was swiftly abandoned due to Reagan's reassurance of the Korean peninsula's security by cancelling the withdrawal plan. Along with the recuperation of the US and ROK military cooperation, this led to the abandonment of the ROK's nuclear and long-range SSM plan. As analysed, the US security guarantee and its back-up of the ROK modernization plan was the most influential factor of ROK armed forces build-up, strategy, and North Korean deterrence during the Cold War.<sup>140</sup>

## The US Military Transformation and its Impact on the Korean Peninsula during the Post-Cold War Era

After the Cold War ended, there was a discussion on the matter of the US residential forces reduction and repositioning in the Asia-Pacific. Therefore, the US DOD submitted "A Strategic Framework for the Asian Pacific Rim; Looking Toward the 21<sup>st</sup> Century" to Congress in April, 1990.<sup>141</sup> This report targeted the readjustment and curtailment of US

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<sup>138</sup> Y.S. Han, *JaJuNyaDongMaengYiNya*, Seoul, Hanul, 2004, p.57-59

To see ROK Nuclear research plan and its abandonment,

D. Oberdorfer, *Two Koreas; A Contemporary History*, revised edition, Indianapolis, Basic Books, 2001, p.66-74

<sup>139</sup> I.Y. Kim and S.Y. Jo, op.cit., p.111 and KODEF, *JeonSiJakJeonTongJaeGwonOhaeWaJinSil*, Seoul, Planet media, 2006, p.23-25

<sup>140</sup> Y.S. Han, op.cit., p.210-213

<sup>141</sup> The US DOD, *A Strategic Framework for the Asian Pacific Rim; Looking Toward the 21<sup>st</sup> Century*, Report to Congress, Washington, D.C, April, 1990

residential forces in the area. They set up three developing stages without any clear targets on the second and third stage to manage the readjustment of the troops and increase the stability in the region. However, due to the Iraqi invasion of Kuwait and the collapse of the Soviet Union, a new approach to this matter was inevitable. Therefore, the US DOD submitted the rearranged report to Congress in July, 1992 with the much clearer target of repositioning and the curtailment of US troops in the area.<sup>142</sup> Accordingly, by 1992, as a first stage measure, 2,000 soldiers of the air forces and 7,000 army non-combatants in USFK were curtailed.<sup>143</sup> However, further scheduled reductions could not materialize due to the tension between the North and South in the early 90's, most notably in the first North Korean Nuclear Crisis of 1994.

Moreover, at the Bottom-Up review in 1993, the US government declared their intention to possess the capability to win two MRCs, with North Korea named as a major flash point along with Croatia and Iraq. The US government promised to keep 100 thousand strong US forces in the region (Asia-Pacific). That commitment was not changed and revealed in the so-called Nye Report in February, 1995, which also reaffirmed that they would keep 100,000 US forces in the region.<sup>144</sup> Therefore, the US commitment to the Korean Peninsula had not yet been seriously transformed by the time 9/11 occurred.

However, the US military strategy has been dramatically transformed since the 9/11 attacks, as mentioned above. Their military build-up and deterrence strategy has been transformed from a threat-based approach using strategic nuclear weapons towards effect and capability-based approaches to face the newly emerging threats. Their military organization has also been transformed towards a mobile and flexible model (for instance the Stryker division) to be despatched in the possible conflict zone as early as possible with reasonable strength. In addition, the static and front deployed overseas forces were transformed into mobile and flexible models.

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<sup>142</sup> The US DOD, *A Strategic Framework for the Asian Pacific Rim; Looking Toward the 21<sup>st</sup> Century*, Report to Congress, Washington, D.C, July, 1992

<sup>143</sup> S.H. Lee, *21SeGiHanBanDoAnBoHwanGyungGwaJuHanMiGunEuiYeokHwal, Sejongjeongchaekyeongu 2001-8 in ROK*, Seongnam, The Sejong Institute, 2001, p.28

<sup>144</sup> The US DOD, *The United States Security Strategy for the East Asia-Pacific Region*, Washington, D.C, February, 1995

In this circumstance, the US-ROK alliance started to move away from the Cold War type force structure and strategy. They were not only targeting the Cold War type of territorial defence capability and threat-based deterrence against North Korea using their nuclear weapons and automatic US engagement but also they were raising the capability to neutralize the North Korean Asymmetric assets (WMDs) such as missiles, nuclear weapons, biochemical weapons and long-range artillery. Since those assets had become the major military assets of the contemporary NKPA and a concern for the US homeland security by their direct threat and proliferation, possessing a capability to neutralize those assets would eventually contribute to the deterrence against North Korea (capability and effect base deterrence approach).<sup>145</sup>

In fact, even though there were no major transformations in development to the Korean Peninsula before 9/11, there were a handful of transformations that were well underway after the Soviet Union collapsed. First, the US-ROK alliance published a report called “A New Alliance for the Next Century: the Future of the US-Korean Security Cooperation” in 1995.<sup>146</sup> According to this report, the US had already prepared for a massive US ground force curtailment and stated that US commitment to the Korean peninsula would dominantly be high-tech Naval and Airpower, which meant the USFK would be built around flexibility and capability. However, it was only targeted during in the second stage (North-South peace settlement and reunification: Accommodation and Integration) out of the three stages of US-ROK alliance development<sup>147</sup> and their force was still mainly committed for the territorial

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<sup>145</sup>Until the Cold War ended, the US had utilized the nuclear umbrella and security guarantee to the ROK government to deter North Korea (Threat based deterrence approach). However, after the Cold War ended, the US-ROK alliance has transformed their deterrence approach to a capability centred one. They believed that once they were equipped with the capability to control the enemy’s (North Korea) strength, North Korea’s hostile action would be severely reduced and eventually deterred. According to this approach, the US-ROK alliance has mainly aimed for the capability to neutralize the NKPA long-range artillery and missiles, which are the core asset of North Korean asymmetric warfare capability, and have made significant progress in recent years.

<sup>146</sup>J.D. Pollack and Y.G. Cha, *et. al.*, *A New Alliance for the Next Century: the Future of the US-Korean Security Cooperation*, Santa Monica, RAND, 1995

<sup>147</sup>I.Y. Kim, HaeWaeJuDunMiGunJaeBaeChiGyeHwaikGwaJuHanMiGunEuiMiRae, *Gunsanondan of ROK*, 39: Fall.2004: p.43-44

defence against North Korea. As the concern for the North Korean WMDs was mounting in the middle of 90's, the US-ROK alliance waived the threat-based deterrence (nuclear weapons) against North Korea<sup>148</sup> and started to mull over a capabilities and effect-based approach to deter North Korea. It was reflected in the newly drafted OPLAN 5026 and the modified OPLAN 5027-94 during the first North Korean nuclear crisis in 1994. Therefore, the US-ROK military transformation was well underway before 9/11 and the War on Terror only worked to ignite major transformation in the Korean peninsula, even though there was not a major shift at this time from the Cold war type military strategy of territorial defence and deterrence using the automatic US engagement,

The OPLAN 5026, drafted in 1993 during the first nuclear crisis, details an operation for carrying out surgical air-strikes on suspicious North Korean nuclear targets. OPLAN 5027 is an all-out war scenario and has been updated every two years since the first nuclear crisis in 1994. OPLAN 5029 is the operation plan to prepare for a sudden change in North Korea (Contingency plan). The most noticeable thing about the OPLAN is that it developed after the first nuclear crisis in 1994. According to the OPLAN 5026, during the first nuclear crisis, the US planned to deploy additional squadrons of aircraft and aircraft carrier battle group to ROK, including F-117s. However, during the second nuclear crisis in 2003, due to the more sophisticated nature of neutralizing North Korean WMDs (the list of strategically important targets had been significantly increased and their fortification also became a real issue), the Korean peninsula and Guam saw the deployment of additional assets in early March 2003. This brought a great deal of capability to the region that would be useful if the United States were to conduct surgical strikes.<sup>149</sup> OPLAN has been reformed to properly deal with the

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It is the stage where “peaceful coexistence would be fully established between North and South Korea, leading to the diminution and ultimate elimination of North Korea’s military threat to the ROK. Excerpted from: J.D. Pollack and Y.G. Cha *et. al.*, *op.cit.*, p.37

<sup>148</sup>There was a “Joint Declaration of the Denuclearization of the Korean Peninsula” which was entered into force as of February 19, 1992

<sup>149</sup> Global Security; *OPLAN 5026 Air Strike*, <http://www.globalsecurity.org/military/ops/oplan-5026.htm>, (Accessed on the 27th of August, 2010)

On the 28<sup>th</sup> of February, 2003 twelve B-52Hs and twelve B-1Bs were ordered to deploy to Andersen Air Force Base at *Guam*. On March 10 the 3rd Fighter Wing deployed roughly twenty-four F-15Es and 800 airmen from the 90th Fighter Squadron to *Osan* Air Force Base. On March 14 six F-117s from the 49th Fighter Wing arrived at *Kunsan* Air Base.

newly-emerged North Korean threat (asymmetric in character) and was also drafted to boost their edge in military technology concerning pre-emptive strike strategy. Therefore, OPLAN development after the first nuclear crisis clearly demonstrated that the US-ROK alliance approached the North Korean deterrence matter with the capability and effect-based approaches, using their edge in military technology rather than threat-based approaches.<sup>150</sup> In addition, the GPR and Flexibility Agreement also confirmed the US-ROK alliance was targeting to build their military strategies around their edges in technology, flexible power projection capability, and effect and capability.

As mentioned above, the US contemplated a major transformation of their force reallocation and projection which was finalized as the GPR. President Bush stated on 25 November 2003 that the US would redeploy US troops all over the world:

“Since the end of the Cold War, the once-familiar threats facing our Nation, our friends, and our allies have given way to the less predictable dangers associated with rogue nations, global terrorism, and WMDs. We have been actively transforming our defences to address these changes. While we continue to make progress in the transformation of our uniformed military, it remains for us to realign the global posture of our forces to better address these new challenges.”<sup>151</sup>

The most significant objective of the GPR is to retain strategic flexibility, which would allow for intervention in unstable regions with limited military power. The GPR is the concept that, by acquiring and networking the stronghold and lily pad<sup>152</sup> with each other, access to unstable

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<sup>150</sup> The US nuclear weapons withdrawal from the Korean peninsula and the relinquishment of trip-wire notion shows that the USFK has weakened the threat based deterrence approaches in recent years. After the annual US-ROK security consultative meeting in 2003 where the US-ROK agreed the US proposition that the USFK headquarter would be moved from *Yongsan* which is the shooting-range of NKPA artilleries to *Osan* and *Pyongtaek* which would not be reached by the NKPA artilleries, the trip-wire notion was actually relinquished.

<sup>151</sup> The US Office of the Press Secretary, Statement by President, 25<sup>th</sup> of November, 2003

<sup>152</sup> As lily pads lie scattered over the surface of pond, American bases are to be strewn all over the world. As frogs jump from pad to pad, American troops will use the bases as springboards for quick movements to reach any spot in the world. This deployment of bases and forces will enable the US to fight protracted wars. Excerpted from: Alternative Views Pacific Asia Resource centre - UMEBAYASHI, Hiromichi, “Keynote speech in Tokyo Meeting for Asia-Pacific Anti-Base

areas will be gained during emergencies, allowing for conflicts to be resolved quickly with timely power concentrations. Therefore, most of their military power was concentrated upon the power projection capability of the expedition force (strength deriving from quality and capability rather than quantity and number) and converting the residential troops' operation concept from a fixed residence in a certain place to a flexible residence, which can move to another place if necessary.

According to the GPR, the area which most needed the new residency of US troops were the places which possessed a high possibility of generating crisis. The US linked the following areas: North-Korea, South and Central Asia, the Middle-East, the Caucasus, East-Africa, and the Caribbean Sea as arcs of instability, and wished to relocate US troops in these areas to tackle possible conflicts and threats of terror.<sup>153</sup>

The relocation concept of the US troops in Asia can be categorised as follows: First, to control the future rival China and tackle the Taiwan Strait problem, alliances and war supplies would be disposed around the Asia-Pacific region. Second, the set-up of a quick-reaction troops system to search for and destroy international terrorist organisations such as the *Jemaah Islamiah*. Third, *Guam* will be used as a strategic stronghold in Asia.<sup>154</sup> Fourth, the triangle defence system of US-Australia-Japan will be maintained and strengthened. Fifth, the curtailment and relocation of residential troops in the Korean peninsula (1/3 = 12,500), as well as the merger and abolition of small and dispersed garrisons.<sup>155</sup>

If the troop relocation in Asia is finalised, the US will free themselves from their sole objective in the Asia-Pacific – tackling the North Korean threat – and move the residential troops in ROK to *Pyongtaek*, which has a harbour and airport nearby, to meet the quick

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Movement", 25-28<sup>th</sup> of November, 2006 , <http://en.parc-jp.org/news/features/peace/main/the-global-realignment-of-u-s-forces-and-the-asia-pacific-region>, (Accessed on the 12<sup>th</sup> of March)

<sup>153</sup> Korea Research Institute for Strategy (KRIS), *DongBukAhJunRyakKyunHyung*, Seoul, KRIS, 2004, p.53-54

<sup>154</sup> Guam is also out of target range from North-Korean and Chinese ballistic missiles.

<sup>155</sup> T.Y. Kwon, *JuHanMiGunGamChukMichJaePyunAeDdaReunHanBanDoAhnBoHwanKyungEui ByunHwa*, *BiSangGiHokBo 70 of ROK*, The Emergency Planning Commission of ROK, 2005, p.19. The size of curtailment has been readjusted to the smaller size.

reaction system requirements of the GPR.<sup>156</sup> Moreover, military garrisons and residential troops in ROK can be used flexibly in case of emergency according to the Strategic Flexibility Agreement that was reached in January, 2006.

Since the US decided to redeploy their residential troops in the Korean Peninsula, under the terms of the War on Terror, they have become able to project their force flexibly and quickly in a low-key regional conflict which is desirable in this era. This also shows that the USFK is transforming according to the contemporary US military transformation trends, where technology and effect has become a real issue. As a result, the efficiency of the US military technology has steadily become a strategically significant issue in the Korean peninsula as well.

In conclusion, the US-ROK alliance is transforming from the Cold War type, which was a static and threat-based military, to a high-tech, effect and capability-based force. At this point, one can question whether this technology-centred transformation would work effectively against the newly-emerged North Korean asymmetric threat. While the contemporary military technology granted severe advantages to the offender in the First and Second Gulf War, as well as the Israel and Palestine conflict in recent years for instance, there have also been cases where military technology failed to make any significant impact on the outcome of the conflict such as the recent insurgence of Afghanistan and Iraq. In consequence, one may ask why there was a difference of impact while the technologically-advanced forces adopted almost the same technology and similar operation strategies to maximize their edges in technology. This thesis aims to find an answer to this problem through case studies of the Korean peninsula. This thesis will reveal that technology alone cannot guarantee ultimate military success against a foe that holds the geographic edge and the capability to utilize it. Therefore, it has to be shown that 1) the geographic dimension of war is a significant one in the Korean peninsula, and 2) the NKPA possessed the capability to use the geographic edge in the Korean peninsula. For that purpose, the chapter below will firstly review the geographical dimension of war and examine the traditional Korean defence strategy, which further demonstrates the importance of using the geographical edge. The last chapter will

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<sup>156</sup> W.G. Park, *MiGukEuiGunSaJungChaek: ByunHwa,GPRMichJuHanMiGun, JuGanGukBangNonDan (National Defence Weekly) ROK*, KIDA (Korea Institute for Defence Analysis) Press, 9<sup>th</sup> of August 2004, p.1-9

research the contemporary North Korean military strategy and tactics to show that North Korea has drafted a defensive plan using their geography and has raised the capability to use the geographic edge after they researched the Korean War, in addition to other contemporary conflicts.

# Chapter 3 North Korean Geographic Edge and Tactical Preparedness

## 3-1 Geographic Dimension of War and the Traditional Korean Military Strategy – The Significance of Tactical Preparedness using the Characteristics of Korean Peninsula Topography

The geographical consideration has always been an integral part of war. Clausewitz mentioned that the geographical element is one of five elements of strategy along with moral, physical, mathematical, and statistical elements.<sup>157</sup> He further mentioned that the grammar of strategy literally and inalienably is dictated by the distinctive requirements of physical geography.<sup>158</sup> Sun Tzu listed geography among five constant factors which governed warfare in his book “The Art of War”.<sup>159</sup> He also mentioned that there are six kinds of terrain – (1) accessible ground; (2) entangling ground; (3) temporizing ground; (4) narrow passes; (5) precipitous heights; (6) positions at a great distance from the enemy – and also how to be successful in combat for each specific terrain.<sup>160</sup> Colin Gray further confirmed that geography is an integral element or dimension of strategy and positioned it as one of 17 dimensions of strategy. He claimed that, “Although geography is a distinguishable dimension, it manifests itself in, and helps shape, strategy in every dimension.”<sup>161</sup> Gray considered geography as (1) physical environment or ‘terrain’ (of all kinds), (2) the driver of technology for tactics,

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<sup>157</sup>C.V. Clausewitz, *On War*, trans. M. Howard and P. Paret, Princeton University Press, 1976, p.605

<sup>158</sup>C.S. Gray, Inescapable Geography in C.S. Gray and G. Sloan, *Geopolitics, Geography and Strategy*, London, Frank Cass Publishers, 1999, p.173

<sup>159</sup> Sun Tzu, *I. LAYING PLANS in The Art of War*, p.1

<sup>160</sup> Sun Tzu, *X. TERRAIN in The Art of War*, p.23

<sup>161</sup> C.S. Gray, op.cit, p.174

logistics, and organization, and (3) the spatial and temporal relations that inspire rival grand theories of geopolitics.<sup>162</sup>

Geography acts as the physical reality in a tactical, operational, and strategic level. In a tactical level, it is related to how to attack or defend the terrain, avenues of approach and fields of fire.<sup>163</sup> For example, during the American Civil War Battle of *Antietam* (17<sup>th</sup> of September, 1862), the Union Commander's (Major General George McClellan) flawed chasing tactics and point of crossing (avenue of approach) against the natural barrier of the Antietam Creek, along with the Confederate's adequate stalling tactics and defence line using the geography ultimately decided the fate of battle.<sup>164</sup>

At an operation level, it is about how the unit will fight in the face of geographic restraints; however, the important contribution of logistics and intelligence cannot be ignored.<sup>165</sup> For example, during the *Imjin* Wars, due to the natural barrier of the Korean peninsula and its distance from the Japanese mainland, the logistics and intelligence side of the war became a real issue and a major stumbling block for the Japanese forces.

In addition, according to Colin Gray, geography drives the technological choices that dominate tactics, logistics, and military cultures.<sup>166</sup> For example, the US aims to possess the capability to neutralize potential foes' WMD facilities and centre of gravity targets, usually HDBTs, as an integral part of capability-based deterrence approach. Meanwhile, The ROK is also passionately pursuing the technology and capability to deal with the NKPA long-range

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<sup>162</sup> Ibid., p.162

<sup>163</sup> P. Caputo, *A Rumor of War*, New York, Macmillan, 1977, p.21-22

<sup>164</sup> H.A. Winters, op.cit., p.124-126

<sup>165</sup> W. Murray, Some Thoughts on War and Geography in C.S. Gray and G. Sloan, *Geopolitics, Geography and Strategy*, London, Frank Cass Publishers, 1999, p.206

To research further to the geographic dimension of war

See) D.G. Hansen, The Immutable Importance of Geography, *Parameter*, Spring, 1997, p.55-64

C.S. Gray, The Continued Primacy of Geography, *Orbis*, 40: Spring, 1996, p.247-259

P. O'Sullivan, *Terrain and Tactics*, London, Greenwood Press, 1991.

E.J. Palka and F.A. Galgano eds., *Military Geography from Peace to War*, New York, McGraw-Hill, 2005

<sup>166</sup> C.S. Gray, op. cit., p.165

artillery, an integral part of North Korean asymmetric warfare strategy and usually hidden in underground tunnels.

In regards to the Korean peninsula's security, how would the geographic factor influence security? The topography of North Korea is dominated by a series of rugged mountainous ranges, comprising approximately 80 percent of the country's landscape. This mountainous terrain is composed of resistant metamorphic rocks that form sharp ridgelines and less-resistant granites that form valleys and depressions. These mountains are formidable barriers against movement in both the north-south and east-west direction.<sup>167</sup> Therefore, due to the tough terrain, the North Koreans could fortify the strategically significant targets with ease. For the US-ROK alliance side, the North Korean advantage in the topography increased the difficulty in neutralizing the strategically important North Korean targets. The rivers in North Korea are usually deep and wide, especially in the summer season from heavy rain. The depth and flow of these rivers has proved to be too much for offenders to cross. The mountainous topography of North Korea was a major stumbling block to the technologically advanced US forces during the Korean War. In addition, it serves as a potential shelter for the North Korean WMDs. In conclusion, the topography of North Korea is highly favourable to the defender once it is properly fortified to maximize its value. Therefore, the geographic dimension in the contemporary Korean peninsula security should be a significant consideration.

How could the geography of the Korean Peninsula affect both parties in possible conflicts? On a tactical level, the defender could strengthen their defence line with the steep mountains and deep and wide rivers; while for the offender it is about how to approach the defence line and break the defence. At the operations level, under the severe geographic restraints, how the offender and defender maximize the Korean peninsula topography in their operations, and gets sufficient supply and information, has often been the critical factor in the Korean peninsula conflict. In addition, since the US-ROK alliance develops and deploys advanced technology to neutralize the North Korean HDBT, one can say that the geographic factor drives the technological development in the Korean peninsula security. The geographic dimension of war in the Korean peninsula is still one of the major dimensions to be

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<sup>167</sup> E.D. Larkin, Location, in E.J. Palka and F.A. Galgano, *North Korea Geographic Perspectives*, The McGraw-Hill Companies, 2004, p.17

considered, and the efforts of the technologically advanced US-ROK alliance to overcome this geographic restraint has become increasingly limited due to the North Korean capability to maximize its worth. Under this circumstance, one critical question emerges. As Colin Gray said, the US-ROK alliance has developed and deployed the technology to overcome geographic restraints. However, do those efforts effectively work against the geographically-advantaged NKPA who understand how to use their edge and continually frustrate the security abilities of the US-ROK alliance?

The chapter above analysed how the US-ROK alliance has transformed their forces to a technology-centred one, reflecting the contemporary trend of military transformation and the War on Terror. The section below will review the traditional Korean Peninsula defence strategy using the geographic edge. In doing so, it will reveal the strategic significance of the defence strategy through using the geographic edge and military readiness to use the geographic edge in Korean peninsula security.

## Traditional Defence Strategy of Korea

Korea has not always found herself in a defensive position. Especially when the Korean peninsula was divided into three kingdoms in ancient times<sup>168</sup>, to be more prosperous, each country invaded the other for their territorial gains. In that time, *JyunRyub*, which was a national hunting event to train individual horse-riding skills and raise battle competence with the bow (the final winner became a national hero), was supervised by the king to show off their military power and train soldiers.<sup>169</sup> So, *JyunRyub* became an important national event to train for manoeuvre warfare.

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<sup>168</sup>The First Three Kingdoms from circa the first century B.C to 668A.D, and The Later Three Kingdoms from 892 A.D to 936 A.D.

<sup>169</sup>Y.H. Kim, op.cit., p.27-34

For example, *Goguryeo* held the *JyunRyub* mostly in autumn and winter, and since the most of their offensive warfare was concentrated on those seasons, one could say that both events were closely related to each other. In other words, there was the close strategic connection between their offensive manoeuvre warfare and mobile military power acquired through the adequate wild animal hunting training. (Ibid., p.75)

The ancient kingdom *Goguryeo* effectively applied manoeuvre warfare to extend their territory both in the Korea peninsula and the North East of China, through their cavalry battle strategy acquired through *JyunRyub* and their nomadic lifestyle. When they conquered the ancient kingdoms of *Okjeo* and *Dongye*, which were geographically adjacent to them and agricultural societies based on their fertile prairies, they took a chance on the enemy's military weakness.<sup>170</sup> They used the heavy cavalry's offensive manoeuvre to cause havoc in the enemy's infantry-centred defence line. On the other hand, when they fought against the militarily stronger *Xian Bei* tribe to extend their territory to the *Liao* River in the North East of China, they gave false information to pay less attention to the defence. Then they applied deception and guerrilla warfare onto the enemy battle array, as well as making an effort to finally seduce the enemy's main attack to their supporting attack. They then annihilated the enemy by turning around its main force in an appropriate time and place.<sup>171</sup> This outcome would not be possible without their manoeuvre warfare capability using the mobility of their cavalry. Ancient Korean kingdoms like *Goguryeo* considered offensive manoeuvre warfare through heavy armed cavalry as the one of the main axes of their strategies.

In addition to this, many of the ancient and medieval Korean kingdoms also waged pre-emptive warfare against tribes or tribal countries around the Korean peninsula since they were worried about those tribes becoming a security threat through rapid tribal unification.<sup>172</sup> For example, even though there was a significant intention to expand their territory, the *Goryeo* dynasty (918-1392) and *Joseon* dynasty (1392–1910) attacked the *Jurchens*<sup>173</sup> around their northern border to prohibit the unification of the tribe and to further disturb Korean peninsula security. As a result, *Goryeo* constructed nine castles (1107) in the North Eastern section of the Korean peninsula.<sup>174</sup> Four counties and six fortresses (1433–1449) in the

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<sup>170</sup> *Okjeo* and *Dongye*'s main forces were infantry.

<sup>171</sup> I.H. Seo, *HanKukGoDaeGunSaJeonRyak*, p.117-118

<sup>172</sup> They also launched pre-emptive attacks to the Japanese pirates called *Wokou* to prohibit any further pillage.

<sup>173</sup> The *Jurchens* were a *Tungus* people who inhabited the region of Manchuria (Northeast China) until the 17th century, when they became known as the *Manchus*.

<sup>174</sup> To review the preventive warfare of *Goryeo* dynasty against the northern nomad tribes,

See) H.K. Jang, *GoRyeoEuiBukJinJungChaekSa*, IMHC, ROKMND, 2004, p.154-156

J.S. Yoo, *HanMinJokJeonJangTongSa2-GoRyeoSiDae*, p.186-192

southern part of *Yalu* and *Tumen* River were constructed during the *Joseon* dynasty era.<sup>175</sup> To prevent any further pirate pillage, *Goryeo* (1389) and *Joseon* (1419) also organized an expedition force and attacked the pirate main base on the *Tsushima* island of Japan.<sup>176</sup> As explained, the type of warfare Korea has waged is not always a defensive warfare. However, it remains to be explored why defensive warfare has been the main strategy of the Korean peninsula.

Korean dynasties mostly possessed numerically inferior military capability compared to the Chinese, which affected their basic strategy. Tactically speaking, it was not an inspired idea for Koreans to wage an open field combat against the northern nomad tribes such as the *Kitan*, *Jurchens* and *Mongol*, who were good at cavalry warfare, the Chinese who had the numerical superiority, and the Japanese, who had excellent hand-to-hand combat skill.<sup>177</sup>

Therefore, rather than an offensive strategy and open field combat, their military strategy started from how to defend with the edge they had. The most significant traditional Korean peninsula defensive strategies are defence in depth, which utilizes the castles on the hill and the rivers on the way to the invader's main strategic target, the capital of Korea. They also used, Scorched Earth tactics, which worsen the invader's weakness of extended supply line.<sup>178</sup>

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<sup>175</sup> To review the preventive warfare of *Joseon* dynasty against the northern nomad tribes,

See) J.S. Yoo, *HanMinJokJeonJangTongSa3-JoSeonSiDaeJeonPyeon*, p.89-127

I.H. Seo, *HanKwonEuRollkNeunYeokDaeByungYoDongKukJeonRanSa*, IMHC, ROKMND, 2003, p.270-283

<sup>176</sup> To review the preventive warfare of Korean dynasties against the Japanese pirates,

See) B.O. Choi, J.S. Yoo, and J.B. Lee, *OuaeKuToBeolSa*, IMHC, ROKMND, 1993, p.163-168 for *Goryeo* dynasty and p.203-221 for *Joseon* dynasty

J.S. Yoo, *HanMinJokJeonJangTongSa2-GoRyeoSiDae*, p.186-192

J.S. Yoo, *HanMinJokJeonJangTongSa3-JoSeonSiDaeJeonPyeon*, p.41-58

I.H. Seo, *HanKwonEuRollkNeunYeokDaeByungYoDongKukJeonRanSa*, p.162-168

<sup>177</sup> J.H. Lee, *ImJinWaeRanSaYeonGu*, Seoul, AseaMunHwaSa, 2007, p.309

<sup>178</sup> To review the origin of the Korean traditional defensive warfare strategy

See) I.H. Seo, *HanGukGoDaeGunSaJeonRyak*, p.22,82,117

B.O. Choi, *HanMinJokJeonJangTongSa1-GoDae*, p.182-248

Invaders had a long journey to reach the Korean peninsula. Therefore they always had problems with the long supply line. These invasions would also be delayed by the hot and wet Korean summer and sometimes with floods and epidemics. In addition, the invader had to overcome the Korean traditional defence in depth, which would delay the enemy advance further and cause them a considerable headache when they tried to avoid attacking castles. These natural barriers, the long journey, the climate of Korea as well as the Korean traditional defensive strategies and tactics which utilize these strategic advantages, all caused a delay in their advance. Therefore, for the invader, logistical problems were usually the biggest concern. Ultimately, the consistent lack of supplies made it almost impossible to accept the chilly and windy Korean winter.

Traditionally, Koreans combined the Scorched Earth tactics with the defence in depth to strengthen their advantage in defensive warfare. The concept of the Korean castle-centred defence in depth strategy was coupled with Scorched Earth tactics. First, the entire public would gather at the castle on the hill, which was normally located on the way to the capital, burn everything, and poison the water. With their long supply line, the invaders would seek to make use of the local supply and start to pillage. However, these tactics left nothing to help the invaders wage a protracted war. Because these were located on the way to the capital, they had to make a decision whether they would occupy the castle or leave it. If they attacked it, they would suffer serious casualties and waste time. Also, since the castles were all linked, once one was in danger, others would support it. If they left it to save time and casualties, then combatants from these castles would attack the enemy rear line in order to cut off their supply. If the invaders finally decided to withdraw, mostly because of the cold Korean winter and protracted warfare, the combatants might also decide to attack the invader's withdrawal force.<sup>179</sup>

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H.K. Yeo, *GoGuRyeoHuGiGunSaBangEoCheGyeWaGunSaJeonRyak*, the Third Compilation of HanKukKunSaSaYeonGu, IMHC, ROKMND, 1999, p.53-68

H.K. Yeo, *GukNaeSungKiGoGuRyeoEuiGunSaBangEoCheGye*, the Second Compilation of HanKukKunSaSaYeonGu, IMHC, ROKMND, 1999, p.58-76

B.O. Choi, *GoGuRyeoDaeSuDaeDangJeonJang*, IMHC, ROKMND, 1991, p.62

J.H. Lee, op.cit., p.288-310

<sup>179</sup> See) H.G. Yeo, *GoGuRyeoSeongI–AbRokGangJungSangRyuPyeon*, Seoul, IMHC· ROKMND, 1998, p.1-47

H.E. Jung, *JoSeonHuGiGukToBangWiJeonRyak*, Seoul, IMHC, ROKMND· 2002, p.1-47

This strategy shows that traditional Korean military thought was immensely influenced by a mixture of topography and climate. The core characteristic of this defence strategy is the protracted defence and guerrilla warfare strategy using the Korean peninsula's mountainous topography and climate. These defensive strategies have proven to be very effective. For example, based on this strategy, *Goguryeo* repelled four massive invasions (598, 612, 613, and 614) of the Chinese dynasty *Sui* (581-618). The *Sui* dynasty eventually collapsed and one of the main reasons behind this was the immense cost of the failed expedition to *Goguryeo*.<sup>180</sup>

In conclusion, even though there is an element of offensive strategy to Korean strategic thinking, its main structure can be defined as a defensive strategy using a geographic edge, adjusted to the specific security situations of the Korean peninsula. However, due to the lengthy peace of the early *Joseon* dynasty, the *Joseon* government was negligent in repairing or building the castles which were the core of this defence strategy, except for the king of the *Taejong* era (1400–1418). Therefore, this traditional defence strategy actually could not be adopted by *Joseon* before the Japanese invasion in the 16<sup>th</sup> century.<sup>181</sup> It contributed immensely to the *Joseon*'s initial military fiasco during the *Imjin* Wars. The strategic significance of a defensive strategy using mountainous geography in the Korean peninsula will be researched in detail using the *Imjin* Wars as a case study.

## 3-2 The North Korean Military Strategy Development

The section above analysed how the US-ROK alliance has been transformed to a technology-centred force and the significance of geographic factors in Korean strategic thinking. It also reviewed the few contemporary writings regarding the issues of modern military technology, skill, and geography. These argue that the strategic effect of modern military technology is significantly reduced against the foe that possesses the geographic edge and the military readiness to use this edge. This section will reflect how the research and experience of the Korean War and several contemporary conflicts caused the NKPA to develop strategies and tactics that use their geographic edge while upgrading their capability to take advantage of their strategies and tactics.

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H.K. Yeo, *GoGuRyeoHuGiGunSaBangEoCheGyeWaGunSaJeonRyak*, p.53-68

<sup>180</sup> I.H. Seo, *HanGukGoDaeGunSaJeonRyak*, p.22.

<sup>181</sup> J.H. Lee, *op.cit.*, p.309.

## Foundation of the NKPA Military Strategy

The US and ROK military analysts argue that, based on the Soviet military strategy, the current NKPA military strategy added the experience of the Korean War, *Kim Il-sung's* anti-Japanese guerrilla warfare, and several local wars.<sup>182</sup> *Kim Il-sung* acquired the PLA (People's Liberation Army) irregular warfare strategy through the anti-Japanese guerrilla experience from 1931 to 1940.<sup>183</sup> He then learned the Soviet regular warfare strategy by serving for the Soviet army from 1941 to 1945.<sup>184</sup> Through the Korean War experiences, North Korea also recognized that the NKPA needed to adopt strategies and tactics which reflected the specific Korean peninsula's geographic characteristics such as steep mountains, deep and wide rivers, and the long coast line. Furthermore, they also learned many lessons from local wars and conflicts.<sup>185</sup>

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<sup>182</sup> M.R. Lee, *BukHanGunSaJeonRyakEuiYeokDongJeokSilCheWaKimJeongIlCheJeEuiGunSaDongHyang* in *Bukhanyeonguhwae, BukHanEuiGunSa*, Seoul, Gyonginmunhwasa, 2006, p.247-250

M.S. Jang, *op.cit.*, p.28-37

G.S. Kim, *JoSeonInMinGunChangSeolGwaBalJeon* in Graduate School of North Korean Studies, Kyungnam University, *BukHanGunSaMunJeEuiJaeJoMyong*, Paju, Hanwool, 2006, p.116-117

M.R. Lee, *KimJeongIlCheJeEuiBukHanGunDaeHaeBu*, p.58-61

KIDA, *BukHanGunSaCheJePyongGaWaJeonMang*, Seoul, KIDA press, 2006, p.48-50

W.S. Seo, *BukhanJeonRyakSaSangShinRon*, Seoul, Hanwon, 1990, p.67-83

<sup>183</sup> Since he served for PLA from 1933 to 1940, he had received an education of *Mao Zedong's* Peoples' war theory

<sup>184</sup> When he returned to North Korea, he was a Soviet Army Colonel and had studied the Tukhachevsky's deep operation theory and saw the possibility for its application and success during the Great Patriotic War (1941-1945)

<sup>185</sup> (1) Cuban Missile Crisis ( October, 1962) – Independent operation capability

(2) Vietnam War (1962-1975) – Irregular warfare

(3) Arab-Israeli conflict (June, 1967 and October, 1970)- Surprise lightning attack

(4) Soviet War in Afghanistan (1979-1989)– Independent defensive warfare capability

Excerpted from– W.S. Seo, *op.cit.*, p.83

Meanwhile, from the First Gulf War experience, they realized the might of modern warfare. Consequently, they positively pushed ahead the local development plan of strategic weaponry most notably in the form of missile and nuclear weapons, which is also in the category of WMD, and

The NKPA military strategy that was used during the Korean War was based on Soviet Military Strategy, which will be reviewed in the Korean War case study in Chapter 5. However, after they avoided a military catastrophe due to the massive Chinese engagement, the NKPA started to modify their strategy to adjust the specific Korean peninsula requirements. The NKPA discussed the strategic and tactical mistakes of the Korean War during the initial phases of war during the Third Plenum of the Second KWP Central Committee. This Plenum has a significant meaning for the further development of NKPA military strategy, since it tried to complement the detected defect of Soviet Warfare strategy application to the Korean peninsula and became the trigger of the indigenous North Korean military strategy. This was adopted to meet the specialty of the Korean Peninsula rather than a reckless imitation of Soviet military strategy.<sup>186</sup>

In this plenum, the North Korean military authorities first picked the reserve problem which was a significant element of Soviet military strategy. They confessed that, due to the lack of reserves, they were not successful during the August and September offensive to the UN defence position in the *Naktong* River and they failed to prohibit the sudden collapse of their troops following the UN success of the *Inchon* landing operation. They also recognized that, since they did not have the proper local defence position, facility, and shelter, their reserve problem became greater and eventually they could not prevent the UN forces from marching north until the Chinese engagement.<sup>187</sup> Their recognition of reserve problems was reflected in the decision to bolster their defence facilities and build up a strong reserve in their rear during the Korean War. After the Korean War, the North Korean recognition of problems with

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strengthened their protracted warfare capability through the fortification of their territory. Excerpted from- M.S. Jang, op.cit., p.37

<sup>186</sup> To review the military discussion in this Plenum,

See) M.S. Jang, op. cit., p.33-34 and p.151-153

G.S. Kim. op.cit., p.107-108

S.H, Kang, BukHanGunSaJeonRyakEuiYeokSaJeokGoChal, *Jeonryakyeongu*, KRIS, 11(3):Nov.1997, p.21-23

W.S. Seo, op.cit., p.72-74

<sup>187</sup> M.S. Jang, op.cit., p.127

reserve and defence facilities in the rear was also reflected in their Four Military Guide Line as “Arming the entire population and fortifying the entire country”.<sup>188</sup>

Secondly, they evaluated that the sudden NKPA collapse was due to the lack of officer classes’ commanding capability, troops’ discipline and ideology education. Once they earned the crucial time, they started officer re-education in every branch of military service. The head of the Soviet military advisory group and new ambassador to North Korea, Razuvayev, enforced a strict and systemic five month long re-education, even though the frontal unit kept asking for reinforcement.<sup>189</sup> They also intensified the ideological brainwashing of the troops and gave an opportunity for the non-communist member soldiers to join the communist party according to their military merit. The effect of these measures started to come out on the NKPA’s stubborn defence campaign during the fall of 1951, most notably during the Battle of Bloody Ridge and Heartbreak Ridge Line.<sup>190</sup>

Thirdly, they mentioned their failure to exterminate the enemy’s combat capability which was highly appreciated in the Soviet military strategy. At the initial stage of the Korean War,

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<sup>188</sup> Even though the frontal unit kept asking for the reinforcement in the early part of 1951, the NKPA decided to train their newly recruited troops (Three corps size; around 100 thousand troops) in *Manchuria* and deployed from their rear between the end of January, 1951 and early February, 1951 Excerpted from- I.S. Kim, *KimIlSungJeoJakSeonJibJe12Gwon*, Pyongyang, Joseonrodongdangchulpansa, 1995, p.403-405

<sup>189</sup>IMHC,*SoRyeonGunSaDanJangRaJuBaYeFEui6.25JeonJaengBoGoSeo2*, Seoul, Guningongjehwae, 2001, p.58-60, and p.77 The Korean translation of Razuvayev’s (the head of the Soviet military advisory group to North Korea; From November, 1950 to September 1953) Korean War report Volume 2. The NKPA started the re-education of officers and reserved forces after the tide of war turned in their favour (November,1950); however, since the real arms were distributed in January 1951, it is reasonable to say that January 1951 was the starting point of re-education of forces. At the time, the communist 3<sup>rd</sup> offensive was committed and made a great success. However, from February, the UN forces’ counter-attack was initiated and *Seoul* was recaptured in March. From March to September, since both parties committed several major offensives and counter-offensives; both parties suffered severe shortage of troops in the front. Under these circumstances, there was a severe reinforcement request from the front; however, the re-education of forces was carried out according to the original plan.

<sup>190</sup> G.S. Kim, op.cit., p.98

the North Korean headquarters ordered taking out a symbolic target such as a radio station, government facility, or prison rather than follow the suggestions from the Soviet military advisory group, which was to take the *Han* River Bridge to exterminate the ROK main forces in the North of the *Han* River.<sup>191</sup> Along with their failure in the Battle of *Chunchon*, this decision gave crucial time for the ROK forces to regroup and lay the defence line in the *Han* River, which consequently gave the US the opportunity to engage in the Korean War. The North Korean military authorities and Soviet military advisory group believed that the NKPA failure of exterminating the ROK's strength in the initial stage of war was one of the main reasons behind their heavy losses in the *Naktong* River Line campaign. They therefore developed the chase and annihilation operation concept further.

Fourthly, they pointed out that their forces failed to overcome the technological disparity (especially the UN airpower superiority) which brought about various supply and supporting firepower problems to the frontal unit. To overcome this defect, they vowed to improve their highland and night combat skills under the US air supremacy, to master land mine warfare to help weaken the enemy's mobility, and to enhance their logistical capability and indigenous war industry productivity.<sup>192</sup> This move was reflected in, "modernizing weaponry, doctrine and tactics under the principles of self-reliance (*Juche*) in national defence" and "fortifying the entire country" in their Four Military Guidelines.

Finally, they pointed out the failure of guerrilla warfare. They expected a vast communist uprising in the ROK rear and a melt-down of the ROK forces. However, this did not happen and they failed to lay down the second front in the ROK rear line until the defeated NKPA waged its guerrilla warfare.<sup>193</sup> This led to a vast build-up of their irregular warfare force and capability after the Korean War.

## Reconstruction of the Economy and Armed Forces; (1954-1961)

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<sup>191</sup>IMHC, *SoRyeonGunSaDanJangRaJuBaYeFEui6.25JeonJaengBoGoSeoI*, Seoul, Guningongjehwae, 2001, p.182-183

<sup>192</sup> M.S. Jang, op.cit., p.33-34 and p.152-153

<sup>193</sup> Ibid., p.34

Through the Korean War experience, the NKPA realized that as long as the US forces were stationed on the Korean peninsula, immediate communization using military means was almost impossible. Therefore, throughout the 1950's the NKPA kept a relatively cautious approach to the Korean peninsula communization resorting to arms. Even though they paid attention to the military capability enhancement, they paid more attention to the economy reconstruction. Militarily, taking a lesson from the harsh experience under the UN air supremacy during the Korean War, they tried to strengthen their airpower<sup>194</sup> capability and pursued their ordnance modernisation rather than focusing on increasing the size of their troops.<sup>195</sup> The North Korean Air Force was expanded to five air divisions, with 33,000 troops as of 1959, which included the MIG-15 and newly developed MIG-17.<sup>196</sup> Accordingly, North Korea focused on the economy's reconstruction, and the improvement of quality of forces, rather than increasing the quantity which could also cause the labour deficiency. At that point, even though their airpower was inferior to US FEAF (Far East Air Force) strength, it was far superior to the ROK Air Force whose main fighter was still an old fashioned F-86F.

## The Preparation of Independent War and Emphasis on Guerrilla Warfare; (1962-1975)

Entering into the 1960's, the North Korean security circumstance changed dramatically. Most of all, there was the Chinese People's Volunteer Army (PVA)<sup>197</sup> withdrawal in 1958 and the purge of an officer class that served the Chinese Army before, since they were a potential

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<sup>194</sup> G.S. Kim, op.cit., p.110

<sup>195</sup> From 1951 to 1956, the NKPA introduced around 2,000 tanks and self-propelled guns including the newly developed T-54 tanks and SU-100 self-propelled guns. Excerpted from- Ibid., p.114

In fact, the NKPA did not need to expand the size of troops at that moment since both sides possessed almost the same size troops. In 1955, the NKPA and PVA possessed slightly more than 650,000 troops including 250,000 PVA soldiers, and the US-ROK joint forces possessed around 700,000 troops including 85,500 US residential forces. Excerpted from- IMHC, *HanMiGunSaGwanGyeSa*, Seoul, IMHC, 2002, p.677

<sup>196</sup> ROK Air Force, *GongGunSa2 (the history of Air Force Volume 2)*, ROK Air Force Headquarter, 1964, p.89

<sup>197</sup> The Chinese sent their troops with volunteer status since they did not wage the official war against the US and UN which could lead to the all-out war against the US.

threat to the *Kim Il-sung* regime. Therefore, the quality and quantity of their force retrograded. Furthermore, the US deployed nuclear weapons on the Korean peninsula from 1958.<sup>198</sup> The military balance in the Korean peninsula sharply turned against North Korea. The democratization movement of the ROK, which could be an opportunity for the North Korean to at least raise the communist sympathiser, was quickly overturned by the anti-communist military *coup d'état*.<sup>199</sup>

In terms of the international security circumstance, North Korea was involved in an ideology debate between China and the Former Soviet Union. Since both countries wanted to court North Korea to their side, North Korea managed to sign “The DPRK (Democratic People’s Republic of Korea; North Korea) Soviet Union Agreement on Friendship, Cooperation and Mutual Assistance” on the 6<sup>th</sup> of July, 1961 and the same treaty with communist China on the 11<sup>th</sup> of July, 1961. However, the relationship between North Korea and the Soviet Union became tense after the “Cuban Missile Crisis” since North Korea criticised Khrushchev’s revisionism, which included peaceful coexistence with the US in their official newspaper *Rodong Sinmun* on the 17<sup>th</sup> of November, 1962.<sup>200</sup> After this, the relationship between North Korea and the Soviet Union worsened and North Korea could not expect any more military aid from the Soviet Union.<sup>201</sup> After the military delegate sent to the Soviet Union returned to North Korea empty-handed, the Fifth Plenum of the Third KWP Central Committee was held urgently on the 10th of December. In this plenum, they resolved to strengthen military power even though there would be slight constraints on the economic development and put out

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<sup>198</sup> J.B. Lee, *NamHanEuiHaekMuGiBaeChiWaBukHanEuiHaekMuGiGaeBal1, Pyonghwahakyeongu*, 9(3), p.27-28

<sup>199</sup> The *Rhee Syngman* regime was collapsed by the April Revolution in ROK since they committed the electoral corruption during the presidential election on the 15<sup>th</sup> of March, 1960. But the social unrest was quickly quelled after the anti-communist military *coup d'état* on 16<sup>th</sup> of May, 1961.

<sup>200</sup> G.S. Kim, *op.cit.*, p.131, and S.H. Kang, *op.cit.*, p.23

During the early part of the Sino-Soviet ideology split, North Korea actually supported China since Khrushchev’s condemnation of personal cult targeting Stalin could influence the North Korean despot *Kim Il-sung*’s position in North Korea.

<sup>201</sup> After North Korea criticised the Soviet’s stance on the Cuban Missile crisis, they sent a military delegation to Moscow and asked for military aid (29<sup>th</sup> of November–5<sup>th</sup> of December, 1962) but the Soviets refused it. The relationship between them understandably worsened. Excerpted from- T.Y. Ham, *GukGaAnBoEuiJeongChiGyeongJaeHak*, Seoul, Bubmoonsa, 1998, p.164

Three Military Guidelines: To arm the entire population; to fortify the entire country; to train the entire army as a “cadre army”.<sup>202</sup> From then on, they started to use one-third of their national budget towards the national defence sector. This was the beginning of “developing the military capability along with the economy at the same phase” policy.<sup>203</sup>

The Four Military Guidelines which added “Modernizing weaponry, doctrine, and tactics under the principle of self-reliance in national defence” to the pre-existing Three Military Guidelines became, in 1966, the spine of North Korean military doctrine. However, in regards to the characteristics behind these guidelines, there was a divided opinion. Most of the ROK military analysts, especially from the Armed Forces, argued that, since this military doctrine was adopted to strengthen their military capability in efforts to become the groundwork of a matrix of further offensive warfare capability build-up, it was quite an offensive military doctrine. However some civilian military analysts such as *Ham Taekyoung* and *Kim Gwangsoo*, argued that since the “Three Military Guidelines” were drafted under various North Korean security dilemmas such as the PVA withdrawal, the US nuclear weapons deployment in the Korean peninsula, as well as an era of discord with the Soviet Union, it was originally drafted as a defensive military doctrine. However, both opinions agreed that the adopted point of the Three Military Guidelines was the tipping point in NKPA military strategy transformation to a model of self-reliance. To overcome these security dilemmas, North Korea opted to chase after the military idea of self-reliance, as outlined in the “Three Military Guidelines” as their military policy principle, and develop their military capability along with their economy simultaneously.

However, entering into 1965, the security situation in North Korea began to turn in their favour. Most of all, the US forces started heavily concentrating their efforts on the Vietnam War while the relationship between the Soviet and North Korea improved following the

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<sup>202</sup> After the PVA withdrawal, North Korea suffered the numerical disparity therefore securing enough reserve was vital. It was reflected in the, “arming the entire population and training the entire army as a cadre army,” to lead the newly recruited military reserve in the case of war. Since the US deployed nuclear weapons in the Korean peninsula, they started to build an underground shelter in 1959. This movement was developed using the logic that the entire country had to be fortified under the possibility of US threat. Excerpted from- G.S. Kim, op.cit., p.131-132

<sup>203</sup> Ibid., p.131-132

Khrushchev regime collapse. In this circumstance, North Korea quickly turned onto the offensive. In 1966, North Korea added the “modernizing weaponry, doctrine, and tactics under the principle of self-reliance in national defence” to the Three Military Guidelines. This became possible since they could expect economic, technological and military aid and cooperation from the Soviet Union.<sup>204</sup> Because the US was involved in the Vietnam quagmire and North Korea’s relationship with the Soviets had greatly improved, North Korea believed that if they succeeded in instigating social unrest in the South and overthrowing the anti-communist regime, they could reach a culminating point of waging the second Korean War.<sup>205</sup> However, their attempt to instigate social unrest failed and only worked to increase anti-communism opinion in the South due to the atrocity of guerrilla warfare. Even though their attempt was foiled, the NKPA continuously pursued the offensive warfare capability build-up.

At that time, however, the focus was in strengthening their irregular warfare capability. *Choi Hyon* (The Minister of National Defence) and *Oh Jinwoo* (The Chairman of the General Staff Department) who took over the position in 1969 were adept at irregular warfare due to their personal careers. The North Korean irregular force dramatically expanded from the end of the 1960s, unlike the regular force whose expansion was stagnated.<sup>206</sup> At that point, three Armies in the front possessed a light infantry brigade in which each retained the outstanding irregular warfare capability. Their Navy, Air Force, and General Staff Department also possessed the special warfare brigade by 1978.<sup>207</sup> In addition, from the early 70’s they

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<sup>204</sup> M.S. Jang, op.cit., p.129

<sup>205</sup> In 1968, the security crisis crept into the Korean peninsula again and reached its peak.

22/01/1968 – ROK President had an assassination attempt by the North Korean special forces

23/01/1968 – Pueblo incident (This was the first surrender of an American naval vessel since the War of 1812)

<sup>206</sup> *Choi Hyon* took charge of NKPA 2<sup>nd</sup> Corps which was famous for the irregular warfare in the enemy rear line during the PVA 3<sup>rd</sup> offensive and *Oh Jinwoo* was the captain of NKPA 766<sup>th</sup> Independent unit which was assigned to the irregular warfare in the enemy rear during the initial phase of the Korean War.

<sup>207</sup> The Navy and General Staff department put one brigade under direct command while the Air Force possessed three brigades at the time. The NKPA Irregular warfare unit has two kinds. First of all, the role of the light infantry brigade is to infiltrate the enemy rear before the main force launches the all-out offensive, and attack the enemy forward command centre or strategically important military target

secretly started to build underground tunnels to infiltrate the enemy rear in massive numbers. By strengthening their irregular warfare capability, they acquired the capability to wage the so-called Two-Front War which combined modern and guerrilla warfare, regular and irregular warfare, and large and small troops to perplex the enemy in the rear and make an easier breakthrough on the front.<sup>208</sup>

## The Development of Regular Force, Improvement of Mobile Warfare Capability and Completion of Two-Front War Strategy; (1976- )

After the mid 1970s, even though the NKPA still pursued the Two-Front War strategy, they prioritised the regular warfare capability build-up, unlike the early 70s. They concentrated especially on elevating the mobile warfare capability. This was because from the middle of the 70s, the new officer class that had received a spell of re-education in the Soviet military school, most notably in the Frunze Academy. There they had learned the orthodox Soviet OMG strategy, which started to be introduced in the NKPA headquarters.<sup>209</sup> *Kim Cholman* the vice chairman of the General Staff Department at that time also had a re-education spell, and published an article called “*HyunDaeJeonEuiGwaHakJeokTeukSeongGwaSeungRiEuiYoIn*” (the scientific nature of modern warfare and key factor of military victory) in the North Korean Journal “*Keunroza*” (Worker) in 1976.<sup>210</sup> This article contains several important

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in the front to cause the havoc in the enemy front and secure the main forces’ advance passages such as the bridge and defile. The role of General Staff Department, Navy, and Air Force special warfare units are more strategic. Their main role is to attack the strategic target in the rear such as the enemy command centre, airport, harbour, energy facility.

Analysed from- G.S. Kim, op. it., p.141-142, M.R. Lee, *KimJeongIlCheJeEuiBukHanGunDaeHaeBu*, p.147-154, KIDA, op.cit., p.52-53 and Joseph S. Bermudez Jr, *North Korean Special Forces*, Annapolis, Maryland, 1998, p.104-114

<sup>208</sup> KIDA, op.cit., p.53, and G.S. Kim, op.cit., p.139

<sup>209</sup> G.S. Kim, op.cit., p.155

<sup>210</sup> He characterised Modern Warfare as followings in that article.

- 1) Three dimensional warfare with no distinction between the front and rear
- 2) Highly modernized mechanized warfare

concepts that influenced the North Korean operation strategy until the early 1990's – the significance of (1) operational and tactical manoeuvre through the application of mechanized troops, (2) firepower to support the deep operation,<sup>211</sup> (3) deep strike, and (4) command and control.

He also mentioned that, for a swift decisive victory, the entire operational plan should target speedy and mobile warfare.<sup>212</sup> This article presaged the NKPA effort to enhance their mobility and their mobile warfare capability. First, they transformed their regular force structure to one more suitable for mobile operation. By allowing the General Staff Department to command the Corps directly, the command structure was simplified which also guaranteed a more prompt command and control.<sup>213</sup> They also divided their mechanized division to brigade size to meet the specific requirements of the Korean peninsula topography.<sup>214</sup> Secondly, in terms of force modernisation for mobile warfare, they spurred on the artillery automation and self-propelling as well as the domestic imitation of the Soviet

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3) Prompt phase in operation and combat

4) Protracted warfare

Excerpted from– Ibid., p.154

<sup>211</sup> Due to the short depth of the Korean peninsula, the entire depth simultaneous operation could be achieved with long-range artillery and SSMs. The NKPA emphasis on the firepower reflected their weakness in airpower.

<sup>212</sup> KIDA, op.cit., p.50-51

Even though he mentioned that the general nature of modern warfare is a protracted one, he also said the speedy phase of the operation and combat level. It looks very contradictory. But under the specific Korean peninsula security situation where US reinforcement would be a vital factor, waging prompt and mobile warfare makes it a very important element for the NKPA. The general understanding of this statement is that the North Korean military targets the speedy mobile warfare against ROK before the US is fully engaged in the Korean conflict, but once the US is fully engaged, they would transform their strategy to a protracted one to generate the most devastating cost possible to the US.

<sup>213</sup> G.S. Kim, op.cit., p.151

<sup>214</sup> W.S. Seo, op.cit., p.103

Because the Korean peninsula boasts steep mountains where only a narrow road is available to the mechanized troops, and deep and wide rivers where a large scale river crossing would be a very tough job for the offender; reducing the size of mechanized troops would guarantee-better mobility.

tank.<sup>215</sup> In addition, reflecting upon the mechanized troops' painful experiences under the US air supremacy, they also tried to improve the mobility and accuracy of their anti-air weaponry.<sup>216</sup> Thirdly, they also improved their river crossing and landing operations capability. The river crossing capability is an important element of mobile warfare in the Korean peninsula where many deep and wide rivers exist.<sup>217</sup>

## Completion of the Two-Front War Strategy

The Soviet military doctrine was developed to satisfy the requirements of possible plain battlefield conditions of Poland, Ukraine, and Western Europe. The Soviet military doctrine<sup>218</sup> required, first of all, acquiring the relative dominance of numbers and firepower in a certain front and then making a breakthrough on that front. Once the breakthrough had been achieved, the OMG and its ATG (Advanced Tactical Group) whose main strength was with the armoured troops would advance to make way for the main forces and harass the enemy's rear. The main forces, along with the massive fire, air, and airborne support which would enable the main force to strike the entire enemy depth, quickly followed the breakthrough made by OMG. The main force would then fully exploit the breakthrough by chasing the enemy's retreating troops persistently with consecutive strikes. The prime objective was the annihilation of the enemy. The Soviet Armoured troops' organization and formation during the battle were established to guarantee superiority in numbers and firepower. That would have been suitable in the prairies of Europe since it is the ideal place to wage a duel between massive size armoured troops.

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<sup>215</sup> Ibid., p.102

<sup>216</sup> G.S. Kim, op.cit., p.153

<sup>217</sup> Ibid., p.154

<sup>218</sup> To review the Soviet deep battle doctrine,

See) D. M. Glantz, *Soviet Military Operation Art: In the Pursuit of Deep Battle*, London, Frank Cass, 1991

D. M. Glantz, *The Soviet Conduct of Tactical Manoeuvre: Spearhead of the Offensive*, London, Frank Cass, 1991

C. Bellamy, *The Future of Land Warfare*, London, Routledge, 1987

However, the Soviet Military Doctrine could not be fully adopted in the mountainous Korean peninsula topography where manoeuvring the massive armoured troops would be almost impossible. Therefore, the NKPA adopted the Two-Front War strategy combining the mechanized regular troops as a main force and irregular warfare troops, whose purpose was to cause a shamble in the enemy rear and secure the main force advance passage in the frontal area.

In addition to the Two-Front War strategy, they also pursued the High-Speed war.<sup>219</sup> In their scenario of war, before the NKPA main force launched the all-out offensive, the light infantry and the special force unit would infiltrate the ROK rear. They would use either the mountainous area infiltration route, pre-built underground tunnels or AN-2 transport airplane modified for the special force operation. Their roles were to agitate the enemy rear and then secure the main force's advance route, a similar role to the Former Soviet OMG and its ATG.<sup>220</sup> Then, the regular armoured troops that were acting as a main force would launch the offensive with massive fire and airpower support to make a breakthrough. Once the

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<sup>219</sup> The NKPA intended to catch the US-ROK alliance by surprise for a full scale invasion, take the initiative and eventually win the war quickly and with ease. Reasons for the NKPA to pursue the High-Speed war were not only because of their logistic problems but also more importantly because of the full scale US engagement fear.

To review the NKPA military strategy in the possible Korean Conflict,

G.S. Kim, op.cit., p.156-162

M.S. Jang, op.cit., p.319-328

W.S. Seo, op.cit., p.105-130

KIDA, op.cit., p.5

<sup>220</sup> The debate on the role of North Korean light infantry is still on-going. *Jang Myongsoon* in his book "*BukHanGunSaYeonGu* (p.323)" wrote that the main role of the light infantry and special warfare troops was to agitate the enemy rear and North Korea would use the armoured troops as the special assignment troops as the Soviet OMG. However, according to the newly published ROK defence White Paper (2008), and 2009 *Bukhangaeyo* (Published by the Korea Institute for National Unification), North Korea expanded the number of light infantry units and special warfare troops to 180,000, while the NKPA Corps in the front would have one more light infantry division, and the NKPA divisions in the front would also expand their light infantry battalion to this regiment. This expansion of light infantry shows that the role of light infantry had been clearly solidified and they would be used as the special assignment troops as analysed above.

breakthrough has been made, their next target (in the exploitation stage) was to isolate *Seoul* and its suburbs, paralyze their war command system and take most of the Korean population hostage. At the same time they would go on to annihilate the South Korean main force in the North of *Han* River through continuously chasing and striking. Eventually, they aimed at finishing the war before the US was fully engaged.

Comparing the Soviet Military Doctrine with the NKPA Military Strategy, one can see that the NKPA kept the spine of the Soviet Military Doctrine. Both would use special assignment troops (OMG for the Soviets and light infantry for the NKPA) to cause havoc and make way for main forces to penetrate deep into the enemy's rear. Meanwhile, following main forces would attack the enemy's entire depth while pursuing the enemy's remaining forces, annihilating them with consecutive strikes.<sup>221</sup>

After the Korean War, *Kim Il-sung* frequently mentioned specific characteristics of the Korean Peninsula. He mentioned the significance of mountains and night-time combat skills as well as the Two-Front War strategy to meet the special requirements of the Korean peninsula's geographic characteristics<sup>222</sup>(most notably in the 2<sup>nd</sup> Congress of KWP Representatives (5<sup>th</sup> of October, 1966) and 5<sup>th</sup> KWP Party Congress, 2<sup>nd</sup> of November, 1970). Among adjusting measures, he paid particular attention to the light infantry which could be used effectively in the mountainous Korean peninsula topography. He mentioned in the Forth Plenum of the Fourth KWP Central Committee (January, 1970) that light infantry had to enhance their capability to operate in the mountainous area and in the enemy rear. That same year, he further mentioned that the light infantry should have the capability to form a second front in the enemy rear. Once the light infantry was successfully expanded in the 1960s, North Korea firmly advocated the Two-Front War strategy. *Kim Il-sung* mentioned in the 5<sup>th</sup> KWP Party Congress that the Two-Front War strategy combining regular warfare and irregular warfare (Light Infantry and Special warfare troops) would become the key factor for their eventual military victory against the South. He bragged that even though the US possessed nuclear weaponry, North Korea held the highly trained light infantry which he said was well-matched to US nuclear power. In addition, North Korea learned during the Korean War that the massive armoured troops manoeuvre would be constrained by steep mountains, and the deep

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<sup>221</sup> G.S. Kim, op.cit., p.158

<sup>222</sup> W.S. Seo, op.cit., p.74-76

and wide rivers of the Korean peninsula. The NKPA also understood that to reach their foremost strategic target (*Seoul*), they would have to go through the mountainous topography which also inevitably led to unfavourable road conditions (narrow and anfractuous) for the massive armoured troops manoeuvre. Therefore, instead of using the mechanized troops as the special assignment troops, they adopted a plan to use light infantry as special assignment troops to adjust to the mountainous topography of the Korean Peninsula.<sup>223</sup>

In conclusion, the NKPA military strategy (Two-Front War and High-Speed War strategy) preserved the spine of the Soviet military doctrine but combined it with the Korean War experience and geographic characteristics of the Korean peninsula adjusting the Soviet military doctrine to apply to specific Korean peninsula security circumstances.

## Consolidation of Asymmetric Power

### What is the Asymmetric Warfare Strategy?

The concept of asymmetric warfare in modern warfare was first officially announced during the 1995 US doctrinal statement, Joint Warfare of the Armed Forces of the United States. However, a more generous rounding to the definition was published in the Joint Strategy Review, *Asymmetric Approaches to Warfare*: “Asymmetric Approaches are attempts to circumvent or undermine US strengths while exploiting US weakness using methods of operation... Asymmetric approaches often employ innovative, non-traditional tactics, weapons or technologies and can be applied at all levels of warfare – strategic, operational and tactical- and across the spectrum of military operations”.<sup>224</sup>

The ROK definition of asymmetric warfare contains the spine of the US JCS definition. In their army drill book, they state, “the Asymmetric warfare is the operation which is carrying out with the different ways and means against the counterpart which lead them to react to the situation inefficiently”. It also stated that asymmetric warfare is based on a mix of

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<sup>223</sup> Highly trained light infantry could offer better mobility and survivability than the mechanized troops in the steep mountainous area.

<sup>224</sup> R. Thornton, *Asymmetric Warfare – Threat and Response in the 21<sup>st</sup> Century*, Polity, 2007, p.19

heterogeneity and superiority. On one hand, the heterogeneity might be defined as “Using the weaponry which is not retained or developed to the counterpart to attack the counterpart’s vulnerability or to exterminate the counterpart’s capability”. On the other hand, superiority is described as “reacting to the counterpart provocation with the overwhelming dominance in numbers or quality.”<sup>225</sup>

The concept of asymmetric warfare is nothing new. *Sun Tzu* in his “Art of War” already proposed the idea of asymmetric approaches to war. He said that “All warfare is based on deception (Laying Plans Part), In all fighting, the direct method may be used for joining battle, but indirect methods will be needed in order to secure victory (Energy Part), and avoid what is strong and to strike at what is weak (Weak Points and Strong Part).”<sup>226</sup> Liddell Hart who saw the “Great War” trench warfare tragedy also insisted upon using indirect approaches of war which avoid the counterpart strength and utilize their vulnerability.

In other words, the asymmetric approaches of war have been adopted for the weak (the have-nots) to win the conflict by exploiting the vulnerabilities of the strong (the haves), or by the strong and equal power to reduce their costs and ultimately win the conflict by exploiting the vulnerability of their counterpart. Asymmetric warfare is a strategic way of warfare using the differences between friend and foe (employing their own specific relative advantages to aggravate the counterpart’s vulnerability) to gain an advantage over the counterpart, while still being able to inflict a heavy cost on the counterpart, and ultimately win a war.

## The NKPA Asymmetric Warfare Strategy

The NKPA asymmetric warfare strategy has become a great security issue recently since the North Korean threat of WMDs<sup>227</sup> has increased in severity. Even so, their pursuit of

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<sup>225</sup> T.Y. Kwon, and H. Noh, op.cit., p.259-260

<sup>226</sup> English translation is based on L. Giles, “*Sun Tzu on The Art of War*”

<sup>227</sup> The main NKPA WMDs are long-range artillery, SSMs, Nuclear weapons and Bio-chemical weapons. In fact, North Korea’s original motive for developing ballistic missiles likely followed the Soviet Doctrine by viewing missiles as a form of extended range artillery that can strike an enemy’s rear during a conflict. Excerpted from– CNS (Centre for Non-proliferation Studies, Monterey Institute of International Studies) Special Report on North Korean Ballistic Missile Capabilities, 22<sup>nd</sup> of March,

asymmetric warfare is nothing new. They have consistently tried to utilize their military advantage to aggravate the ROK vulnerability.

Geographically, the Korean peninsula has a short depth, covered with many steep mountains, encapsulated by a long coastline. The NKPA has developed their irregular and mobile warfare capability as well as airpower to exploit the geographic ROK vulnerability.<sup>228</sup> After the Cold War ended, North Korea had been suffering economic crisis and lost two of its biggest patrons. Nevertheless, the ROK was still able to experience economic growth. Therefore, a conventional arms race became an invalid option for the North. In fact, the most common measures of power in international relations – economic size and defence spending – show clearly that North Korea has been smaller on an absolute and per-capita basis for at least thirty years, and continues to fall farther and farther behind.<sup>229</sup> Instead of strengthening the mechanized troops and airpower which requires an economic foundation, they started to put forward WMDs, and especially long-range artillery (which is lethal but economic) as a main means of asymmetric warfare, along with their irregular warfare troops. Long-range artillery is not usually classified under the WMD category. However, under specific Korean security circumstances, it is qualified as WMD. Firstly, the *Seoul* metropolitan area is just 40 km away from the cease-fire line; therefore, it is within the shooting-range of the long-range artilleries of NKPA. Secondly, the NKPA possessed the huge cache of long-range artilleries as they followed the former Soviet military doctrine, which considers artillery as the “God of War. Finally, these long-range artilleries could equip the bio-chemical warhead. Therefore, the NKPA long-range artillery can inflict severe damage on the *Seoul* metropolitan area and is categorised as WMD in ROK.

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2006, p.6. However, the striking power of the conventional warhead and possible Nuclear and Bio-chemical warhead became a huge security burden for the US-ROK alliance due to the severe casualties and costs these weapons could inflict.

<sup>228</sup> The Special Forces could easily penetrate the ROK rear through the mountain pass and operate actively in the mountainous area. Because of the long coastline, they could also easily infiltrate the ROK rear mainly through the use of a semi-submersible submarine. Due to the short depth of the Korean peninsula, with the mobile warfare capability and airpower which would become possible to bombard the strategic target in the rear let alone the CAS mission in the front, their aim of High-Speed warfare could be possible.

<sup>229</sup> T.Y. Ham, *BukHanEuiJunJaengSuHaengNeungRyuk*, Seoul, Sejong Institute, 2005, p.7

	Troop Strength (Ten Thousand)	Tanks	Field Artillery/ Multiple Rocket Launch System	Surface to Surface Missile
1970's	50	1,500	3,000	None
1980's	75	2,200	5,000	Started to Produce
1990's	100	3,500	11,000	400
1999-2000	110	4,000	13,000	600
2008	119	3,900	13,600 (MRLS;5,100)	

Index 3-1 The Progress of the North Korean Military Capability Development<sup>230</sup>

North Korean asymmetric warfare strategy was designed to maximize their relative advantage in a self-sustainable industry while exploiting the ROK's fatal weakness: that *Seoul* was only 48 Km away from DMZ and the industrial, economic, and political centre of ROK. The adoption of WMDs, especially long-range artillery, as a main means of asymmetric warfare strategy would give the NKPA several strategic advantages.

First, it would allow the NKPA to take the initiative during the initial phase of war since it could grant much needed firepower in the front. It could also help spread war-phobia not only to the battle front but also to the civilian population. Secondly, it would strengthen their long-range offensive capability which would aid in covering up their weakness in deep strike capability due to their relative enfeeblement of airpower. This would affect their ability to attack the strategic targets at the rear.<sup>231</sup> In addition, the mere possession of WMDs would give the NKPA a minimum deterrence against the US nuclear threat and become a valuable bargaining chip during diplomatic talks. The introduction of WMDs for military and

<sup>230</sup> Based on M.R. Lee, *KimJeongIlCheJeEuiBukHanGunDaeHaeBu*, p.108, and ROK Military White Paper 2008, p.260

<sup>231</sup> Once the NKPA acquires the long-range offensive capability –most notably through the missile– they could delay the rapid US reinforcement which allows them to achieve the High-Speed war since they could destroy the airport and harbour in the ROK rear.

diplomatic purposes and their devastating effects when deployed, provoked the US-ROK alliance's introduction of a pre-emptive strike strategy and its capability (OPLAN 5026). The threat of North Korean WMDs and asymmetric warfare led the US-ROK alliance to transform their traditional threat-based deterrence strategy<sup>232</sup> into capability-based approaches of deterrence against North Korea.<sup>233</sup>

After the Cold War ended, even though the NKPA had not significantly increased their mobile warfare capability, which is at the core of their regular warfare strategy (an integral part of their Two-Front warfare strategy and the heart of High-Speed warfare) it is still in the centre of the North Korean military potential and invasion plan. In addition, the irregular warfare capability, another integral part of Two-Front Warfare strategy, has been strengthened recently.

The solidification of asymmetric approaches of war was conceived in an aim to boost their Two-Front and High-Speed warfare strategy. The asymmetric warfare strategy with a main means of WMD is designed to increase the efficiency of their conventional and irregular warfare capability. This is no longer possible because of the economic and diplomatic problems associated with the arms race.<sup>234</sup> The asymmetric approaches of war using WMD

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<sup>232</sup> The US-ROK alliance give enough assurance of massive retaliation using strategic nuclear powers and massive engagement of US troops once the North breaches the cease-fire agreement and launches the all-out war, and eventually make the North Korean to give up on the reunification banking on the military means.

<sup>233</sup> Let alone having a capability to demolish any North Korean breach of cease-fire agreement, they aim to equip with the nuclear (tactical) or conventional capability as well as the operation plan to deal with the threat (most notably in the form of WMD in the recent Korean Peninsula) immediately so as not to give any military or diplomatic edges to North Korea.

<sup>234</sup> The enhancement of their conventional warfare capability through the arms race is no longer a viable option to the North. However, the superiority of conventional warfare capability is required to achieve their military strategy of Two-Front and High-Speed war. Without the conventional warfare superiority, they cannot reach the foremost strategic target (*Seoul*) and demolish the ROK's main strength around *Seoul*. In addition, it is almost impossible to achieve a High-Speed war without the mobility and firepower. Once the NKPA is able to attack the entire depth simultaneously, first of all, the moral and defence capability in the enemy front will be severely damaged which will increase the NKPA conventional power potential. In addition, in the enemy rear, the war phobia and public

would allow them to maximize their strength (their war industry is well-developed under the self-reliance ideology and it is possible to produce the WMDs in mass numbers without much cost), harass the weaknesses of the US-ROK alliance (the *Seoul* metropolitan area is not far away from the DMZ), and allow for eventually increasing the efficiency of their conventional warfare capability.

Moreover, North Korea has fortified their territory using their knowledge of the geography and raised their capability to use this edge. Proper use of geography is also considered part of asymmetric warfare strategy, as the survivability of their WMD (the North Korean strength) would be raised but the efficiency of US military technology (target acquisition, stand-off technology, and earth-penetrating weapons: the US strength) would be decreased.

In conclusion, North Korea still kept the Two-Front and High-Speed warfare strategy as their main military strategy, but they solidified the asymmetric warfare strategy using WMDs, especially long-range artillery, to overcome considerable economic frailty and lack of external support. Moreover, to increase the efficiency of their asymmetric strategy, they also tried fortification using the mountainous geography. Since the fortification of the territory boosted the strategic worth of North Korean WMDs, it also became a realistic burden for the US-ROK alliance. Therefore, in researching the North Koreans, fortification and tactical preparedness to use their edge becomes an important security issue as well. How much has their fortification progressed and are their armed forces ready to use this edge? The small section below will explain the North Korean fortification using their geographic edge. By doing so, it is able to be ascertained whether the possible conflict between the US-ROK alliance and NKPA could be a duel between the technologically advanced forces and the geographically advantaged and tactically capable forces.

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disorder will be diffused which will increase the NKPA irregular warfare potential. Therefore, the WMD application will be beneficial to the NKPA regular and irregular forces.

Military Purpose	<ol style="list-style-type: none"> <li>1. Threatening or attacking military establishments in the Korean peninsula, US, and Japan</li> <li>2. Deterrence against the foe (the US Nuclear)</li> <li>3. Delay of US reinforcements deployment</li> <li>4. Attacking the strategic target and population in the rear including the <i>Seoul</i> Metropolitan area – paralyzing war command and spreading war-phobia</li> <li>5. Complement the imbalance of the conventional arms race</li> </ol>
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Index 3-2 The military purpose of the North Korean missile development<sup>235</sup>

## The North Korean territorial fortification

During the Korean War, the NKPA learned the vital lesson that, providing there has been suitable fortification and training, the Korean peninsula's mountainous topography would give them a great defensive edge as well as natural camouflage and coverage to add to their offensive strength. Following the UN forces' success on the *Inchon* landing operation, the NKPA lost the *Pyongyang* and *Wonsan* quickly and was forced out to the inner highland near the Chinese border. This was because the NKPA failed to capitalize the natural barrier of Korean peninsula central highland, due to the lack of reserves and an unprepared defensive line.

As analysed above, the NKPA headquarter also pointed out the failure of fortification in the rear using the mountainous Korean peninsula topography. However, following the Chinese engagement, the communist forces waged staunch trench warfare using the mountainous topography and closely linked underground tunnels against the dominant US fire and airpower. They drove the US forces into trouble in many cases. During the Korean War, the communist forces built the so called "Underground Great Wall" spanning from the *Imjin* River mouth in the west to *Gosong* in the east (about 4,000km).<sup>236</sup>

<sup>235</sup> Y.S. Han, *HanBanDoPyongHwaWaGunBiTongJe*, Seoul, Parkyoungsa, 2005, p.347-348

<sup>236</sup> *JoSeon Ilbo* (Seoul), 10<sup>th</sup> of October, 2010

Along with frontal fortification, North Korea started to fortify the rear, maximizing the geographic edge. Following the PVA withdrawal and the armed force purge in 1958, the fortification of territory was driven by the US nuclear fear. The logic that North Korea had to fortify their territory for enduring the US nuclear bombing was inherited into the Three Military Guidelines as a “fortification of territory”.<sup>237</sup> The fear of US nuclear bombing and the urgent need for territorial fortification were clearly revealed in *Kim Il-sung*’s speech at the 4<sup>th</sup> graduate ceremony of *Kim Il-sung* University in 1963; “We need to fortify our territory. We do not have nuclear weapons. We have to stand against the enemy who possess the nuclear weapon. We have to dig in the tunnel wherever the enemy would be tempted to attack. Once we stayed in the underground tunnel, we can protect ourselves from any nuclear weapon strikes. We have to fortify the entire territory not to mention the frontal line.”<sup>238</sup>

Needless to say, the logic of fortifying territory also reflected the Korean War experience, especially their massive damage under the enemy air supremacy.<sup>239</sup> *Kim* mentioned that “the Korean War experience tells us that many steep mountains in the Korean peninsula would be helpful for us to fortify our territory.”<sup>240</sup> He also claimed that, under the military doctrine of “Fortification of territory”, we need to build the formidable defence system which is capable of repelling any enemy invasion.<sup>241</sup> He further demanded the fortification of war industry facilities. Throughout the 1960s, their territorial fortification progressed significantly and *Kim* bragged in his speech at the 5<sup>th</sup> KWP Party Congress (November, 1970) that, “the entire territory is now fully fortified and the important production unit is also perfectly fortified.”<sup>242</sup>

The territorial fortification was beefed up even more after the First Gulf War; North Korea organized the tentative Gulf War research institute under the Ministry of People’s Armed

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<sup>237</sup> G.S. Kim, op.cit., p.124

<sup>238</sup> M.R. Lee, *KimJeongIlCheJeEuiBukHanGunDaeHaeBu*, p.42

<sup>239</sup> I.S. Kim, *KimIlSungJeoJakSeonJibJe17Gwon*, Pyongyang, Joseonrodongdangchulpansa, 1982, p.445-448

<sup>240</sup> I.S. Kim, *KimIlSungJeoJakSeonJibJe18Gwon*, Pyongyang, Joseonrodongdangchulpansa, 1982, p.257

<sup>241</sup> I.S. Kim, *KimIlSungJeoJakSeonJibJe17Gwon*, p.428

<sup>242</sup> M.R. Lee, *KimJeongIlCheJeEuiBukHanGunDaeHaeBu*, p.43

Forces and researched the First Gulf War. After the First Gulf War, through direct instruction, this note was given to each commander. *Kim Il-sung* stressed the following:

- (1) If the conflict would occur in the Korean peninsula, the US would approach the conflict just as they did during the First Gulf War.
- (2) Through the experience of the Gulf War, we recognize that, through the fortification of the entire territory, we can stand any enemy massive air bombardment.
- (3) The NKPA should research the US strategy in war and strengthen the construction of an underground tunnel.
- (4) Once we fulfil the fortification of the entire territory, even the technologically advanced forces would not penetrate our defence line.

The Ministry of People's Armed Forces also published a military drill book called "*ManJeonJaengGyeongHeomAeDaeHaYeo* (Regarding the First Gulf War experience)" in November, 1992 which also contained the importance of complete underground tunnel construction in strategically important places for the defensive warfare. In addition, it insisted upon the significance of fake targets and trenches as well as the tactics of concealment and diversion for effective deception.<sup>243</sup>

After the First Gulf War, North Korea sent military delegates to Yugoslavia in 1999 following NATO's engagement in Kosovo. They also monitored the whole course of the Second Gulf War and researched it. According to the testimony of exiled former NKPA general *An Yongchol*,<sup>244</sup> after the Second Gulf War *Kim Jongil* was relieved, unlike the US had predicted. *Kim Jongil* pointed out that during the Second Gulf War, even if the main battlefield was in the desert, the US forces were struggling to find underground military facilities and neutralize those. He confidently stated that "since the North Korean territory is mountainous, the underground military facility would not be detected and they would not become another Iraq." Therefore, under a modern warfare setting, the NKPA perceived the potential threat of modern US military technology and had been engrossed in preparing the adequate remedy with their outstanding fortification and deception skills using their geographic edge. These North Korean preparations against the US precision stand-off technology would become a serious security burden to the US-ROK alliance. Because of the

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<sup>243</sup> M.S. Jang, op. cit., p.35-37

<sup>244</sup> He had an interview with the Japanese Magazine called "*Gentai*" in June, 2003.

developed North Korean defensive strategy and preparation using their geographic edge and underground tunnels, the neutralization of the suspicious North Korean WMDs launching facilities, production units, and arsenal which became the most critical security threat for the US-ROK alliance, as well as the North Korean centre of gravity would become a much more difficult issue than previously thought.

This part of the research examined how the US-ROK alliance was transformed to technology-centred forces and the strategic significance of North Korean WMDs, which were substantially increased after they adopted the capability approach of deterrence. It also examined that in accordance with the Korean peninsula security, the geographic consideration has always been a significant element of war in that region and the NKPA has fortified their territory using their geography while raising their capability to use the edge. As a result of this section, it is demonstrated that conflict between the North and US-ROK alliance could be a duel between a technologically advanced and centred force, and a geographically advantageous force that possesses the capability to use their edge. Therefore this part of the research presents the platform of examination for Biddle's argument on skill and technology and the thesis argument that technological superiority alone cannot completely guarantee military success against North Korea.

## The North Korean long-range artillery threat

The North Korean long-range artillery is one of the obvious security concerns for ROK. Thus, the debate concerning the extent of strategic effect has been keenly carried out in both contemporary ROK and US military society. The core of the debate on the NKPA long-range artillery effectiveness is how many shells would drop on the *Seoul* metropolitan area in an hour. The Stars and Stripes (9<sup>th</sup> of February, 2003) interviewed Stephen Oertwig (USFK spokesman at that time) and he mentioned that, in the first hours of an attack, around 300,000 to 500,000 artillery rounds could rain down on *Seoul*. However, the numbers of artillery rounds that would fall on the *Seoul* metropolitan area is quite unrealistic since it could be possible only if all the artillery pieces in the front are fired toward the *Seoul* metropolitan area. In reality, only the 170mm self-propelled guns and 240mm MLRS which hold a shooting-range of around 40km have the capability to bombard the *Seoul* metropolitan area. Among 648 of those ordinances, only 342 pieces deployed in the north of the *Seoul* metropolitan area

pose any direct threat.<sup>245</sup> It is very pessimistic but unrealistic early prediction of North Korean long-range artillery effect.

On the one hand, there is an optimistic opinion (*Im Jongin*) that the NKPA long-range artillery would not be a great threat to ROK security since the 170mm self-propelled guns would not be able to reach *Seoul* unless they use the Rocket Assisted Projectile. These are considerably more expensive and were not developed by the NKPA, and they would not be particularly effective due to the long loading time. They also insisted that the destructive power of 240mm MLRS would not be devastating enough to bring *Seoul* to a shambles.

On the other hand, there is also the pessimistic opinion (*Park Jin*) that, since the North Korean long-range artillery is hidden amongst various underground bunkers and tunnels, the ROK armed forces are not equipped with the weaponry to neutralize them. If the USFK withdraws, about 25,000 rounds an hour would drop onto the *Seoul* metropolitan Area and *Seoul* would be seized by the NKPA in 16 days.<sup>246</sup> During the heated debate on the strategic effectiveness of North Korean long-range artillery, *JoongAng Ilbo (Seoul)* reported on the 6<sup>th</sup> of October, 2004, after several interviews with military analysts considering the deployment numbers of long-range artillery and loading time. They commented that, once the war had begun, a minimum of 1,000 and maximum of 2,000 rounds would fall down on the *Seoul* metropolitan area in an hour. However, the mere fact that the NKPA is able to attack the *Seoul* metropolitan area with cheap weaponry would give a significant strategy edge to the NKPA.

Stalin once mentioned that “artillery was the god of war”. This comment clearly demonstrated that concerning communist warfare, the use of artillery is clinical. Since the NKPA followed the former Soviet Union’s military strategy and later adopted the Two-Front

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<sup>245</sup> Excerpted from *Kim Haksong* (The ROK National Assembly member)’s comment during the Parliament audit and inspection of the Ministry of National Defence on the 29<sup>th</sup> of August, 2006.

<sup>246</sup> The optimism and pessimism in regards to the North Korean long-range artillery was debated in 2004 ROK parliamentary audit and inspection of Ministry of National Defence between the national assembly members *Im Jongin* and *Park Jin*.

warfare strategy,<sup>247</sup> the NKPA also considered the artillery's fire support in the front for the breakthrough and long-range assault capability for the enemy rear agitation as the most important elements in war. As mentioned above, unlike the Soviet Military Doctrine, the NKPA were not able to bombard the enemy rear with any substantial amount of airpower. Therefore, they deployed massive amounts of SSM and long-range artillery to support the entire depth offence capability. Even though their initial strategic objective of massive long-range artillery introduction was to elevate the entire depth offence capability, Because *Seoul* is near to the DMZ, the strategic impetus of long-range artillery has been expanded to paralyze the enemy's centre of geography and can contribute to the spreading of war phobia.

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<sup>247</sup> Two-Front warfare strategy places significant strategic importance on mobility and capability of attack upon the entire depth.

# Part 2 Case Studies – Does Contemporary Military Technology Bring Ultimate Military Success against the Geographically Advantaged and Tactically Well-prepared North Koreans?

## Chapter 4 *Imjin Wars*

### Introduction

Chapter 3 analyzed the significance of tactical preparedness using knowledge of the local terrain as a geographic edge in the ancient and modern eras of military strategy in the Korean peninsula. This chapter will evaluate why tactical preparedness using geographic edge is such a significant element in Korean peninsula security through an examination of the Japanese invasion of Korea (*Imjin Wars*). It will characterise the effectiveness of traditional defensive strategy using terrain, and the Korean peninsula as an ideal place to wage a defensive warfare using geographic edge. It will be seen that the Korean peninsula is a place where the geographic dimension is important and Koreans have plenty of experience in defensive warfare using the geographic knowledge to their advantage.

Since the fate of war is not decided by a single dimension, *Joseon* and Japan's tactical and strategic decisions and outcomes will also be researched in depth. The transformation of the *Joseon* strategy – using their knowledge of the local landscape and thus serving as a geographic edge – can explain why the geographic dimension, if prepared adequately, was so important in the *Imjin Wars* and the eventual outcome of warfare in the Korean peninsula. In addition, it would also reveal how Korea was an ideal place to wage a defensive war using geographical knowledge and how the Koreans excelled in this instance of warfare.

## Outbreak and the end of the *Imjin Wars*<sup>248</sup>

Japan invaded *Joseon* in 1592 with their justification that *Joseon* rejected the request to pass the Korean peninsula for the invasion of China (*Ming* Dynasty at that time). *Joseon* already noticed the Japanese intention through exchanging envoys and other sources. However, their preparation was not suitable or good enough to drive away the Japanese expedition forces. Therefore, the Japanese took the initiative and drove *Joseon* to the far north of their territory nearby *Joseon* and the *Ming* border. *Joseon* asked for Chinese aid and after the Chinese engagement, the tide of war gradually became more and more favourable to *Joseon*. The Japanese force stationed in *Pyongyang* led by *Konish Yukinaga* was defeated and withdrew back to *Seoul*. However, the *Ming* forces recklessly advanced to *Seoul* and were humiliated when the Japanese ambushed their forces in *Pyokje* (Battle of *Pyokje*).

Furthermore, the Japanese also had to cope with much adversity. Since Japan initially planned an intensive surprise offensive whose objective was to occupy *Joseon* as soon as possible, they were not well-prepared for the protracted warfare that ensued and suffered a host of logistical problems. Supply and communication difficulties only continued to worsen because of the lengthy supply and communication route from the Japanese mainland and hindrance from the *Joseon* Navy and local militias. Their strategy also had another problem: since their invading route was the quickest route to *Seoul*, they did not invade and conquer *Cholla* province, which had a vast plain and could have become a national supply depot for *Joseon*. Therefore, *Joseon* was able to quickly recover from the surprise attack and retaliate.

In this circumstance, *Ming* and Japan started a ceasefire and began peace talks. Japan withdrew from *Seoul* to the coastal towns in *Gyeongsang* province where they built their traditional style castle (*Wajo*), geographically adjacent to the Japanese mainland, guaranteeing better communication and supply. However, there was one more twist: the truce talk was not successful and *Toyotomi Hideyoshi* (Japan's leader at this time) ordered a second invasion. The Japanese force tried to capture *Seoul* again, but this time passing through *Cholla* province with the support of the navy instead of cutting through *Gyeongsang* province, since they now recognized the strategic significance of the *Cholla* province. However the

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<sup>248</sup> Following content is the Summary from I.H. Seo, *ImJinWaeRanSa*

*Joseon* and *Ming* joint forces had strengthened during the interwar period in terms of actual military power as well as strategic and tactical preparation.<sup>249</sup>

Therefore, the second invasion was not as easy as the first. The Japanese Army was defeated in the *Chiksan*, while their navy also failed to cross the *Myungnyang* strait, the junction between the South Sea and Yellow Sea of Korea. With the logistics problem imminent again, they withdrew their force to the coastal line towns. War again went into stalemate until *Toyotomi* suddenly died and, in his will, ordered the force to withdraw back to the homeland. The *Imjin* Wars finally ended after the Japanese force withdrew from the *Joseon* territory.

## 4-1 The Japanese Invasion Plan

After the reunification of Japan had finally been achieved,<sup>250</sup> the new government of Japan began to discuss and plan for the advance into the Chinese mainland. This was because of both the personal ambitions of *Toyotomi* and his intention of weakening warlords after the reunification.<sup>251</sup> They discussed two possible routes to invade the mainland. The first possibility was to use the sea route passing through *Okinawa*, and then land on the south eastern coast of China. Another route was the overland course passing through *Joseon*, *Manchuria*, *Shanghai-kwan*, and then reaching the mainland. After an ardent discussion, *Toyotomi* decided to use the overland route and planned the strategy with two options.<sup>252</sup> The first option was to put *Joseon* under their control with diplomatic pressure and then invade China with *Joseon* as their guide. The second option was to occupy *Joseon* as soon as possible, and thereafter reorganize and strengthen, again disguising their intentions through diplomatic talks with the *Ming* dynasty. Ultimately, after the careful consideration of the situation around them, they would decide whether or not to invade the Chinese mainland. *Toyotomi* believed the first option was more viable and attractive. However, *Joseon* denied

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<sup>249</sup> The initial invasion: April, 1592- August, 1593

Cease-fire and interwar period: August, 1593–July, 1597

The second invasion: July, 1597–November, 1598

<sup>250</sup> After the *Onin War* (1467-1477), Japan descent into chaos of warring state period. *Hideyoshi* finished the division of country and Japan reunified in 1590.

<sup>251</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.37

<sup>252</sup> I.H. Seo, op.cit., p.29

the Japanese diplomatic threat saying they could not guide Japan to invade the Chinese mainland.<sup>253</sup>



Map 4-1 Japan, China and Korea in 1592<sup>254</sup>

After the diplomatic threat failed, *Toyotomi* had no choice but to follow the second option (the military expedition to the Korean peninsula). He therefore, assembled around 330,000 soldiers and organized 158,700 strong expedition forces.<sup>255</sup> Their strategic objective in this

<sup>253</sup> Ibid., p.30-31

<sup>254</sup> Excerpted from- S. Turnbull, *The samurai invasion of Korea 1592-1598*, Ospreypublishing, 2008, p.12

<sup>255</sup> Assembled Troops were separated into

The *Joseon* Expeditionary Forces: 158,700

The Reserve in Japan under the command of Imperial General Headquarters: 102,960

war was to capture *Seoul* as soon as possible and annihilate *Joseon*'s main forces in the South of the *Han* River to urge *Joseon* to surrender; if they did not, the next objective would be to occupy the whole of *Joseon* as soon as possible.<sup>256</sup> This intensive surprise offensive strategy against *Joseon* could reduce logistical problems while earning them time to advance toward the Chinese mainland.

Furthermore in order to achieve the strategic objective, they chose the shortest route to *Seoul* by landing on the southern coast of *Gyeongsang* province and marching through the highlands between the border of *Gyeongsang* and *Chungchong* province. They divided the expedition forces in three divisions. The First division, led by *Konish Yukinaga* (18,700 soldiers), landed on *Pusan* and advanced through *Taegu*, *Choryong* (a mountainous border pass between *Gyeongsang* and *Chungchong* province), *Chungju*, and *Yongin* to reach *Seoul* (Central Route). The Second division, led by *Kato Kiyomasa* (22,800 soldiers), also landed on *Pusan* and planned to advance through *Ulsan*, *Kyongju*, *Jukryong* (a mountainous border pass between *Gyeongsang* and *Chungchong* province), *Wonju*, and *Yeoju* to reach *Seoul* (Eastern Route). *Kato*, however, who was very keen on military success in war, changed their planned eastern route to a central route passing through *Gunwi*, *Jeomchon*, *Mungyong*, *Choryong* and reached *Seoul* quicker than *Konish* did.<sup>257</sup> The Third division, led by *Kuroda Nagamasa* (11,000 soldiers), landed on *Dadaepo* and advanced through *Kimhae*, *Songju*, *Kimcheon*, *Chupungryong* (a mountainous border pass between *Gyeongsang* and *Chungchong* province), and *Chongju* to reach *Seoul* (Western Route).<sup>258</sup> They were to be joined within a few days by the Fourth, Fifth, Sixth and Seventh divisions totalling 84,700 men, while the Eighth and Ninth divisions of 21,500 men were to be held in immediate reserve on the islands of *Tsushima* and *Iki* respectively.

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The Japanese Navy; 9,200

Troops directly responsible to the Imperial General Headquarters; 29,000

Defence guard of City of *Kyoto* where the Japanese emperor lived at that time); 30,000

Excerpted from- I.H. Seo, op.cit., p.30-31

<sup>256</sup> Ibid., p.30-32

<sup>257</sup> The concept of right and left for both countries was different. For *Joseon*, since the reference point was her capital *Seoul*, the Right was the West, however, for Japan, since the reference point was Japan, the Right was the East.

<sup>258</sup> W.R. Cho, op.cit., p.59-61



Map 4-2 The first invasion (1592), and the retreat to *Seoul* (1593)<sup>259</sup>

<sup>259</sup> Excerpted from- S. Turnbull, op.cit., p.25

## 4-2 Japan's Initial Successes and Joseon's Defence Systems

The initial Japanese success was not brought about by one or two simple reasons but was caused by a mixture of strategic and tactical strengths and weaknesses of both sides. This section will examine why Japan had huge success in the initial phase of war and why the lack of Joseon's tactical and strategic preparation using the geographical edge was the most significant factor in Japan's initial success.

Tactically speaking, Joseon prepared the battle formation warfare carrying long-range weaponry while attaching importance to the cavalry's striking capability. Joseon's main adversaries were the *Jurchens* on the Northern Border who adopted cavalry mobile warfare<sup>260</sup> and the Japanese pirates in the southern coastal lines who were predominantly infantry. Joseon did not experience massive infantry invasion before the *Imjin* Wars because of the warring state period in Japan and peaceful diplomatic relationship with the *Ming* dynasty. In this circumstance, Joseon focused on developing the anti-cavalry tactics which aimed at *Jurchen*'s cavalry mobile warfare.

To protect them from the enemy's mobile cavalry striking power and for the following counter-attack, in terms of armoury, the Joseon army was armed with long-range weaponry such as the long bow and the *Chongtong*, which used gunpowder's explosive power to fire arrows, bullets or even cannon balls. However, because the gunpowder weaponry was not widely used, the battle formation became the most important element to deal with the *Jurchens*. In the Joseon battle formation tactic, the cavalry and infantry, armed with long-range weaponry, were trained to create a battle formation quickly according to the field commander's orders.<sup>261</sup> Joseon's tactical approach had the advantages that they could attack *Jurchen* cavalry from a long distance and weaken the enemy strike with a quick and fluent

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<sup>260</sup>The *Jurchens* who were the main foe of Joseon before the *Imjin* Wars, invaded Joseon's northern border to revenge or secure basic necessities of life. *Jurchens* military was mainly a cavalry, and they used their mobile cavalry power and thick forest in *Yalu* and *Tumen* rivers to make a surprise attack Excerpted from H.E. Jung, *HanKukJeonTongByeongSeoEuilHae*, IMHC, ROKMND, 2004, p.92-93

<sup>261</sup> Ibid., p.25

transformation of battle formation. Therefore, *Joseon's* fluid and well-trained battle formation tactics and long-range weaponry made *Joseon* capable of dealing with the *Jurchen* cavalry mobile warfare. However, because of the long peace and corruption, *Joseon* did not possess many well-trained forces which are a crucial element to wage battle formation warfare.<sup>262</sup> Even though the *Joseon* force managed to form a battle position, their formation was easily crumbled by the terror and massive concentrated power of Japanese forces' *harquebus*.

In the actual combat situation, *Joseon* commanders also applied combat skills written in *Gyechukjinseol, Eungjeonpyeon* (how to engage combat). It focused on cavalry use from the vast combat experiences with *Jurchens*. It also detailed how to create a cavalry battle formation; however the key was to take the initiative by beating the enemy's spearhead with the deposition of cavalry in front and charging into the enemy battle position.<sup>263</sup> In general *Joseon's* military tactics before war were the quick transformation of battle position, carrying long distance weaponry, and cavalry use in actual combat situations.

The Japanese developed the close-order infantry tactics from their civil war experience. In the middle of the 15th century, the *Muromachi* feudal government lost their control of Japan after the *Onin* War caused by the *shogun* succession dispute. After that, Japan entered into the warring state period. In terms of military command structure at the time, the 'master and servant' military model became very popular. More importantly, the *harquebus* was introduced from the west and castle fortification technology was further developed. Therefore, the cavalry became an easy prey for foot soldiers and castles became impregnable for the cavalry and small numbers of troops. In this circumstance, the subject of combat was transferred from the small number of valiant knights to massive fronts of infantry soldiers and tactically speaking, war transformed to close-order infantry battle.<sup>264</sup>

Since the combat style was transformed from the individual brilliance test to preponderance, a light infantry called *Ashigaru* was introduced into the battle. Initially their job was to agitate the enemy rear line by setting it on fire or by inflicting other means of devastation. They

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<sup>262</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.149-153

<sup>263</sup> *Ibid.*, p.84-93

<sup>264</sup> I.H. Seo, *op.cit.*, p.25

became part of the regular army following the introduction of the harquebus and gunpowder and grew further to become the main subject of war armed with harquebus, bow, and long spear under the guidance of *Ashigaru* commander.<sup>265</sup> However, their ultimate contribution to war came from the harquebus division.<sup>266</sup> *Oda Nobunga* adopted these *Ashigaru* tactics and took the initiative in the reunification race. *Oda*, in his famous battle of *Nagashino* in 1575, defeated the *Takeda*'s old cavalry charge tactics by using the wooden stockades<sup>267</sup> and rotating volleys of fire. The defeat of the famous *Takeda* cavalry also signified a change in the general style of warfare, away from the more 'chivalric' cavalry combats and a melee-weapon infantry to a less personal, more industrialised warfare depending on advanced equipment and new tactics as much as on personal valour. The centre of this battle was obviously *Ashigaru* armed with harquebus.<sup>268</sup>

After *Oda* was suddenly assassinated, *Toyotomi* took charge of *Oda*'s force and succeeded in reunification. He developed the *Ashigaru* tactics further. The basic Japanese military tactics developed by *Toyotomi* were to divide the military into four sections and if the first section led by cavalry was ready to surround the enemy by charging in from two different directions, then the second section (Harquebus *Ashigaru* section) would advance to the enemy front firing harquebuses to unsettle the enemy line. Then the third section, the longbow *Ashigaru* section, would quickly follow, and finally spearmen and sword men would charge to the enemy for hand-to-hand combat. The efficiency of this tactic was magnified because they were well-equipped and had reasonable war experience as well as the power of unity between the commander and soldier, also a central cause of their high morale.<sup>269</sup>

During the engagement in the initial phase of the *Imjin* Wars, once the Japanese spotted the break-up of the battle line because of the accurate harquebus firepower, the Japanese infantry

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<sup>265</sup> H.S. Lee, *ImJinJeonRanSaSang*, p.29-33

<sup>266</sup> S. Turnbull, op.cit., p.19

<sup>267</sup> The stockades served to blunt the force of charging cavalry, provide protection from sword blows and spear thrusts, and provide limited protection from arrows. Ports or gates in the staggered and overlapping stockades were positioned to channel the cavalry charges into lanes where they would be at a disadvantage to further gunfire, arrows, and sword and spear thrusts from the stockade's defenders.

<sup>268</sup> J. Keegan, *A history of Warfare*, London, Pimlico, 1994, p.42- 43

<sup>269</sup> *Ibid.*, p.27-28

spearman and swordsmen charged to the battle line for hand-to-hand combat.<sup>270</sup> Meanwhile, the *Joseon* forces' cavalry charged the enemy front line. This tactic had been an effective against the *Jurchens* but it was not against the Japanese, since they received a hail of enemy bullets through rotating volleys of harquebus fire. On a tactical level, the *Joseon* forces, who did not have a solution for Japanese battle tactics, exposed a serious weakness in a set piece battle with the Japanese.

On a strategic level, since the army dominated defensive strategies, the Japanese could avoid a naval battle in an open sea, which enabled them to land on the *Joseon* soil without any casualty or cost.<sup>271</sup> In addition, because the invasion route was a traditional trade route between *Joseon* and Japan, they possessed a sound geographic knowledge which also boosted their confidence and morale in the initial phase of war.<sup>272</sup>

*Joseon*'s national defence system<sup>273</sup> (*Jeseungbangryak* system) also brought negative side effects. Upon inauguration, *Joseon* had a local administrative and defence system inherited

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<sup>270</sup> H.E. Jung, op.cit., p.23

<sup>271</sup> W.R. Cho, op.cit., p.63-66

<sup>272</sup> Y.J. Choi, *YongNamDaeRo:HanKukGoDoRoEuiYeokSaJiRiJeokYeonGu*, Seoul, Korea University Minjokmunhwayeonguso, 1990, p.131-136

In terms of geographic factors, the Japanese initial success was contributed mostly by the *Joseon*'s failure to adopt the protracted warfare using the steep mountainous topography. However, the Japanese knowledge of the Korean peninsula topography also became an important reason for their early success, by avoiding the operation in mountainous provinces and heading directly to *Seoul* by the shortest route. But, their cautious approach to the mountainous Korean inlands such as *Gangwon* and *Cholla* provinces proved to be a great burden to them in the later stages of war. *Cholla* province itself is not mountainous; however, their borders with other provinces were either highly mountainous (*Sobaek* Mountains) or divided by the deep and wide *Seomjin* River. These highlands became the operational ground for the *Joseon* guerrillas and could make *Joseon* withstand the Japanese invasion of the province. Thus, for the Japanese, the geographic knowledge itself was not always beneficial to them.

<sup>273</sup> For the *Joseon* National Defence system (*Jinguan* and later *Jeseungbanryak* system)

See) W.S. Lee, *YooSeongRyongEuiGunSaBunYaEuiEobJeokJaeJoMyeong*, Seoul, Chongmungak, p.68-80

The ROK Army Headquarter, *HanKukGunJeSa(JoseonJeonGi)*, Seoul, The Army Head Quarter, 1968, p.275

from the preceding Korean kingdom *Goryeo*. However, since *Goryeo* only set up military fortresses in strategically important places, there was a lack of fortresses and the collapse of a fortress could be catastrophic to the whole course of war. Thus, *Joseon* reshuffled the national defensive system (*Jinguan* defence system: 1457A.D). The core of the *Jinguan* system was to secure as many defensive fortresses as possible to enhance the defensive depth. Accordingly, every local administrative unit (*Eup*; Town) became a military defensive unit (*Jin*: Fortress) at the same time.<sup>274</sup>

In proportion to the size of the administration unit, the provincial capital became *Jujin* (Main Fortress). *Byeongsa* (Military commander of Province) was stationed in *Jujin* and put division or corps sized forces under his command. The medium-size local administrative units between the provincial capital and small local towns became *Geojin*. *Byeongmajeoljesa* or *Cheomjeoljesa* (*Geojin* Military Commander) put regiment-sized forces under his control. Finally there was a *Jejin*, which was set up in remaining small towns. In principle, *Jejin* also had to have a military commander; however, in fact, the local chief magistrate commanded the local force, usually the size of a battalion. A chain of command was unified and *Byeongsa* gave orders to lower unit commanders. It was also a provincial defence system where *Byeongsa* took charge of provincial defence and neighbouring provinces were not allowed to support in case of conflicts.<sup>275</sup>

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The ROK Army Headquarter, *HanKukGunJeSa(JoseonHuGi)*, Seoul, The Army Head Quarter, 1968, p.24

W.R. Cho, op.cit., p.60-64

I.H. Seo, op.cit., p.19-20

J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.136-137

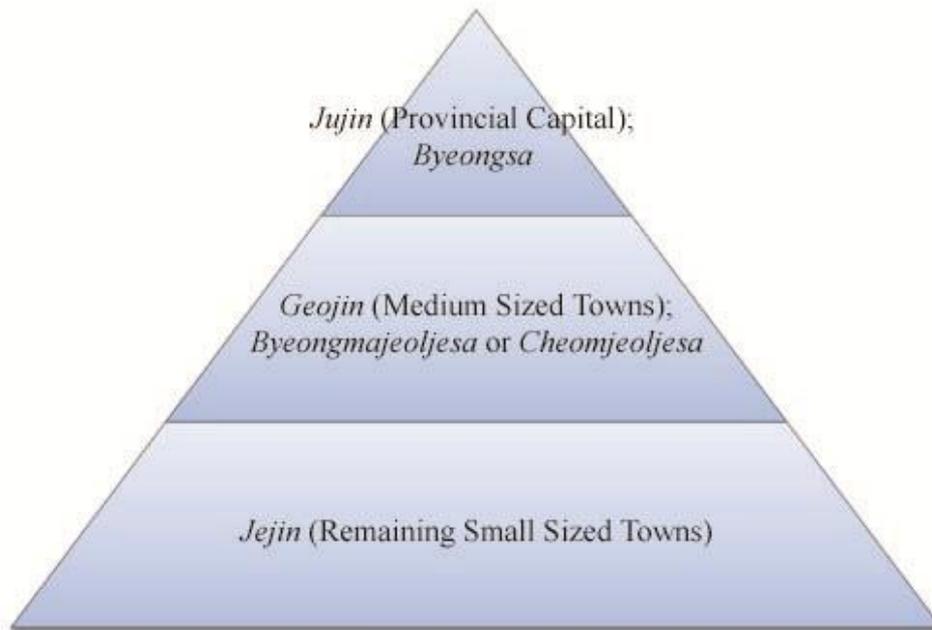
H.K. Jang, *JoSeonSiDaeGoonSaJeonRyak*, p.136-142

S.D. Ha, JeSeungBangRyakYeongGuSang, *Jindanahkbo in ROK* 36, 1973

S.D. Ha, JeSeungBangRyakYeongGuHa, *Jindanahkbo in ROK* 37, 1974

<sup>274</sup> W.S .Lee, op.cit., p.68

<sup>275</sup> The ROK Army Headquarter, *HanKukGunJeSa(JoseonHuGi)*, p.24



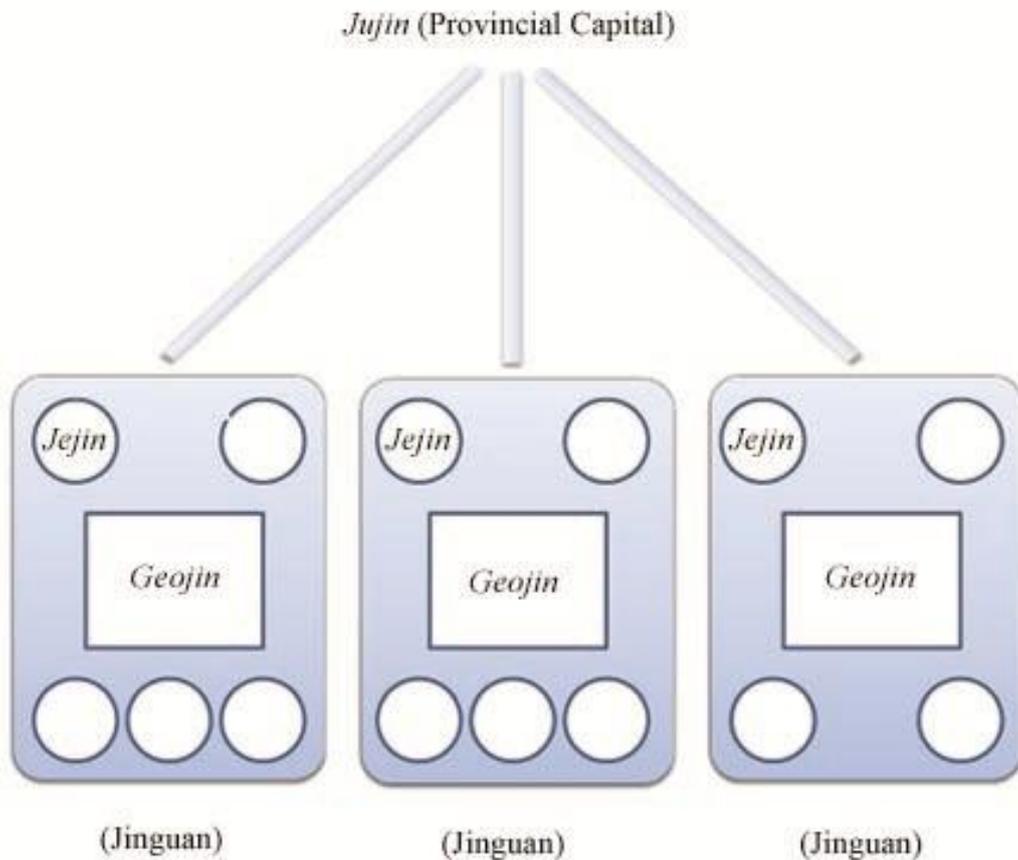
The Chain of Command (*Jinguan* National Defence System)

Index 4-1 The Chain of Command (The *Jinguan* National defence system)

Even though they managed to set military defence fortresses even in the small towns, the *Jinguan* was created for the efficiency of defence. The *Jinguan* is an independent defence unit which was composed of a central *Geojin* and several neighbouring *Jejins*. A *Jinguan* was supposed to fight and defend itself by using this strategic composition. Therefore, every province had several independent *Jinguan*s. Under this system, the roles of local commanders were to be stationed at their post, know the local topography inside and out, draft the operation plan, train local soldiers, and defend their own defensive quarter through mobilising their own local soldiers in the case of conflict.<sup>276</sup>

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<sup>276</sup> Ibid., p.24



- 1) The number of *Jinguan* was depending upon the size of province
- 2) The number of *Jejin* belonged to a *Jinguan* was varied depending upon the size of *Geojin*

### *Jinguan* national defence system structure

#### Index 4-2 *Jinguan* National Defence System Structure

The *Jinguan* defence system required many soldiers since it was not a concentrated use of a force but a dispersed-force defence system, which required local forces to defend their own defence perimeters, called *Jinguan*. However, there were not enough soldiers to maintain the *Jinguan* system when *Joseon* adopted the *Jeseunghangryak* defence system.<sup>277</sup> *Joseon*'s military conscription and supporting system, called *Bobub*, was introduced in the *Sejo* of *Joseon* (1464) The *Bobub* was a system to support an active soldier (called *Jungbyung*). The

<sup>277</sup> W.S. Lee, op.cit., p.76

peasant class alone took the burden of national defence and the soldiers were selected from them. The inactive adult male peasants (Called *Boin*) had to support the active soldier by paying a canvas instead of military service.<sup>278</sup> According to the *Bobub*, one active soldier was supported by the allocation of another inactive adult male peasant (one canvas per year).<sup>279</sup> However, once the allocated *Boin* fled to avoid the military duty, in most cases, the financial burden was directly inherited by the active soldier.

A peasant class in *Joseon* actually did not hold a sound economic base, therefore many peasants fled to avoid paying canvases. As a consequence of these flights, the allocation of *Boin* became titular and the burden of the active soldier was increased. Also because of the lengthy service period (three months every year), in many cases the service period and the farming season collided with each other. Consequently, many active soldiers were not able to finish their farming which caused them great economic difficulties.<sup>280</sup> Because of these increased burdens of military service, most of the peasants wanted to avoid the military service by paying a canvas, and the corrupt local military commander received canvases from active soldiers and freed them; these were called *Banggunsupo*. Since the *Banggunsupo* became a national phenomenon, the *Joseon* government tried to introduce the *Gunjeoksupo* system in 1541 which collected a canvas from each peasant class adult man aged between 16 and 60, and hired soldiers from among them. However, in reality, collected canvases were used as the running expenses of government or for the private purposes of government officials. Therefore, even though there were plenty of soldiers in their army and navy roster, at any given time there were only a few active soldiers.<sup>281</sup>

Because of the lack of active soldiers, *Joseon* could not afford the dispersed local defence system (*Jinguan* system) and were forced to adopt a concentrated troop application defence system. Along with the lack of active soldiers, the *Jinguan* system also bore other problems. Firstly, it was basically a provincial defence system. Active rule called *Bupiljeoktajinjijobeob* prohibited neighbouring province support. Therefore, if there was a massive invasion or conflict and the *Jinguan* and upper military unit in the province (*Jujin*: top of local

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<sup>278</sup> The canvas was widely used as the currency in ancient and medieval Korea.

<sup>279</sup> I.H. Seo, op.cit., p.20

<sup>280</sup> H.K. Jang, *JoSeonSiDaeGoonSaJeonRyak*, p.141

<sup>281</sup> Ibid., p.141-142

(provincial) defence system) failed to defeat the enemy, there were not many military options available because the neighbouring province could not offer support.<sup>282</sup> If a massive invasion occurred and the provincial military commander was not able to defend the province, a military commander would be dispatched by the central government. The government was thus supposed to be in charge with the cooperation of invaded provincial commanders and their neighbouring commanders. However, there was a fatal problem here. Because the central government military commander was not knowledgeable of the local topography and details of that situation, he was not able to excel. Secondly, the *Jinguan* system was devised for the local force to defend their defensive perimeters. However, if a massive number of enemies attacked only a certain area, this area could be vulnerable through the lack of defence forces. Also, if the enemy succeeded in establishing a bridgehead, the shockwave could easily spread out.<sup>283</sup> The shortcomings of the *Jinguan* defence system were “(1) the lack of active soldiers because of the *Gunjeoksupo*, (2) the difficulties of maintaining a dispersed local defence system as a consequence, (3) the vulnerability of provincial defence (Cooperation problem with neighbouring province) (4) the need for a concentrated application of forces if there was a massive enemy invasion in a narrow area.” These brought the strategic review on the *Joseon* government.<sup>284</sup> After the review, *Joseon* devised the *Jeseungbangryak* defence system.

Under the *Jeseungbangryak* system, the local magistrates would be the first to mobilise local troops, bring them to the pre-arranged troops assembly point called *Shinji* and wait for the arrival of military commanders from the central government. Then, if the central government military commander arrives, he would lead the local troops with the cooperation of local military commanders. The key of *Jeseungbangryak* is that the central government military commander would have full control of assembled troops, which could solve the cooperation problem. It also could make the concentrated use of force possible, which would be very effective against a sizable enemy. In addition, as the concentrated use of troops became possible, the commander in charge was able to repel the enemy in an initial phase of conflict since he could concentrate his force in a possible enemy invasion route or war zone to defeat

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<sup>282</sup> Ibid., p137

<sup>283</sup> Ibid., p138

<sup>284</sup> S.D. Ha, *JeSeungBangRyakYeongGuHa*, p.15

the enemy.<sup>285</sup> To summarise, the *Gunjeoksupo* led to the deficiency of troops to fill in forts, therefore a static defensive system (*Jinguan*) was no longer a viable option to *Joseon*. Instead, they introduced the mobile defensive system (*Jeseunbangryak*) to maximize the efficiency of existing small numbers troops available. A few strategically important forts such as *Pusan*, where the Japanese initially landed during *Imjin Wars*, and some northern border garrison towns used to defend against the *Jurchens* were still manned, but most of the forts became empty before the *Imjin Wars*.

However, the *Jeseunbangryak* defence system also had several serious problems. Since the military commander dispatched from the central government used all the available resources to repel the enemy in a decisive place, there was a reserve forces problem. Therefore, if defeated, there would be a certain wide defensive blank. In addition, it took much time for the central government military commander to dispatch to a hot spot, and without proper knowledge of the area's topography and local situation, he was unable to prepare for the battle properly.<sup>286</sup>

According to the *Jeseunbangryak* defence system, *Dongrae*, *Ulsan* (Second division invasion route), *Taegu* (First division invasion route), *Sangju* (First division invasion route) were the prearranged local force assembly points in *Gyeongsang* province. However, only in *Dongrae*, the local military commander (*Dongrae* magistrate) was able to muster local forces to defend the city. This was because it took so much time to dispatch the central government military officers to *Gyeongsang* province towns. The ones that were especially close to coastal lines were too far away from *Seoul*, and the dispatches were delayed and assembled forces were scattered without proper control.

In the case of *Ulsan*, where the *Gyeongsang* Left Army garrison was located, it was too far away from *Seoul* to send the central government commander, and assembled forces who were gathered from thirteen local towns around *Ulsan* simply scattered after the *Gyeongsang* Left Army commander (*Lee Gak*) fled.<sup>287</sup> The commander dispatch was also delayed in *Taegu*,

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<sup>285</sup> W.R. Cho, op.cit., p.61

<sup>286</sup> W.S. Lee, op.cit., p.78

<sup>287</sup> Y.S. Lee, G.H. Kim, S.Y. Kang, J.N. Na, *ImJinWaeRanChoGiJeonToYeonGoo* (A studies on the initial battles of Japanese invasion in 1592), Seoul, Hwarangdae research institute, KMA,1999, p.17

and the assembled forces around *Taegu* again were scattered.<sup>288</sup> It was the same in *Sangju*. Consequently, the central government military commander in charge of *Sangju* (*Lee Il*) had no forces available upon his arrival. He then ordered conscription of the local military commander who used a bait of food rations to conscript local farmers and refugees. However, he did not know details of the local situation (he did not even know how far advanced the enemy was upon his arrival) or its topography for a proper defensive battle to delay the enemy advance. Because conscripted forces had no discipline, he started a battle formation training procedure – the basic skill for the *Joseon* army at that time – in *Sangju Bukcheon* (Northern stream) bank, which was open and wide enough to train for battle formation properly, but also an ideal place for the Japanese to wage a set piece battle on their own terms. From these two cases, one can see that the critical flaws of the *Jeseungbangryak* defence system, the delay of central government military commander dispatch and their lack of local knowledge, actually contributed to the initial success of the Japanese invasion.<sup>289</sup>

Although this military fiasco cannot be attributed to one simple reason, there is a catalyst among these contributing factors. The decisive factor was *Joseon*'s failure to frustrate the main Japanese strategy (an intensive surprise offensive strategy) through stalling tactics with their strategic edge of topography. The Japanese were the invaders from overseas, and therefore faced an inevitable logistics problem since their supply route was long and hard. If *Joseon* had adopted stalling tactics using their tricky topography, the Japanese would have been in a serious trouble. In fact, because of the local militia, the *Euibyeong*, the *Joseon* navy, and the long supply route, Japan suffered from serious logistic problems during the *Imjin* Wars.<sup>290</sup>

Also, they could have had Chinese aid without any suspicion or delay which would have allowed *Joseon* to halt the Japanese from advancing sooner than their original phase. Though the refusal to pass through the *Joseon* territory to invade China was one of the main reasons for the Japanese invasion, the *Ming* dynasty was still suspicious of *Joseon*'s intention. Their suspicion was that the *Joseon* commitment to war was not serious enough, and would simply give way to the Japanese; and they even thought that *Joseon* acted as Japanese guides

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<sup>288</sup> Ibid., p.27

<sup>289</sup> Ibid., p.28-31

<sup>290</sup> H.E. Jung, op.cit., p.221-222

because of the quick demolition of the *Joseon* forces.<sup>291</sup> Therefore, if *Joseon* were able to delay the Japanese any longer than what they actually managed to do (a reasonable advancing speed), *Joseon* could have had reinforcements earlier, which would have been crucial in deciding the fate of war.

Furthermore, *Joseon* was not an easy country to occupy even though there were strategic and tactical mistakes on their side. In fact, they showed resilience. Even though their army was ultimately sacrificed by faulty strategies and tactics, their ground forces were quickly complemented by the local militia and their navy was in superb shape to prevent any Japanese naval movement. The northern three provinces and southern three provinces sent their troops to *Seoul* to save the king. Even though the northern and southern province forces were defeated by the Japanese in the *Imjin* River and in *Yongin*, just south of *Seoul*, because of the flawed battle strategy, *Joseon* showed that they could wage a protracted war with the Japanese.

The Korean local militia's strategy and tactics were very similar to those used in modern guerrilla warfare. Namely, they were good at local topography and enjoyed a close relationship with the local population, which meant they could get sufficient supplies and use their geographic knowledge for ambush or retreating routes following combat. Their main strategy was to ambush the enemy using their superior knowledge of local geography and information, then retreat using the familiar topography when the main enemy element was approaching to rescue troubled troops or starting to get over the initial shock and prepare the counterattack. By their guerrilla warfare, they put the enemy supply line in jeopardy, and at a later stage of the first invasion, the Japanese could only use a central route to *Seoul* to supply their troops in the Northern provinces. In addition, when there was a castle on the hill battle, such as the siege of *Chinju* castle and the battle of *Haengju* castle (12<sup>th</sup> of February, 1593), as a part of traditional defensive strategy, they cut off enemy supplies or replied to the reinforcement requests and rallied around the castle on the hill.

Since they could not match the Japanese regular army in firepower, training, and preponderance, they tried to evade open space battle. As will be analysed below in the section

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<sup>291</sup> J.H. Song, *ImJinWaeRanEuiBalBalGuaGyungGwa*, Seoul, *Hankuksa* 29, National Institute of Korean History, 1995, p.72

about the Japanese second offensive to *Cholla* province, open space battle was only committed with the support of *Joseon* regular forces (in the case of *Go Gyeongmyeog's* militia's joint operation with the *Kwak Young's* regular army at the Japanese second offensive to the *Cholla* province) or they were raided in surprise by the Japanese regular forces (in the case of *Cho Heon's* militia's battle in *Keumsan*). Even though they failed to give a decisive blow to the Japanese main forces, the *Joseon* militia were still able to destabilize the Japanese by cutting off their supply line, and contributed to frustrating their so-called pacifying operation, which inevitably led to the later military debacle in *Pyongyang* and withdrawal to the southern coast.<sup>292</sup> Therefore, the Japanese were not able to occupy the vast majority of the *Joseon* territory except for towns in their main invasion route. In other words, even though *Gyeongsang* province was occupied, if they had delayed the Japanese advance, with the resilience they had (actually *Gyeongsang* province was one of eight provinces in *Joseon*); it would not have been that easy for the Japanese to maintain that phase of the advance.

In conclusion, Japan's initial success can be attributed to a wide array of decisive factors. It was possible for *Joseon* to change the whole course of the war or at least draw them to quagmire by adopting a traditional defensive warfare strategy which used the geographic edge to retard the Japanese advances. The following section will examine the battle of *Chungju*, which failed to retard the Japanese advances with the geographic defensive edge, wreaking catastrophic results for the *Joseon* side.

## The battle of *Chungju* <sup>293</sup>

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<sup>292</sup> J.H. Lee, *ImJinWaeRanJungEuiSeungGunEuiHwalDongEDaeHaYeo*, in *Samyeongdangginyeomsaeophwae, SaMyongDangYuJeong*, Seoul, Jisiksaneopsa, 2000, p.135-154

<sup>293</sup> To Review the Battle of *Chungju*,

See) J.S. Yang, *DaSiSseuNeunImJinDaeJeonJang1*, Seoul, Goryeowon, 1994, p.97-102

H.S. Lee, op.cit., p.267-268

I.H. Seo, op.cit., p.47-49

Y.S. Lee, op.cit., p.36-48

J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.154-156

H.K. Jang, *JoSeonSiDaeGoonSaJeonRyak*, p.157

Following the Japanese landing on *Pusan*, *Joseon* had not properly applied the stalling tactics using their geographic defensive edge until the Japanese reached *Chungju*. They had advanced all the way through the natural barriers of the South Eastern part of the Korean peninsula, the *Naktong* River, the mountainous inland of the *Gyeongsang* province, and the mountainous border passes between *Gyeongsang* and *Chungchong* province. Their advance was very fast without much resistance. Because of these failures, *Joseon* did not earn the time to recover from the surprise Japanese invasion which inevitably led to the military fiasco on the *Joseon* side in the initial phase of war.<sup>294</sup>

At the battle of *Chungju* where *Joseon* assembled sizable forces for the first time to tackle the Japanese, *Joseon* did not adopt stalling tactics using their mountainous border pass *Choryong*. Instead, they chose a set piece battle in *Chungju* and their force was brutally crushed. This did not delay the Japanese advance. Through examining the Japanese advance to *Chungju* and the battle of *Chungju*, this section will show that *Joseon* failed to apply stalling tactics using their geographic defensive edge. This failure and mistake had a crucial impact on the *Joseon*'s defence campaign.

## Previous engagements before the battle of *Chungju*

The next target of the Japanese First division following the fall of *Dongrae* was *Miryang*.<sup>295</sup> On their advance to *Miryang*, there was a village called *Jakwon* which was about twelve km

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<sup>294</sup> The Japanese managed to advance to the North quickly. However, because of supply problems, their advance became slower and eventually stalled. At the early stage of war, the local militia was not fully organized and *Joseon* did not have time to adopt the Scorched Earth tactics. Therefore, the Japanese force did not suffer any serious logistics problem. However, the *Joseon* local militia and the navy's consecutive successful operations put the Japanese supply in jeopardy. In hindsight, once *Joseon* successfully adopted stalling tactics using their geography, the Japanese force could have had supply problems earlier had there been an application of Scorched Earth tactics and full organization of local militia. The Battle of *Chungju* was carried out in the initial stage of war before *Joseon*'s local militia was fully organized and the *Joseon* government adopted the Scorched Earth tactics.

<sup>295</sup> To review the Battle of *Miryang*

See) H.S. Lee, *ImJinJeonRanSaSang*, p.249-256

I.H. Seo, op.cit., p.38-39

Y.S. Lee, op.cit., p.19-22

away from the *Miryang* castle and this had to be passed through to advance to *Miryang*, *Cheongdo*, *Taegu*, and eventually to *Seoul*. Therefore this village acted as a checkpoint and transport station to check the goods of Japanese traders and envoys.<sup>296</sup> To pass this village, there was a narrow central pass (an artificially-made route), and, on the left and right side, a steep cliff. However, with only small numbers of troops available, the *Joseon* commander in charge committed tactical mistakes, and decided to divide the forces between the *Jakwonguan* and *Miryang* castles. The defending forces in *Jakwonguan* had no option but to concentrate the force on the central pass and could not guard the left and right sides of the cliff. The Japanese climbed the left cliff and surrounded the defending force. The remaining small force in the *Miryang* castle also became easy prey for the Japanese invaders.<sup>297</sup> For the Japanese First division, *Miryang* was the first gate to advance to the inland of *Gyeongsang* province, which meant they had to take *Miryang* at all costs. However, *Joseon* did not fully use the natural barrier (*Jakwonguan*) and lost the chance to earn crucial time. Following the collapse of *Miryang*, the Japanese reached the outskirts of *Sangju* smoothly and quickly, without any resistance in *Cheongdo* and *Taegu*.<sup>298</sup>

Notable among towns on the Japanese invasion route, *Taegu* has natural barriers (The *Nakdong* River and various mountains) from the West to the East which means with the utmost use of natural barriers, the city could become impregnable or at least apply stalling tactics against an invasion from the North or the South. The importance of *Taegu* in terms of defensive warfare was proven in the Korean War's *Nakdong* River line defence campaign, where both sides were desperate to keep *Taegu* on their side. However, the assembled forces in *Taegu* were scattered because of the delayed dispatch of a central government military commander.<sup>299</sup> If the local force in *Miryang* succeeded in earning crucial time using *Jakwonguan*, the first central government military commander *Lee Il* would have had a better chance to delay the Japanese from advancing in *Taegu* relying on the natural barrier around it.

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J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.147

<sup>296</sup> This village used to called as *Jakwonguan* (Guan in Korean means station or fortress) because of the purpose of this village.

<sup>297</sup> Y.S. Lee, op.cit., p.20-22

<sup>298</sup> Ibid., p.26-27

<sup>299</sup> Ibid., p.26-27

He only managed to reach *Sangju*<sup>300</sup> which did not hold any severe natural barriers and strategic importance except for the fact that it was the provincial capital, and was eventually crushed by the Japanese without the much-needed delay of the advance. Therefore, the tactical failure of *Miryang* affected the whole Japanese *Gyeongsang* province inland campaign. Their First division did not experience severe resistance during their offensive inland of *Gyeongsang* province where the immense natural barriers like the *Nakdong* River and *Sobaek* Mountains were able to keep them away.

During the initial phase of war, after they took *Kyongju*, the Second Division also chose the central route (The First Division Route) instead of the originally planned Eastern route to *Seoul*. This was a longer route than the central route, but the choice was made because of the personal ambition of the Second division commander, *Kato*. Thus the strategic importance of this central route was intensified. To check the Japanese who were advancing through the central route to reach *Seoul*, the central government dispatched a military commander (*Lee Il*) to collect the available forces in *Sangju*. However there were no significant natural barriers in *Sangju* to help stall the Japanese advance. In addition to the natural barriers, and because of the tactical mistake of *Lee Il* (scouting), he was not able to defend his forces at the *Sangju* castle and had to fight in open space.<sup>301</sup> Following the collapse of *Sangju*, because the Japanese main force was concentrated on the central route, the strategic importance of *Choryong*, with its steep mountainous topography, to stop or delay the Japanese advance was significantly increased. However, the Second Central Government Military Commander (*Shin Lib*) chose an open field in *Chungju* rather than in *Choryong* to stall the Japanese from advancing onward.

## Why choose *Chungju*?

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<sup>300</sup> To Review the Battle of *Sangju*,

See) J.S. Yang, op.cit., p.99-100

H.S. Lee, *ImJinJeonRanSaSang*, p.258-264

I.H. Seo, op.cit., p.45-46

Y.S. Lee, op.cit., p.29-31

J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.149-153

<sup>301</sup> *Sangju* was the provincial capital therefore their castle was in a reasonable status to defend against the Japanese.

Following the collapse of *Sangju*, and the Japanese advance to the *Choryong* border pass, *Joseon* appointed *Shin Lib* as the *Samdosunbyeonsa* (the supreme military commander in charge of Southern three provinces) who received national hero fame after he defeated the *Jurchens* along the Northern border, and *Kim Yeomool* as the *Jongsaguan* (the military advisor) to check the Japanese advance with 8,000 dominantly conscripted forces.<sup>302</sup> After taking *Sangju*, the Japanese met the steep mountainous area of the *Sobaek* Mountains, at the border of *Gyeongsang* and *Chungchong* provinces. Only the border pass could afford the quick passage of massive troops and supply. The *Sobaek* Mountains became a natural barrier for the Japanese, so this border pass had an immense strategic significance. Since *Konish* (the First Division Commander) had an ambition to occupy *Seoul* as soon as possible, he had no option but to pass through the border pass called *Choryong* (642m) which is located between *Juheul* mountain (1075m) and *Baekhwa* mountain (1063m).<sup>303</sup> Therefore, *Choryong* was a strategically important place for the *Joseon* to check the Japanese advance. Upon being dispatched, *Kim Yeomool* also insisted that the only way for the outnumbered troops (*Joseon*'s central government force) to stall the opposite forces (the Japanese expedition forces) would be to hold on to the *Choryong* border pass.<sup>304</sup>

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<sup>302</sup> H.K. Jang, *JoSeonSiDaeGoonSaJeonRyak*, p.157 Even though most of forces were conscripted, the core element was the battle-hardened heavy cavalry.

<sup>303</sup> There were two other border passes called *Jukryeong* (689m) and *Chupungryeong* (217m) however; following the invasion route switch of *Kato* forces from Eastern route to Central route, the main force of Japan was heading to *Choryong* located in central invasion route. Excerpted from– J.S. Yang, op.cit., p.98

<sup>304</sup> However, there were a few military commanders who set a low defensive value on the border pass. Outstanding figures were *Shin Lib* and *Lee Il* who earned their fame through beating the *Jurchens*. They had an expertise in the offensive cavalry warfare and were not the defensive warfare specialists, using mountainous defensive edge. They insisted that the *Joseon* force could check the Japanese advance in the mountainous border pass but could not give them a decisive blow. Their lack of expertise in defensive warfare became one of the main reasons for them to abandon the defensive plan in *Choryeong*. On the other hand, *Kim Yeomool*'s proposition was to check the Japanese advance in *Choryeong*. He said the best way to beat the Japanese was to lay ambush in the left and right side of gorge in *Choryeog*, allow them to advance to the gorge and shoot them. Excerpted from– Y.S. Lee, op.cit., p.29-31

However, *Shin Lib* insisted on setting up a battle in the open field mainly because the *Joseon* force was cavalry and that of the Japanese was infantry.<sup>305</sup> *Shin* also insisted that since the Japanese already came close to *Choryeong* (actually this was not the case), the *Joseon* force would not have enough time to prepare the defensive warfare and consequently, their position would be vulnerable. *Shin* then mentioned that, once they put their forces in mountainous area, because of the poor training of the forces, there would be a great number of runaway soldiers. Finally, *Shin* made a decision to abandon *Choryeong* and form a defensive line in *Danweolyeok* which is located 4km away from the *Chungju* castle. This meant that *Shin* believed that hand-to-hand combat with the Japanese using the cavalry's mobile and striking power would give an edge to *Joseon*.<sup>306</sup>

Adopting a cavalry tactic was not a total misjudgement of data. *Shin* tried to adopt the tactic he was good at while using the main force's (cavalry) strength against the Japanese. However, *Shin* made a crucial mistake in executing this tactic and experienced bad luck. *Shin* led the force from *Danwolyeok* to *Tangeumdae* and then set up a defensive line in the low and humid ground where the *Namhan* River and *Dal* Stream met, and waited for the Japanese arrival. His decision to wage a cavalry offensive warfare instead of stalling defensive warfare in *Choryeong* was a mistake that could only be seen in hindsight.<sup>307</sup> His decision to choose low

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<sup>305</sup> Even though *Shin Lib*'s main force was battle hardened cavalry, the majority was the conscripted infantry. Traditionally, for the Korean cavalry, the mastery of *Gakgung* (Korean Bow) during his ride on horse was regarded as the most important fighting technique therefore; *Shin*'s cavalry should have been good at bowman-ship. In addition, traditionally the standard of Korean bowman's technique was high and their bow (*Gakgung*) was regarded as the best bow in the Far East. In fact, even though *Joseon* became a conservative civilian society and most physical exercise or military training was viewed with contempt, the noble class and king himself still practiced bowman-ship, saying bowman-ship would help to clear mind and soul. Therefore, defending *Choryeong* was not a bad option to them since their force would have good bowman-ship and bow in *Gakgung*.

<sup>306</sup> *Ibid.*, p.37-39

<sup>307</sup> Tactically speaking, *Shin* was not aware of the enemy strength and situation; therefore the *Joseon* forces were not ready to use their strength. He did not know the Japanese harquebus was an efficient weapon to break down the cavalry charge. The *Joseon* force could not put the Japanese into turmoil just by a cavalry charge because of the high morale and training of the Japanese expedition force. *Shin* also did not notice that, by protracted warfare using the steep mountainous geography between

and humid ground surrounded by a paddy field and swamp was a truly tremendous blunder. Also, it had begun to rain which meant the ground became much soggy. The strength of the cavalry was mainly derived from the horses' speed. Because of the soggy ground their horses' speed and striking power was reduced, and ultimately they became an easy prey for the long-range weaponry.<sup>308</sup> This is a typical example of Clausewitzian friction, where inevitable mishaps build upon each other, with each minor setback producing another series of additional problems. On the Japanese side, they had the advantage of having accurate long-range weaponry (Harquebus). They set up wooden stockades as a barricade to blunt the forces of the charging cavalry and applied volley fire tactics to maximize their firepower. As a consequence, the *Joseon* force was crushed by the Japanese.<sup>309</sup>

## Strategic effects of The Battle of *Chungju* during the Initial Phases of War

Strategically speaking, this battle took on a significant meaning during the course of war. After the collapse of *Chungju*, *Joseon* were no longer able to delay the Japanese advance – let alone defeat them before the Japanese reached the outskirts of *Seoul* – since there were no more formidable natural barriers for *Joseon* to hang on to after they abandoned the *Choryong* border pass. Consequently, even though *Joseon* had resilience, they did not have enough time to recover because of their earlier failure of delaying the Japanese advance. This meant they had to make the decision to abandon *Seoul* and then flee to the North.

Even though the *Joseon* government made a decision to abandon *Seoul*, they set up the defensive line in the *Han* River. The *Han* River was the last resort for *Joseon* to defend *Seoul* since *Seoul* was located in the northern bank of the *Han* River. They only managed to conscript a small number of soldiers around *Seoul* to defend the *Han* River, but their effort of defending the *Han* River was in vain. *Seoul* was then occupied on the 3<sup>rd</sup> of May, 1592, only nineteen days after the Japanese landed in *Pusan*.<sup>310</sup> *Joseon* could amass a force which was

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*Gyeongsang* and *Chungchong* province border, they could diminish the effect of direct firing of Harquebus's firepower and exacerbate the enemy supply problem: fast advance and long supply line.

<sup>308</sup> Ibid., p.38-40

<sup>309</sup> H.K. Jang, *JoSeonSiDaeGoonSaJeonRyak*, p.157

<sup>310</sup> To review *Han* River and *Seoul* battle

capable of defending the *Han* River defence line if there was adequate time. The Northern three provinces (*Hamgyong*, *Hwanghae* and *Pyongan*) had already dispatched their troops, but because of the early collapse of *Seoul*, they managed only to reach the *Imjin* River, located towards the north of *Seoul* and the next northern natural barrier. The Southern three provinces, most notably the *Cholla* province, also sent troops to *Seoul*, but they retreated after the collapse of the city.

In conclusion, the military catastrophe of *Joseon* was not the result of a single deciding factor. However, the failure of defensive warfare using geographical edge was the most significant blunder, which had a domino effect. Failing to check the Japanese advance in *Miryang* using *Jakwongwan* affected the outcome of the Japanese *Gyeongsang* province's inland campaign such as *Taegu* and *Sangju*. Their failure to use the *Choryong* border pass in delaying the Japanese advance also later affected the *Han* River defensive line and *Seoul*. Therefore, *Joseon*'s failure to adopt stalling tactics using their geographic edge acted as the catalyst for many mistakes they made in the initial phase of war and led them to complete military catastrophe. In hindsight, if the *Joseon* forces had adopted a stalling tactic, with the resilience they had, they could have earned enough time to regroup and rearm themselves. In addition, because of the reasonable advance speed, a quicker Chinese engagement could have been made. More than anything else, the Japanese expedition force would suffer logistic problems because of the long supply line. Therefore, the *Imjin* Wars could have concluded earlier. The next part of this research will review the strategic transformation of *Joseon* and its effect through the *Cholla* province's defence campaign.

## 4-3 Shock and the Gradual Strategic, and Tactical Transformation of *Joseon* - *Cholla* Province Defence (occupation) Campaign<sup>311</sup>

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See) J S. Yang, op. cit., p.103-107

H.S. Lee, *ImJinJeonRanSaSang*, p.281-284

I.H. Seo, op.cit., p.51-56

Y.S. Lee, op.cit., p.49-52

<sup>311</sup> To review *Cholla* province protection campaign

## The Japanese Operation Plan

The Japanese expedition force launched its full-scale operation in *Cholla* province at the end of June, 1592. Since their initial strategic objective was to occupy *Seoul* as soon as possible, they only managed to secure towns along their short plotted invasion route from *Pusan* to *Seoul*. Therefore, they planned to occupy *Cholla* province, which had been excluded in the initial operation.

The expedition forces in charge were the 7<sup>th</sup> Division (15,700 soldiers) led by *Kobayakawa Takakage*. His division landed in *Gyeongsang* province in the middle of April as a six division. It was stationed in *Gimcheon* or *Changwon* to secure the western route to *Seoul* with *Mori's* 7<sup>th</sup> Division. However, according to the division and rule plans of *Joseon* drafted in the middle of May in *Seoul*, his division became the 7<sup>th</sup> division and was ordered to take charge of *Cholla* province.<sup>312</sup>

*Kobayakawa* then ordered his troops in *Changwon* led by *Ango Kugi* to advance to *Cholla* province. He planned to advance to *Chonju* (The provincial capital of *Cholla* province) passing through *Haman*, *Ulryong*, *Hamyang*, and *Namwon*. *Ango's* initial advance was checked and repelled in *Ulryong* by a local militia led by *Kwak Chae-U*.<sup>313</sup>

Then they altered their invasion route. They would enter *Cholla* province from the north-western part of *Gyeongsang* province and the southern part of *Chungchong* province into the North Eastern part of *Cholla* province. *Ango's* troops invaded *Cholla* province from the north western part of the *Gyeongsang* province. (Initially planned route: *Gimcheon*, *Jirye*, *Buhangryeong* (north eastern border pass between *Cholla* and *Gyeongsang* province), *Muju*, *Chinan*, *Ungchi*, and *Chonju*). *Kobayakawa* led his troops from the southern part of

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See) H.S. Lee, *ImJinJeonRanSaSang*, p.370-413

I.H. Seo, *ImJinWaeRanSa*, p.81-111

S. Turnbull, *Japanese castles in Korea 1592-1598*, Osprey publishing, 2007, p.45-51

W.R. Cho, op.cit., p.68-76, p.123-156

J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.170-186

<sup>312</sup> I.H. Seo, op.cit., p.83

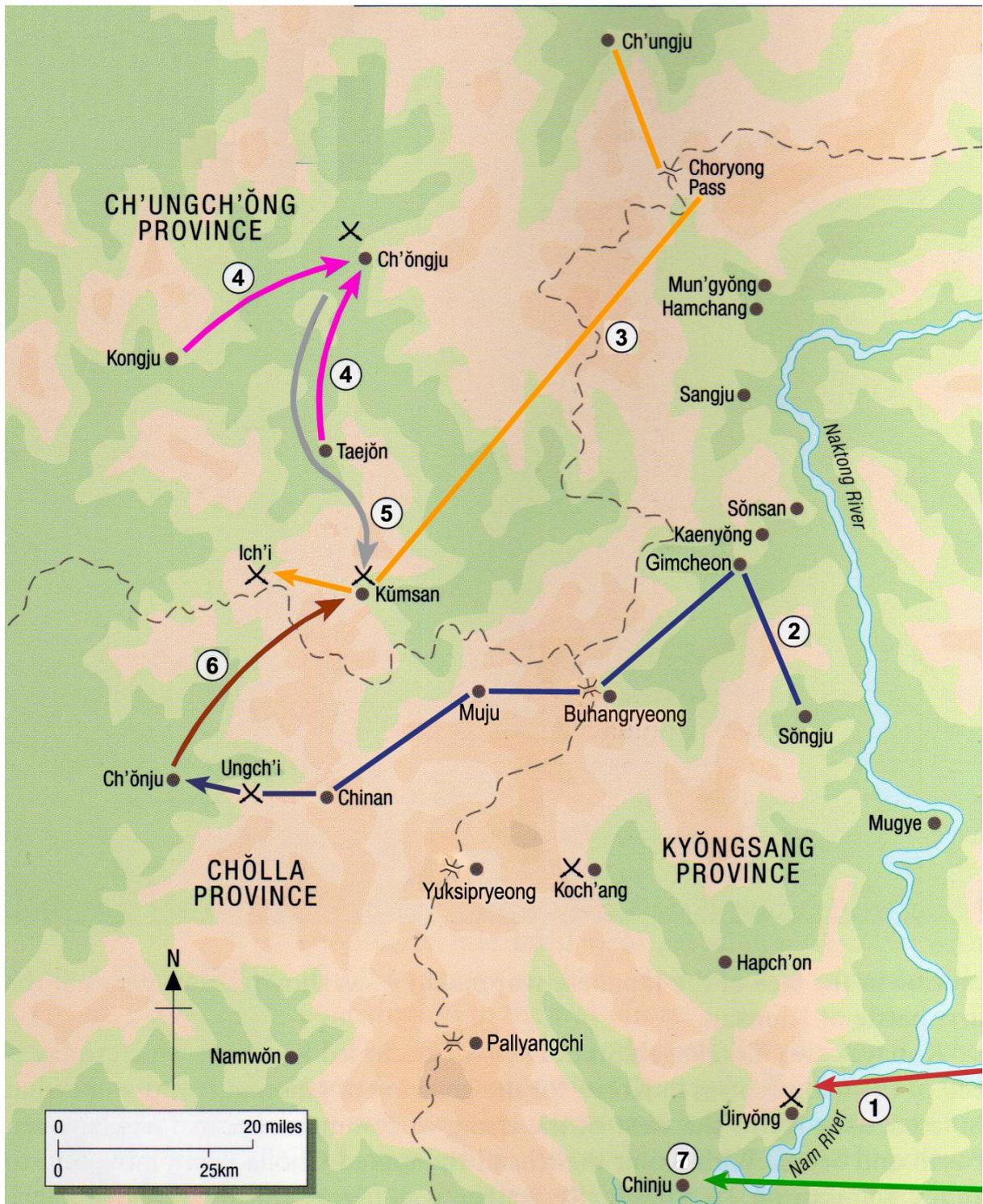
<sup>313</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.177

*Chungchong* province to the *Cholla* province. (Initially the planned route encompassed *Chungju*, *Choryong pass*, *Kumsan*, *Ichi* and *Chonju*).<sup>314</sup>

They made a final effort during the first invasion to occupy *Cholla* province after their second effort had failed again. Their planned invasion route this time was *Jinhae* and *Goseong*, which are the southern coastal towns of *Gyeongsang* province, and then cross the *Nam* River, and finally reach *Cholla* province. This plan was also not successful since they suffered another miserable defeat during the first siege of *Chinju* (5<sup>th</sup> of October, 1592-10<sup>th</sup> of October, 1592)

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<sup>314</sup> I.H. Seo, op.cit., p.84



1. The First Cholla province occupation campaign led by Ango
2. The Japanese Attack on Ich'i led by Ango
3. The Japanese Attack on Ungch'i led by Kobayakawa
4. Joseon Advance on Chongju led by Jo Heon
5. Jo Heon's advance against the Japanese main force in Kumsan
6. Go Gyeongmyeong and Kwak Young's Joint movement against the Japanese main force in Kumsan
7. The First siege of Chinju (The Third phase of Cholla province occupation campaign)

Map 4-3 The Japanese offensive route and *Joseon*'s defensive line during the *Cholla* province occupation (defence) campaign.<sup>315</sup>

## *Joseon*'s Reaction to the Japanese Offensive

### The Battle of *Ulryong* (25<sup>th</sup> of May, 1592)

According to the initial occupation plan of *Cholla* province, *Ango*'s troops would advance to *Cholla* province from their post in *Changwon*. He successfully reached the eastern bank of the *Nam* River marching through *Haman*. He then tried to cross the *Nam* River to reach *Ulryong*. On the *Joseon* side, the respected local leader *Kwak Chae-U* rallied the local militia and laid an ambush along the *Jeongamjin* ferry, located in the North Western bank of the *Nam* River, assuming that the Japanese would invade *Ulryong* by crossing the *Nam* River. At first, *Ango* sent the scout around *Jeongamjin* ferry to check the local topography. The Japanese scout spotted the swamp and stuck twigs into the ground to point out the available route. However, at night, the *Joseon* local militia pulled out the twigs and stuck them into the ground again, leading them to the swamp. The following day (25<sup>th</sup> of May), *Ango*'s troops headed to the ferry, but because of the false information they then fell into turmoil in the swamp. At that point, the ambushing *Joseon* militia launched a surprise attack to *Ango*'s troops. *Ango* was then defeated and moved to *Gimcheon* to regroup and wait for the next order.<sup>316</sup>

### The Battle of *Ichi*, *Ungchi*, and *Kumsan* – The Second Offensive to *Cholla* Province

The Japanese initial attempt to occupy *Cholla* province was frustrated at the Battle of *Ulryong*. Afterwards, they made another plan to cross the North Eastern border of *Cholla*

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<sup>315</sup> Recreated from maps below

(1) S. Turnbull, op. cit., p.46

(2) J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.174,176

<sup>316</sup> J.H. Lee, *Chae-UKwakYeonGu*, Seoul, Yangyonggak, 1983, p.164

province and reach *Chonju*. During the course of this offensive, there were a series of battles called the Battles of *Ichi*, *Ungchi*, and *Kumsan*. The *Joseon* camp in *Cholla* province was also assigned to the defence sector to prevent the Japanese invasion from *Gyeongsang* and *Chungchong* province.

Rank	Name	Defence Sector
<i>Bangeosa</i>	<i>Kwak Young</i>	<i>Kumsan</i>
<i>Jobangjang</i>	<i>Jang Euihyun</i>	<i>Buhangryeong</i> (690m)– Border pass between <i>Muju</i> of <i>Cholla</i> province ( <i>Muju Gun</i> (County), <i>Mupung Myeon</i> (Township- Sub division of <i>Si</i> and <i>Gun</i> in contemporary Korea) and <i>Jirye</i> of <i>Gyeongsang</i> province ( <i>Gimcheon Si</i> (City), <i>Buhang Myeon</i> )
<i>Jobangjang</i>	<i>Lee Gyejeong</i>	<i>Yuksipryeong</i> (734m)- Border pass between <i>Chinan</i> of <i>Cholla</i> province ( <i>Jangsu Gun</i> , <i>Janggye Myeon</i> ) and <i>Aneui</i> of <i>Gyeongsang</i> province ( <i>Hayang Gun</i> , <i>Seosang Myeon</i> )
<i>Jobangjang</i>	<i>Lee Yooeui</i>	<i>Pallyangchi</i> (513m)- Border pass between <i>Namwon</i> of <i>Cholla</i> province ( <i>Nawon Gun</i> , <i>Inwol Myeon</i> ) and <i>Hamyang</i> of <i>Gyeongsang</i> province ( <i>Hamyang Gun</i> , <i>Hamyang Eup</i> )

Index 4-3 Initial *Cholla* province defence sector allocation in 1592<sup>317</sup>

However, the Japanese offensive came too quickly for *Joseon*'s *Cholla* province defence forces to fortify their northern and north-eastern border. *Ango*'s troops managed to cross *Buhangryeong* and reached *Muju* on the 19<sup>th</sup> of June and *Kobayakawa*'s troop also successfully reached *Kumsan* on the 23<sup>rd</sup> of June. As a supportive attack, *Ango*'s troop passed *Chinan* and reached *Ungchi*, the last natural barrier to reach *Chonju* from the North-East border of *Cholla* province. From the northern border, *Kobayakawa* troops as a main attack tried to reach *Chonju* through *Ichi*. Therefore, both the *Ungchi* and *Ichi* were the last natural defensive barriers to reach *Chonju* from the North and North-Eastern border.<sup>318</sup>

<sup>317</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.171

<sup>318</sup> *Ibid.*, p.171-172

On the *Joseon* side, following the withdrawal from *Kumsan*, *Kwak Young*'s force regrouped and reinforced in *Gosan*, then advanced again to *Jisan*, near *Kumsan*, to threaten the enemy advance. The defensive void was quickly filled with the relocation of troops. Once the *Joseon* government realized *Ango*'s intention after the capture of *Muju* was to reach *Chonju* instead of *Namwon*, *Lee Gwang* (*Cholla* provincial governor) ordered the *Gimje* magistrate *Jeong Dam* and *Naju Panguan*<sup>319</sup> *Lee Boknam* to advance from their position to *Ungchi* to check the Japanese advance. On their departure, the local militia leader *Hwang Bak* also joined the battle with his 200 militias. On the 7<sup>th</sup> of July, when *Ango* tried to overrun the *Joseon*'s first defensive line in *Ungchi*, the battle of *Ungchi* began. On the 8<sup>th</sup> of July, the *Joseon* force began to crumble when they ran out of arrows and could not hold back the Japanese forces. They withdrew to *Chonju* and *Ango* advanced to *Chonju* on the 9<sup>th</sup> of July.<sup>320</sup>

Along with the *Dongbuk* Magistrate *Hwang Jin*, *Kwon Yul*'s force was reallocated in *Namwon*, only to be then moved again to *Ichi* to check *Kobayakawa*'s Japanese main force, when they noticed that *Ango*'s troops were heading to *Chonju* rather than *Namwon*.<sup>321</sup> The Japanese main forces launched their offensive to *Chonju* through *Ichi*. In *Ichi*, they set up a wooden fence on their defensive line on top of the hill and artificial obstacles on the probable

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<sup>319</sup> The duty and position of *Panguan* was to support the local magistrate who had many duties and offer the local administrative service

<sup>320</sup> *Ibid.*, p.172-173 and H.S. Lee, *ImJinJeonRanSaSang*, p.370-413

<sup>321</sup> *Namwon* took a strategically very important position in the defence of *Cholla* province and the entire defence of *Joseon* at that time. On *Namwon*'s east, there is *pallyangchi* which is a valuable check point for *Joseon* in case of Japanese invasion from the western border of *Gyeongsang* province. Once *Namwon* is occupied, the Japanese could quickly advance to the southern part of *Cholla* province without a severe natural barrier for *Joseon* to check their advance and the *Joseon* Army in the south east of *Cholla* province and *Chinju* to prohibit the Japanese south western coastal offensive as well as the naval garrison in the southern coast of *Cholla* province would also be in danger of siege. *Namwon* is also located in the important transport junction where you can go to provincial capital *Chonju*, or *Seoul* through *Muju*, *Chungchong* province, or *Gyeongsang* province through *Pallyangchi* and *Hamyang*, or to southern part of *Cholla* province. Therefore, because the strategic significance, the Japanese were keen on taking *Namwon* to advance to *Seoul* and dominate *Cholla* province in the second invasion.

Japanese offensive route to the *Joseon* defensive line. They also prepared enough stones and arrows to defend their position, and made thick smoke to render their position invisible to the Japanese scout.<sup>322</sup>

On the 7<sup>th</sup> of July, *Kobayakawa* left *Kumsan* castle with few forces to defend, and contacted the *Joseon* force in *Ichi* on the 8<sup>th</sup> of July in the early morning. They tried to overrun the *Joseon*'s defensive line initially breaking through artificial obstacles on the way to the top of hill and then demolishing the wooden fences through the continuous attack of two separate divisions. However, their attempt failed because of the timely reinforcement. However, *Kobayakawa* was not prepared to admit defeat and withdrew to *Kumsan*.

In fact, he was about to launch the second offensive to *Ichi* but, he received news that unknown *Joseon* forces were spotted in *Yonsan*, which is not far away from their main offensive base in *Kumsan*. They were obviously heading to *Kumsan*. In fear of encirclement by *Kwon Yul* and unknown troops they decided to withdraw from their current position to *Kumsan*. *Ango*'s troops were in the same dilemma since they could be surrounded by the defensive force in *Chonju* and *Ichi*. So, they also withdrew initially to *Muju* and then to *Kumsan*.<sup>323</sup>

The reason that the Japanese offensive to *Chonju* was unsuccessful was not just that the regular army had checked the Japanese in *Ichi* and *Ungchi*. There was a coordinated local militia effort also in place. In fact, the local militia activities were the crucial reason for the Japanese withdrawal since *Cholla* and *Chungchong* province militia attacked the enemy's main base in *Kumsan* consecutively twice. The reported unknown troops which made the Japanese main attack force to withdraw to *Kumsan* were *Go Gyeongmyeong*'s local militia from *Damyang*.<sup>324</sup>

Under the cause of saving the king, they tried to advance to *Seoul* and reached *Eunjin* in *Chungchong* province. However, a rumour that the *Kobayakawa* force would attack *Kumsan* and *Chonju* was spread. A severe discussion followed as to whether they had to advance to

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<sup>322</sup> I.H. Seo, op.cit., p.87

<sup>323</sup> Ibid., p.88

<sup>324</sup> W.R. Cho, op.cit., p.133-134

the north or help the local force in *Cholla* province save the province. Their decision was to save the province so they made a plan to help *Kumsan*. However, before they reached *Kumsan*, it was occupied by the Japanese. Consequently, they decided to station themselves in *Jinsan* next to *Kumsan* to regroup and organize the coordinated attack on *Kumsan*.

*Go Gyeongmyeong* already agreed to join the attack on *Kumsan* with *Kwak Young's* army and contacted the *Chungchong* province local militia *Jo Heon* for that purpose as well.<sup>325</sup> His force started to advance to *Kumsan* on the 8<sup>th</sup> of June and obviously their movement was not unnoticed by *Kobayakawa*. Upon arrival on the outskirts of *Kumsan* castle, his force was united with *Bangeosa Kwak Young's* army. They started to attack the *Kumsan* castle, but failed to occupy the castle and withdrew on the 10<sup>th</sup> of July, because of poor coordination with the regular army and untimely reinforcement of *Kobayakawa*.<sup>326</sup>

Afterwards, *Jo Heon's* *Chungchong* province militia that promised the joint attack also approached the outskirts of *Kumsan* castle on the 17<sup>th</sup> of August and waited for the *Cholla* province regular army reinforcement to arrive. However, the Japanese forces came out of the castle and fought in the open space. The entire *Joseon* militia was killed in action, and the Japanese also suffered severe casualties.<sup>327</sup> Both militias could not manage to capture *Kumsan* but strategically the battle of *Kumsan* has a significant meaning. Because of the fear of encirclement, the Japanese main operation forces had to withdraw and defend *Kumsan*. In addition, owing to casualties suffered in both attacks, the Japanese supporting attack force in *Muju* withdrew to *Kumsan* on the 7<sup>th</sup> of September and all the Japanese forces engaged in this operation eventually withdrew from *Kumsan* to *Okchon* on the 16<sup>th</sup> of September.<sup>328</sup>

## The First Battle of *Chinju* Castle (the First Siege of *Chinju*)<sup>329</sup>

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<sup>325</sup> Ibid., p.138-140

<sup>326</sup> Ibid., p.139-141

<sup>327</sup> Ibid., p.149-152

<sup>328</sup> Ibid., p.153-155

<sup>329</sup> Located in the western bank of *Nam* River and surrounded by steep mountains, the *Chinju* castle was the fortress blessed with natural barriers for defence. Strategically, once the Japanese managed to occupy it, they would have an access to *Pallyangchi* which is the crucial border pass to reach *Namwon* and *Seomjin* River which makes a provincial border between *Gyeongsang* and *Cholla*

Following the failure of the Second occupation campaign, the Japanese planned another coordinated naval and ground attack on the Southern coast of *Cholla* province. However, their navy was humiliated by the *Joseon* navy at the end of July in *Hansando* and they were ordered to station their base in *Pusan*. Therefore, the army had to take the whole responsibility and advanced westwards to *Chinju* in early August from their army base in *Kimhae*. Their initial advance was frustrated and they returned to the original base.<sup>330</sup>

After the initial joint operation collapsed, the Japanese expedition forces headquartered in *Seoul* set up the strategic objective to reacquire the southern coast naval base following the consecutive defeat of their navy, and to gain entrance to *Cholla* province by occupying *Chinju*. They would also be able to attack *Kwak Chae-U's* guerrilla forces hiding in the area. Under this strategic direction, from the middle of August, some elements of the Japanese Army in *Seoul* headquarters started to relocate to *Kimhae*.<sup>331</sup> On the 24<sup>th</sup> of September, they launched the offensive campaign again to *Chinju* castle. They had more than 20,000 soldiers led by General *Hosokawa Tadadoki*. On their way to *Chinju*, they recaptured *Changwon*, and *Haman*. From the 6<sup>th</sup> of October, they started to cross the *Nam* River and surrounded the *Chinju* castle. On the *Joseon* side, *Kim Simin* also prepared for battle in the *Chinju* castle with his 3,800 soldiers. He had already asked for reinforcements in *Cholla* province and local militia, which arrived in time, was dispersed around the mountainous terrain encircling *Chinju* castle.<sup>332</sup>

Even though they arrived on the 6<sup>th</sup> of October, the Japanese hesitated to attack the castle until the early morning of the 8<sup>th</sup> of October because surrounding mountains and other natural barriers were taken by the *Joseon* local militia and army, and consequently could threaten their rear supply line or even the main battle camp once they advanced to attack the castle. However, they already had an order from headquarters to occupy the castle as soon as possible and therefore attacked it on the 8<sup>th</sup> of October. Following the failure to occupy the

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province, and was not far away from the *Joseon* Left Navy main naval base. In addition, the Japanese could control the southern coast of *Gyeongsang* province and build the naval base against the *Joseon* Navy in *Cholla* province once the *Chinju* castle collapsed.

<sup>330</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.183

<sup>331</sup> I.H. Seo, op. cit., p.108

<sup>332</sup> Ibid., p.109

castle on that day, there was a discussion in the Japanese camp as to why they failed to occupy it. They thought it was because they could not give 100% of their efforts to occupy the castle since the *Joseon* militia and army, which took the geographically advantageous position around *Chinju* castle, threatened their main camp and supply line.

From the 9<sup>th</sup> of October, they separated their forces into several small groups to find and destroy the *Joseon* militia and army around them. However, this effort worsened the situation. The *Joseon* militia and army already took the advantageous position and knew the local topography. Therefore, the Japanese effort to eliminate the surrounding fear was foiled with much cost. After the failure of this attempt, the Japanese saw other attempts to capture the castle also failed because of the significant natural barriers around the *Chinju* castle and stellar leadership shown by *Kim Simin*. In the end, they decided to withdraw from the *Chinju* castle on the 10<sup>th</sup> of October. .<sup>333</sup>

## Outcome along with Long Term Effects of the Campaign, and Why this was the Signal of the *Joseon*'s Gradual Strategic Transformation

Because of the failure of this campaign, the Japanese attempt to occupy *Cholla* province proved in vain during the first invasion. *Cholla* province contained the largest prairie in *Joseon* which could support the *Joseon* and the *Ming* force's joint offensive to the Japanese, therefore their success in this campaign also became a turning point of the war. Strategically speaking, this campaign also held significant meaning since *Joseon* started to apply efforts to weaken the Japanese tactical strengths (accurate firepower of Harquebus, battle experience, and preponderance) by adopting defensive strategies using their geographic advantages.

In the battle of *Ulryeong*, the *Joseon* local militia took a chance on the enemy's weakness of local topography knowledge and won the battle. During the second offensive, *Bangeosa Kwak Young* initially allocated the defence sector to defend *Cholla* province whose objective was to use their defensive edge by stationing the troops in a steep mountainous border pass. Following the collapse of the *Buhangryeong* defensive line and *Kumsan* before they solidified their defensive line, they also relocated their troops from their original positions to

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<sup>333</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.183-184

*Ichi* and *Ungchi* which was the last significant natural barrier for the defence of *Chonju* and managed to repel them in *Ichi*. Meanwhile, at the battle of *Chinju* castle, *Joseon* also defended the castle using natural barriers such as the *Nam* River and mountainous terrain around the castle. This campaign showed that unlike the initial phase of war when the *Joseon* Army recklessly waged an open field set piece battle in *Chungju* or a cavalry offensive in the battle of *Imjin* river, *Joseon* began to recognize the weakness and strength of herself and Japan, thus gradually transforming their strategy to the traditional defensive warfare using the advantages of topography.

The traditional defensive warfare strategy was not constrained to defence tactics employing natural barriers. The coordination of forces in the enemy offensive sector is also crucial using either mobile manoeuvre to wage guerrilla warfare against the enemy main offensive base or cutting off enemy supply lines based on their knowledge of local topography. In this campaign, during the second offensive *Cholla* and *Chungchong* province local militias actually attacked the enemy main offensive base in *Kumsan* by the mobile manoeuvre which crossed the *Kum* River and mountains. They were defeated, but the threat of encirclement and the casualties they suffered eventually led to the Japanese decision to withdraw from *Kumsan*. Meanwhile, during the battle of *Chinju* castle, the local militia and army which stationed itself amongst steep mountains around the castle also threatened the enemy supply or even the Japanese main base, proving to be a tremendous distraction.

The consecutive victories during the campaign gave *Joseon* a lesson about which appropriate strategic approach using the geographic edge would help give the defensive edge against the well-trained and outnumbered Japanese. It also brought great confidence back to the *Joseon* army and militia. The lesson learned in this campaign helped to regain the control of Japanese western and eastern invasion route towns, which meant the Japanese could only communicate with and supply the troops in *Seoul* and the northern part of *Joseon* through the central route, which caused a significant logistics problem.<sup>334</sup> In addition, the combat experiences and

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<sup>334</sup>To review the *Joseon*'s guerrilla warfare using topography in the western and eastern invasion route towns,

See) H.S. Lee, *ImJinJeonRanSaSang*, p.422-445

I.H. Seo, op.cit., p.99-105, p.111-117

J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.184-188

lessons learned in this campaign also helped contribute to *Joseon's* developing a new defensive strategy – in actuality, return to traditional Korean defensive strategy during the interwar period.

## 4-4 The Second Invasion and the Transformed *Joseon* Strategies and Tactics

During the initial phases of the war, the Japanese easily defeated the ill-prepared *Joseon* forces and advanced on to the North. *Konishi* pressed on towards *Pyongyang*, while his rival *Kato* set off on a long campaign to pacify the North East of *Joseon* and captured two *Joseon* princes in *Kyongsong*.<sup>335</sup> They could not advance further because of the logistics problem and the threat of possible Chinese engagement. However, the logistics problem worsened because of the long supply line and local militia's guerrilla warfare which threatened the supply. Their supply to the forces in the North of *Joseon* suffered further setbacks since their naval supply route was also blocked by the *Joseon* Navy.

In addition to this supply problem, *Joseon's* winter was not very generous to the Japanese who had never before experienced such cold weather. *Konishi's* forces in *Pyongyang* were not even equipped with winter clothes because of supply problems; consequently their morale was quite low.<sup>336</sup> Therefore, when there was the second battle of *Pyongyang* (8<sup>th</sup> of January, 1593), they were defeated by the *Ming and Joseon* joint force, and withdrew to *Seoul*. Even though the Japanese managed to beat the Chinese who tried to recapture *Seoul*, at the battle of *Pyokje* (27<sup>th</sup> of January, 1593) they desperately needed a time to regroup and think about how to fight back.<sup>337</sup> The Japanese asked for peace talks with the Chinese in order to gain more precious time. As a consequence of the initial peace talk, they evacuated *Seoul* on the 18<sup>th</sup> of

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<sup>335</sup> Turnbull, op.cit., p.27

<sup>336</sup> H.K. Jang, *JoSeonSiDaeGoonSaJeonRyak*, p.169-175

<sup>337</sup> At this point, the best estimate of the army's strength was 53,000 men. Death and wounds from numerous battles, sieges, frostbite, guerrilla raids and typhoid fever had taken a huge toll, and the chronicler noted how the common soldiers suffered from frostbite and snow-blindness. Excerpted from- Turnbull, op.cit., p.63

April and withdrew to the southern coastal towns in the *Gyeongsang* Province. The Japanese used the time to regroup themselves and decided to invade again in February, 1597.<sup>338</sup>

## The Japanese Strategic Objective and Invasion Plan

Following the decision to reinvade, the Japanese formed a reinvasion force totalling 142,000 men including a newly mobilised army of 115,000 and a navy numbering 7,000 as well as the remaining forces in *Joseon* equalling around 20,000. *Toyotomi* gave six operation guidelines to his forces. The first and second guidelines were related to *Cholla* province<sup>339</sup> since he did not want to repeat the mistakes of the first invasion result where because of their haste to advance to *Seoul*, the remaining *Cholla* province local militia and navy attacked their rear supply route and eventually forced them to retreat. *Cholla* province also possessed a vast paddy field which could supply the whole Japanese expedition force as this province already proved its capability in the first invasion. In addition, *Joseon* and *Ming* already bolstered their defence in the Japanese first invasion route towns located mostly in *Gyeongsang* province.<sup>340</sup>

Before the second invasion, following ardent discussion, the Japanese military authorities decided upon their combat guidelines.

“The reason that *Joseon* did not collapse even after we occupied most of the territory was because the remaining parts of *Cholla* and *Chungchong* provinces supported the whole *Joseon* through the naval route. Therefore the operation guideline should be fulfilled through the joint operation in ground and sea, not only through ground occupation but also by securing the sea line supply to *Seoul*”.<sup>341</sup>

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<sup>338</sup> Ibid., p.63

<sup>339</sup> In his guideline

- (1) They will occupy *Cholla* province thoroughly and then advance to *Choungchong* province and the other *Joseon* territory.
- (2) Once the occupation of *Cholla* province was finalised, they appointed a castle defence commander in charge in the whole *Cholla* province as planned.

<sup>340</sup> H.K. Jang, *JoSeonSiDaeGoonSaJeonRyak*, p.176

<sup>341</sup> K.N. Cho, *NanJungJabRok3*, Jungyu, 20<sup>th</sup> of August

In other words, the Japanese thought that the occupation of *Cholla* province along with securing the naval supply line to *Seoul* through the South Sea of *Cholla* province were prerequisites to advance to *Seoul*.

Prior to the army's advance, the Japanese navy tried to break down the *Joseon* navy to secure the command of *Joseon* South Sea which would secure the naval supply line for the advancing army. In *Joseon*'s position, losing naval command in the South Sea would be disastrous since it cut off their naval supply line to *Seoul*. Therefore, Japan set up a plan to get rid of *Joseon*'s naval commander in chief, *Yi Sunsin*, who had made them suffer the consecutive humiliating naval defeats of *Okpo*, *Sachon*, *Tangpo*, and *Hansando*, using false information. *Yi* was sacked on the 26<sup>th</sup> of February.<sup>342</sup>

*Gyeongsang* Right Navy commander *Won Gyun* took over command. However, he also suffered from the same dilemma as *Yi*. After the central government was informed that more than 600 ships were at anchor in *Pusan* around early July, they ordered him to attack the enemy main base in *Pusan*. He was initially reluctant realizing he may face the same trouble as *Yi*. He had no option but to lead his navy to *Pusan* on the 14<sup>th</sup> of July. He could not break down the Japanese navy in *Pusan* because the Japanese could wage a navy and army joint operation since it was the Japanese main military base in *Joseon*. He then tried to withdraw to the main base in *Hansando*, but the *Joseon* navy almost suffered complete annihilation in *Chilchollyang* on the 15<sup>th</sup> of July by the Japanese joint naval and ground operations.<sup>343</sup> Following the defeat of *Chilchollyang*, *Joseon* lost their naval command and the Japanese became ready and, able to apply the army and navy joint operation to reach *Seoul*.

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<sup>342</sup> The misleading information given to the *Joseon* central government by the *Konishi* spy was that *Kato* would arrive in *Pusan* on the 21<sup>st</sup> of January from Japan so, if the *Joseon* navy ambushed him on his way back to *Joseon*, *Joseon* could capture him in the open sea. The *Joseon* government believed the information because *Kato* and *Konishi* had experienced antagonism during the first invasion and ordered *Yi* to capture *Kato*. However, *Yi* said he could not trust the information given by the enemy and refused the central government order. He was then dismissed with the accusation of missing a chance to capture *Kato*. Excerpted from- J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.245

<sup>343</sup> *Ibid.*, p.246

The army invasion plan was to move inland in two main thrusts meeting in *Chonju*, one veering toward the right, the other to the left. Two great armies were organized for the purpose; 65,300 men in the Right Army under the overall command of *Mori Hidemoto*<sup>344</sup> and 49,600 men in the Left Army under *Ukida Hideie*<sup>345</sup> - a combined army invasion force of 114,900 men.<sup>346</sup> In addition to army advances, the navy (7,200 men) also had a plan to land in *Hadong* and advance through the *Seomjin* River to *Gurye* where they planned to meet the Left Army.<sup>347</sup>

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<sup>344</sup>The planned invasion route initially crossed the *Nakdong* River, and then advanced to *Kochang*, *Chinan*, and finally reached *Chonju*.

<sup>345</sup> The planned invasion route was advancing through the southern coast line of *Gyeongsang* province (*Goseong*, *Sachon*, *Hadong* on its way) and turning north westwards to occupy *Namwon* and reaching *Chonju*.

<sup>346</sup> S. Hawley, *The Imjin War –Japan’s Sixteenth Century invasion of Korea and Attempt to Conquer China*, Royal Asiatic Society-Korea Branch, 2005, p.466

<sup>347</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.233



Map 4-4 The Second invasion in 1597 and the Liberation of Korea, 1598<sup>348</sup>

<sup>348</sup> S. Turnbull, *op.cit.*, p.76

# *Joseon's* Preparation during the Interwar Period and Reaction to the Invasion

## Tactical Preparation

Before the *Imjin Wars*, the Chinese were already equipped with tactics and specialized forces to deal with the cavalry-centred northern nomad enemy like the *Jurchens*, *Mongols*, and the infantry-centred Japanese pirates (倭寇),<sup>349</sup> unlike *Joseon* who only managed to possess the antidote against the cavalry-centred northern nomads. During the *Imjin* wars, the tactical approach of troops (南兵) that specialized in combat against the Japanese pirates became a major success in this war. Their tactics were based on *Qi Jiguang's* military drill book called *Jixiaoxinshu* (紀效新書 - New Book of Effective Discipline (1561)), and called *Zhejiang* tactics. (浙江兵法) The core of these tactics was the close cooperation of the infantry's long-range firepower and hand-to-hand combat. Without using the cavalry, they were equipped with a shield in one hand and various types of hand-to-hand weapons in the other, usually quite long to cope with the Japanese long sword. The *Ming* force in the battle of *Pyongyang* successfully applied these tactics and *Joseon* were hugely impressed. In *Pyongyang*, the *Ming* force took the initiative against the Japanese, thoroughly devastating the Japanese defensive line with their accurate long-range cannons which were above the Japanese *harquebus's* shooting-range. They finally defeated the unsettled Japanese with a massive infantry charge.<sup>350</sup>

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<sup>349</sup> *Wokou* means small-build bandit. Traditionally Japanese called as 倭(*Wo*) by both Korea and China since they were relatively smaller than the Korean and Chinese. 寇(*Kou*) means a bandit or thief in Chinese. Therefore literally, it means a Japanese bandit. Because of the debilitation of central government influence, political instability, and the devastation of land during the Warring State period, a group of petty farmers and fishermen in the coastal areas of Japan who were usually around 20-400 ships and commanded by small or medium sized feudal lords, started to raid the Korean and Chinese coastal towns for their survival. So it is wrong to say that they were a regular army with any military objective. They were only pirates, surviving in the horrible civil war time through the pillage.

<sup>350</sup> H.E. Jung, *HanKukJeonTongByeongSeoEuiHae*, p.23-24

Unlike the *Joseon* tactics, which stressed long-range weaponry and formation, the Chinese were more efficient with close coordination of long-range firepower and hand-to-hand fighting. *Joseon* were most impressed with the Chinese cannons and their application. In addition to cannons, since *Joseon* suffered from the accurate firepower of Harquebuses and the Japanese close order infantry tactics, they were also interested in the Harquebus and various infantry hand-to-hand fight weapons and techniques (the Harquebus was also applied in the *Ming* forces). Therefore, from July, 1593, *Joseon* started to train their troops according to *Zhejiang* tactics and officially established *Hunryeondogam* in August, 1594 to train the troop with this tactics. In *Hunryeondogam*, they started to train *Samsubyeong* (three different types of infantry) including *Posu* (Artillery and Rifle (Harquebus) man), *Sasu* (Archer), and *Salsu* (a Spear and Sword man) according to *Zhejiang* tactics. *Joseon* especially stressed great importance upon producing *Posu* because they greatly affected the Chinese artillery and Japanese Harquebus.<sup>351</sup>

In terms of weaponry, the harquebus had been approved for adoption by the army and was now in limited use among many units, although still far below the numbers employed by the Japanese. New cannons, which had proved their worth in the first invasion, were cast to replace those destroyed in battle and captured by the Japanese. *Hwacha* (fire wagons), which shot up to one hundred gunpowder-propelled arrows in a single volley, were turned out as well. Efforts were also made to refine new weapons, such as the rock-throwing *sucha sokpo* (water wheel rock cannon).<sup>352</sup> In addition, they also produced massive numbers of various weapons in *Cholla*, *Chungchong* and *Hwanghae* provinces. Therefore, at least in terms of firepower, they had reached the Japanese level of sophistication, unlike in the initial phase of war.<sup>353</sup> The introduction of the Harquebus and the massive production of cannon, *hwacha*, and *sucha sokpo*, brought not only a similar technological level to the Japanese Army, but also the significant efficiency enhancement of castle on the hill defence because of the increased firepower against the Japanese who had to climb the slope to reach and attack the castle.

## Strategic preparations

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<sup>351</sup> I.H. Seo, op.cit., p.213-214

<sup>352</sup> S. Hawley, op.cit., p.446-447

<sup>353</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.233

## Strengthening the Quality and Quantity of Local Troops

Prior to the *Imjin Wars*, *Joseon*'s local force was on the verge of breaking down because of the *Gunjeoksupo*. Since the *Joseon* government recognized it was one of the main reasons for its initial military fiasco, they tried to fill their local forces' lack of quality and quantity, and organized a new local force system called *Sokogun* based on the suggestion of *Qi Jiguang*'s *Jixiaoxinshu*. Unlike the previous system (only peasant classes were mobilised and the subdivision of towns were excluded in organizing local force), it included all classes and local administrative units.<sup>354</sup> Therefore, *Joseon* were able to increase the number of their local forces through applying the military duty to every class, as well as training and mobilising the local forces properly thorough expanding their military organization to the very last administrative unit.

## Review of the National Defence System

In addition to renovating organization of local troops, *Joseon* also returned to the *Jinguan* national defence system. *Yoo Seongryong* (*Joseon*'s prime minister during the interwar period) indicated the necessity of returning to the *Jinguan* system with the comment below:

“If we keep a hold of the *Jinguan* system with a qualified person who can properly train the local soldier in peacetime and defend the garrison with the trained soldier and prepare weapons in case of conflict, our national defence would be fine. So if we return to the *Jinguan* system how can we have another disaster resulting in a meltdown of our defence line and losing our capital in ten days' time?”<sup>355</sup> In other words, the *Joseon* government recognized it was impossible for *Joseon* to refurbish the national defence and eventually win the *Imjin Wars* without taking the merit of the *Jinguan* system.<sup>356</sup>

There was a major development of the national defence system (modified and strengthened *Jinguan* system) during the Interwar period. It could be categorized into three significant developments. First, as in the original *Jinguan* system, the commander in charge would stay

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<sup>354</sup> I.H. Seo, op.cit., p.213-214

<sup>355</sup> W.S. Lee, op.cit., p.86

<sup>356</sup> Local forces would be ready to mobilise in good conditions. It would be easy for *Joseon* to cope with enemy surprise attack. Local force could take advantage of their merit in local topography.

in the defence sector. Secondly, the role of commander had been significantly strengthened. Under the *Jeseunbangryak* system, the commander only commanded assembled local troops; however, under the new system, they were ordered to understand local topography in and out, draft operation plans, train local soldiers, keep discipline and a chain of command with enhanced authority, and defend their own defence sector in case of conflict. Compared to the old *Jinguan* system, the commander would have a strengthened authority which could not be overruled by the local magistrate.<sup>357</sup> Finally, the chain of command was much more clarified and densified. Under the *Jeseunbangryak* system, the military commander took charge of the whole military action. Under the new system, the military organization spread into the smallest local administration unit which meant the command was delegated to the appropriate level and the size of reserve forces was increased dramatically. As in the old *Jinguan* system, there was a *Jujin* (Provincial capital), *Geojin* (*Jinguan*) and *Jejin* (Town) and, the military organization was expanded to the smallest local administration unit.<sup>358</sup>

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<sup>357</sup> A strict chain of command was set up to bolster the weakness of the *Jinguan* system. In the *Jinguan* system, usually there were many local magistrates in a *Jinguan* so it was very difficult to coordinate each other and sometimes even difficult to set up a chain of command. Even though there was a *Cheomjeoljesa* as a military commander in a *Jinguan*, his authority was often infringed by the local magistrate since *Joseon* was a civilian society and military officers were held in contempt. Therefore, the military commander's authority was strengthened to avoid chain of command problems.

<sup>358</sup> W.S. Lee, op.cit., p.86-89

	Original <i>Jinguan</i> system	<i>Jeseunbangak</i> system	Modified and strengthened <i>Jinguan</i> system
<i>Location of commander in charge</i>	Defence sector	Dispatched from Central government	Defence sector
<i>Role of Commander</i>	1) Know a local topography inside out 2) Draft an operation plan 3) Train a local soldier 4) Defend own defence sector in case of conflict.	Command assembled local troops without an information on local topography and operation plan	1) Know local topography inside out 2) Draft an operation plan 3) Train a local soldier 4) Defend own defence sector in case of conflict. 5) Keep discipline and chain of command with a strengthened authority
<i>Chain of Command</i>	<i>Jujin- Byongsa</i> , Provincial capital, Division size	Central government military commander take charge of whole military action	The same as original <i>Jinguan</i> system
	<i>Geojin- Cheomjeoljesa</i> , <i>Jinguan</i> (one big centre <i>Geojin</i> and Several <i>Jejins</i> ), Regiment size		
	<i>Jejin</i> -Local magistrate, Town ( <i>Si, Gun</i> ), Battalion size		
	<i>Myeon, Dong</i> - (Subdivision of Town) : Military unit was not existent		<i>Choguan</i> - a company size unit commander (Reserve Force)
	<i>Tong, Ri</i> - (Subdivision of <i>Myeon</i> and <i>Dong</i> ): Military unit was not existent		<i>Gichong</i> - A platoon size unit leader (Reserve Force)  <i>Daechong</i> - A squad size unit leader (Reserve Force)

Index 4-4 The *Joseon* national defence system<sup>359</sup>

<sup>359</sup> Recreated from W.S. Lee, op.cit., p.86, 87, and 89 indexes

## Return to Traditional Korean Defensive Warfare<sup>360</sup>

### *Jinguan* System Reform

*Jinguan*s were set up to consider the entire defence of *Joseon*. *Jinguan*s in Southern provinces were created for defence against the southern foe (the Japanese), maximizing advantage of local topography. *Jinguan*s in Northern provinces were organized for the effective defence against the Northern enemy (*Jurchens*) at the time.

After the first invasion, the *Joseon* government did a detailed research on local topography, their defence capability, the enemy capability and possible invasion routes. After a systematic review had been finalized, the *Joseon* government decided to bolster and reform the *Jinguan* defence system, maximizing their geographic advantage. They further strengthened the *Jinguan* system with the connection of natural barriers such as local castles and mountainous topography (usually border passes) as well as various streams and rivers. For example, *Guangju Jingaun*, the final defensive sector to check the Japanese advance to *Seoul*, was further bolstered with the headquarter in *Namhan* castle (*Guangju*), *Jukju* castle in the south (Front line), *Dok* castle and *Muhan* castle in the East, *Pasa* and *Yongjin* in the North (rear line). The Western front was the *Yellow Sea* and naval supremacy was in the hands of the *Joseon* navy. They were well connected, and were able to prevent enemy manoeuvre from the East and the West.<sup>361</sup> Under this system, like the traditional Korean defence strategy, once any defence line in *Jingaun* was in danger, the reserve troops in the headquarters or the troops in other defence lines were called upon and sent as reinforcements or to harass the enemy supply line.

The old *Jingauan* system was the provincial defence system. In most cases, steep mountains or deep and wider rivers became a natural border between provinces. These mountains and

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<sup>360</sup> The significant characteristics of traditional Korean defensive warfare strategy were

- 1) Using the utmost geographical advantage of steep Korean mountains and deep and wide rivers
- 2) Keep the coordination among troops in defence.
- 3) Cut off enemy supply line through Scorched Earth tactics and guerrilla warfare.

<sup>361</sup> *Ibid.*, p.85

rivers have been strategically important in the defence of the Korean peninsula. For example, the *Sobaek* Mountains, which are a natural border between *Chungcheong* and *Gyeongsang* provinces as well as *Cholla* and *Gyeongsang* provinces, became a huge natural barrier for enemy entry to *Seoul* and *Cholla* province. According to the old *Jinguan* system, once these border mountains and rivers were invaded, even though these places were strategically important, they would first have to decide which province would be in charge of defence. Once this problem was solved, they have to cope with the reinforcement problem. Since the old *Jinguan* system was the provincial defence system, the neighbouring province's *Jinguan* could not provide support. Therefore, timely and decisive reinforcements became very difficult. They realized that to maximize their defensive advantage in geography, they required the close coordination of strategically important and adjacent *Jinguan*s. Therefore, they abolished active rule called *Bupiljeoktajinjjobeob* which did not allow the neighbouring province *Jinguan*'s support to the *Jinguan* in trouble. The military operation plan was drafted accordingly. Therefore, close coordination of troops was further boosted beyond *Jinguan* level.

## High Ground Defence and Close Coordination of Troops

During the interwar period, the *Joseon* government analysed the topography of each province and built or repaired both the Castles on the Hill in strategically important places and the gateways<sup>362</sup> in the mountainous border pass. Strategically speaking, bolstering high ground defence strategy was not simply a matter of building or refurbishing castles. First, it could only be possible with significant financial support. In addition, as mentioned, the major mountainous topography was located in the border between provinces. To maximize the defensive worth of castles on the hill, the *Joseon* government had to review their defence system as well. They relinquished the *Bupiljeoktajinjjobeob* principle in the old *Jinguan* system for the fluent cooperation among troops which would enhance the defence potential of castles on the hill. Thus, the Castle on the Hill (high ground) defence strategy had reflected

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<sup>362</sup>Generally speaking, the border pass is a narrow road surrounded by steep mountains on their left and right. Therefore if a check point (usually a castle) is constructed, it could be an impregnable fortress since manoeuvres and encirclement would be almost impossible. That check point is called the gateway.

the painful experience during the first invasion and was a very systematic approach to their advantage in geography.

Tactically speaking, they recognized that the incentive of enemy harquebus would be reduced during the Castle on the Hill warfare. In an open field combat situation, the *Joseon* forces became an easy prey of the Japanese harquebus volley fire. In a combat situation of Castle on a Plain, the Japanese first, built the earthworks within their harquebus shooting-range while firing the harquebus to deny the approach of the *Joseon* force and if finished, hiding in the back of their earth works, they kept firing toward the castle. It was not easy for the *Joseon* forces to deal with the arrows and stones.<sup>363</sup>

*Yoo Seongryong* also indicated that traditionally Koreans were good at the Castle on the Hill defence warfare and the wrong selection of battlefield (either an open field or a Castle on a Plain) rather than Castle on the Hill was the main reason for *Joseon*'s consecutive military fiascos during the initial phase of war. *Bibyeonsa*<sup>364</sup> also sent in a written report concerning the advantage of Castle on the Hill defence in December, 1593. It indicated that the reason Korea still stood even though there had been many massive-scale invasions was mainly because of the Castle on the Hill defence advantage. But because of the long peace, *Joseon* had not built or repaired any of their Castles on Hills which had caused *Joseon* a disastrous succession of defeats in the initial period of war. This suggested that *Joseon* must build or repair their Castles on Hills and bring the local people with their belongings (most importantly grain and cookery) into the castle. The report also predicted that the Japanese would have a hard time trying to occupy the castle and that lack of supplies would lead them

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<sup>363</sup> *Joseon* had two styles of castle. One was called *Eupseong* which was Castle on the Plain and another was *Sanseong* which was Castle on the Hill. Excerpted from, Turnbull, op.cit., p.8-9

<sup>364</sup> Before the *Imjin* Wars, since *Joseon* reached the peak of civilian society, there was no government organization to discuss military matters. What they did was to decide who to send in a troubled place and there was no deep discussion on following measures such as logistics or coordination with the neighbouring towns. Therefore, once the commander in charge was sent to the place, there were lots of problem even before he met the enemy. In addition, since there was no government organization on military affairs, it was impossible for *Joseon* to react quickly once military trouble occurred. To solve these problems, *Joseon* organized a permanent government organization to discuss military matters that organization was called *Bibyeonsa*.

to retreat. Once they retreated, *Joseon* could deal the Japanese another blow by chasing out the withdrawing Japanese forces.<sup>365</sup>

After the plan of repairing or building these Castles on Hills was agreed upon, they discussed crucial Japanese check points and started repairing and building a new and better Castle on the Hill plan from there. Most of all, they thought the mountainous border passes between *Gyeongsang* and *Chungchenog* province, which were located in the Japanese initial invasion route, and *Chinju*, which was the vital place to reach *Cholla* province from the southern coast of *Gyeongsang* province, would serve as the most important check points.

*Ming* military commanders also mentioned the importance of those border passes. Among those three border passes the *Choryong* pass was deemed the most significant. *Sung Yingch'ang*, the vice minister of military affairs, indicated the importance of the *Choryong* pass by mentioning, "it is vital and urgent to install a gateway at the *Choryong* border pass which is the steepest mountainous border pass of all, to defend *Joseon* against the probable Japanese invasion in the future." *Seonjo* the King of *Joseon* also agreed with his view and installed a gateway in the *Choryong* pass that was finished in October, 1594.<sup>366</sup>

The installation of a gateway and the rebuilt castles in *Gyeongsang* province became a real stumbling block for the Japanese and one of the main reasons for them to alter their invasion route to *Cholla* province, since the repairing and building process was faster in *Gyeongsang* province and the gateway was not installed in other crucial border passes such as *Yuksipryeong* and *Pallyangchi* to reach *Cholla* province from *Gyeongsang* province.

In addition to the Castle on the Hill repair and building plan, the *Joseon* government also set up the cooperative defence system among several Castles on Hills in a *Jinguan* and between adjacent *Jinguan*s. They overcame the problem of the original *Jinguan* system which did not allow for the coordination of neighbouring provinces by allowing the close cooperation with the neighbouring province's *Jinguan*. For example, for the defence of *Cholla* province (*Chonju*), *Joseon* set up the close troop coordination plan among the *Namwon Jinguan* in the

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<sup>365</sup> Ibid., p.292-294

<sup>366</sup> W.S. Lee, op.cit., p.114-118

central eastern part of *Cholla* province, *Chonju Jingu* (Provincial capital of *Cholla* province) *Kongju Jingu*<sup>367</sup> (South Eastern part of *Chungchong* province).

## Enemy Supply Harassment

With the strengthened high grounds defence, *Joseon* planned to harass the enemy's supply while checking their advance. *Yoo Seongryong* drafted the Scorched Earth tactics upon the imminent reinvasion. Its core concept was for the local people to bring their cookery and grains to the nearby Castle on the Hill, in order to stop the local supply flow and defend against the Japanese with their geographic edge.<sup>368</sup>

In fact, the Scorched Earth tactics was one of the main traditional Korean defensive tactics using lengthy enemy supply lines and the defensive edge of the Korean mountainous topography. However, *Joseon* was lacking many Castles on Hills at this point, which is the single most important element of the Scorched Earth tactics. *Hong Bokyang* (*Gyeongsang* province governor at that time) reported to the government that “right now we only had a *Samga* castle nearby to store the grain we produced this year so to apply the Scorched Earth tactics, we had to repair or build the castle on the hill.” However, the intensive high-ground defence bolstering process that took place during the interwar period allowed them to apply the Scorched Earth tactics. According to the central government order, the local people were allocated to be near the Castle on the Hill and defended it against the imminent Japanese reinvasion.<sup>369</sup>

Along with the Scorched Earth tactics, *Joseon* also tried to boost the guerrilla warfare capability of local militias who harassed the enemy supply with their geographic knowledge and manoeuvre. They were exempt from military duty, organized into suitable units, and given proper military training. So the *Joseon* government appointed the *Chongseob* in every

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<sup>367</sup> Ibid., p.119

<sup>368</sup> If the castle is too far or their belongings were too many, they were asked to bury them in the mountains. Military commander in charge had a right to execute anyone who did not follow the evacuation order under the charge of cooperation with the enemy. Excerpted from—I.H. Seo, op.cit., p.218

<sup>369</sup> W.R. Cho, op.cit., p.296

province to take charge of the entire local militia, which helped to build the chain of command and train the local militia. They were trained in *Zhejiang* tactics to raise the level of their effectiveness.<sup>370</sup> Thus, the *Joseon* government tried everything they could to develop operational, strategic, and tactical solutions to the Japanese during the interwar period. Bolstering the guerrilla warfare capability and the adoption of Castle on the Hill defence strategy proves that during the interwar period, the geographic factor became the major consideration when it came to drafting the defence strategy and plan.

## The Second Invasion and Outcome

The strategic objective of the Japanese reinvasion was to occupy *Cholla* province using a western route and eventually capture *Seoul*. However, *Joseon*'s defence was concentrated in *Gyeongsang* province where the shortest route to *Seoul* from the Japanese main base *Pusan* was located. The only force that was located in the Japanese reinvasion route was the *Gyeongsang* Right Army Commander *Kim Eungseo*'s force in *Eulryong*. All the other forces and local militia were evacuated to a Castle on the Hill according to the Scorched Earth tactics.<sup>371</sup> In addition, *Ming* decided to send their expedition forces again to *Joseon* with around 60,000 soldiers in March, 1597. These forces were stationed in strategically important places in *Cholla*, *Gyeongsang*, and *Chungchong* provinces, so the Japanese expedition forces could avoid contact until they reached *Namwon*<sup>372</sup>

As a consequence, the Japanese could easily advance to *Cholla* province. But, they also understood that the remaining Castle on the Hill on their way to *Cholla* province could be a real threat to their rear line, therefore they tried to occupy it. *Kato Kiyomasa* of the Right Advance Troop tried to capture *Hwangak Sangseong* but had to abandon the plan, because of the steep mountainous terrain and defensive preparation of the castle. Both Right and Left Forces advanced and were able to evade contacting *Kim Eungseo*'s forces to save time and capability. The *Joseon* force in *Gyeongsang* province also did not come out of their defensive garrison for fear of a Japanese counter-attack. Therefore, the Right Forces reached *Yuksipryeong*, entering *Cholla* province without much resistance.

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<sup>370</sup> J.H. Lee, op.cit., p.176-182

<sup>371</sup> I.H. Seo, op.cit., p.222

<sup>372</sup> J.S. Yoo, *HanMinJokJeonJangTongSa3*, p.233

Even though the Japanese recognized that these Castles on Hills could disturb their rear line, they had to advance to save time and reduce casualties. Therefore, many of these castles were left behind them. Upon arriving at *Yuksipryeong*, they started to suffer supply problems. The Japanese chose the harvest time to acquire the local supply but *Joseon* adopted the Scorched Earth tactics which did not leave anything behind for the enemy. Therefore, the Japanese became desperate for provisions and attacked the *Hwangseok Sanseong*.<sup>373</sup> In fact, to avoid more casualties and losing time in this mountainous and well-prepared castle, they suggested that if the *Joseon* force in the castle gave them the supplies they needed, they would not attack the castle. The *Joseon* defence force refused, and the Japanese were left with no other option but to attack the castle. Unlike the Japanese prediction, this castle easily collapsed because of chaos within the castle and the opening of the gate following a Japanese night attack on the 16<sup>th</sup> of August.<sup>374</sup> Afterwards, the Right Forces collected enough supplies from the castle to reach *Cholla* province on the 17<sup>th</sup> of August.<sup>375</sup>

From the battle of *Hwangseok Sanseong*, it can be inferred that the Japanese felt a serious burden by *Joseon*'s Castle on the Hill defence strategy and Scorched Earth tactics, although the efficiency of this strategy and tactic was severely dependent on the commander's quality. At this battle, the castle was easily collapsed because the quality of command and soldiers was lacking. This instruction is also reflected in the modern warfare in the Korean peninsula (Korean War – Battle of *Chunchon* in the initial stage of War) and North Korean defence doctrine (Four Military Guide Line) where both North and South realized the significance of command and training to maximize the efficiency of fortifications using the topography.

Unfortunately for *Joseon*, even though they could make a defence and operation plan using their geographic edge in a fairly short time, because of the long peace and civil society, the quality of command and troops was not as high as expected. Therefore, they failed to maximize their defence and operation plan using the defensive worth of Korean peninsula

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<sup>373</sup> Ibid., p.222

This castle was severely strengthened during the interwar period. The Japanese desperation showed that this castle was actually quite far away from the main road to *Yuksipryeong*.

<sup>374</sup> Since the former *Kimhae* local magistrate *Baek Sarim* tried to escape from the castle with his family following the night attack, the gate was opened.

<sup>375</sup> Ibid., p.222-224

topography. However, the introduction of Castle on the Hill defence and Scorched Earth tactics made the Japanese hesitate to attack the Castle on the Hill and cause the supply and safety problem in their rear. In addition, even though they succeeded in *Hwangseok Sanseong*, the Japanese force was not able to conquer any more Castles on Hills with the military power during the second invasion. Therefore, even though *Joseon* failed to maximize the effect of the reintroduction of Castle on the Hill defence with the Scorched Earth tactics, it contributed to the military success of the *Joseon* and *Ming* Joint forces during the Japanese second invasion. During the Japanese second invasion, in addition to the Right Advance Force, there was the Left Advance Force. They started to advance through the coast of *Gyeongsang* province and turned north upon their arrival at the *Seomjin* River to reach *Namwon*. Since the *Joseon* navy crashed in *Chilchollyang*, they had not experienced severe resistance from the *Joseon* force. Upon the arrival of the navy, they were prepared to attack *Namwon*.

After *Ming* decided to send their troops again to *Joseon*, *Xing Jie* was appointed as the general oversight of Military Affairs in the Eastern regions under, which *Joseon* was included. He insisted that “to defend *Seoul*, we need to defend *Choryong* and *Chungju* from our Eastern front, and *Namwon* and *Chonju* in our Western front”. He further commented that “Once we lose *Namwon*, we would lose our Western and Eastern front, and had to withdraw to the *Han* River”<sup>376</sup> They considered *Namwon* as the most important strategic place and sent *Yang Yuan* who served as the Left Division Commander under *Li Rusong* in 1593. At that point, the main garrison was on the verge of moving to *Kyoryong Sanseong*, where the Japanese would have to attack uphill through wooded terrain as initially planned by the *Joseon* government, but *Yang Yuan* overruled them and decided to make a stand in the *Namwon Eupsong*.<sup>377</sup> He chose the Castle on the Plain, to help take advantage of their cannon firepower instead of *Sanseong*’s geographic edge. He then began an extensive programme to strengthen *Namwon*’s wall and install the cannon firing facilities which enabled them to fire three cannons from various positions. In addition to the castle refurbishment, he asked for reinforcements to the *Joseon* and *Ming* forces around *Namwon* and another 3,000 *Joseon* reinforcements arrived at the castle.

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<sup>376</sup> K.N. Cho, *NanJungJabRok3*, Jungyu, 15<sup>th</sup> of August

<sup>377</sup> S. Turnbull, op.cit., p.77

The Japanese launched their offensive to *Namwon* on the 13<sup>th</sup> of August. However, the *Ming* Commander *Yang Yuan*'s tactical approach was totally wrong. First, although the *Ming* had long-range cannons, Japan possessed harquebuses, which are also great firing assets in the plain. Secondly, the Japanese adopted small group tactics which meant the *Ming* cannon could not deliver decisive blows on the Japanese. The main body of the force, in any case, stayed back and well out of range.<sup>378</sup> Thirdly, they also had poor cooperation amongst their troops. *Ma Gui* who was the actual commander in chief of the *Ming* expedition force, gave this order to his forces, "Once *Namwon* is in danger, the commander assigned to the town had to report to *Chonju* and the force in *Chonju* should cooperate with the force in *Namwon*".<sup>379</sup> The General assigned to *Chonju* (*Chen Yuzhong*) did not reply to the reinforcement request from *Namwon*. The way that General *Yang* and the *Ming* expedition force in *Cholla* province fought against the Japanese was not identical to the *Joseon*'s defensive warfare concept. This involved using the geographic edge of the Castle on the Hill and close cooperation with the neighbouring forces. In the end, the *Namwon* castle collapsed on the 17<sup>th</sup> of August and *Chen Yuzhong* also fled from *Chonju* following the collapse of *Namwon*. Thus, *Chonju* was easily captured by the Japanese.<sup>380</sup>

*Joseon* suffered heavy costs at most of the battles at the Castles on the Plains (the first landing point, *Pusan* castle, and next target *Dongrae* castle were Castles on the Plains) and in the open field (*Sangju* and *Chungju*) because of the well-organized Japanese close order infantry tactics using Harquebuses. Therefore, they decided to return to the traditional defensive strategy to reduce the effectiveness of enemy tactics. But, the *Ming* commander was fully committed to the Castle on the Plain battle, instead of the recommended Castle on the Hill combat plan, due in part to his excessive pride in firepower, and was defeated in the end. The instructions were the same as that of *Lee Il* in *Sangju* and *Shin Lib* in *Chungju*. Once the commander underestimated the enemy and did not fully understand all the benefits of the

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<sup>378</sup> *Ibid.*,p.78

<sup>379</sup> I.H. Seo, *op.cit.*, p.226-230

Actually he tried to make a successive chain of defence as *Joseon* already planned. He further tried to tie *Chonju* and *Kongju* together, and finally *Kongju* and *Seoul* to densify the defensive network.

<sup>380</sup> *Ibid.*,p.229

local topography,<sup>381</sup> the efficiency of traditional Korean defensive strategy using geographic edge would be seriously damaged.

Once the Japanese expedition force met in *Chonju*, they decided to advance in two ways. One division (formerly a Right Army) kept their advance to the North and another division (formerly a Left Army) turned their troops to the South of *Cholla* province for the pacifying operation of *Cholla* province. This cut off the *Cholla* province sea route to suffocate *Joseon* and stopped supply the Northern-bound expedition force. The Northern-bound force was roaming around *Chungchong* province capturing several towns without any resistance. They quickly started to suffer supply problems when *Joseon* evacuated the local people in *Chungchong* province to a steep Castle on the Hill according to the Scorched Earth tactics.<sup>382</sup>

They kept advancing forward to *Seoul* and eventually the Japanese expedition force along with the *Joseon* and *Ming* joint forces met in *Chiksan* (7<sup>th</sup> of September) and the Japanese were defeated. They withdrew to *Chongju* but they were scared of being strangled by the *Joseon* (who were stationed in a castle on the hill in their rear line and launched the offensive against the Japanese with a grudge which meant they had a high morale) and *Ming* Joint force. Also, their supply was endangered because of the Scorched Earth tactics. They eventually decided to withdraw to the original position in the southern coast of *Gyeongsang* province.<sup>383</sup> The Southern-bound force was also not able to pacify *Cholla* province and was in danger of cutting off supply. Since most of the local people were evacuated to a castle on the hill, they suffered severe resistance from the *Joseon* regular or irregular forces during the operation and their navy was also defeated in the battle of *Myungnyang*. Securing the coastal line to cut off the *Joseon* supply line and supply the northern-bound force also became useless since their army and navy were defeated in *Chiksan* and *Myungnyang*. Therefore, they held a meeting and decided to withdraw to the southern coast. After their second effort was rebuffed, there

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<sup>381</sup> *Lee Il* and *Shin Lib* were the central government commanders under the *Jeseunghangryak* defence system and the *Ming* commander was anyway a foreigner. Both of them did not fully understand the local topography. *Lee Il* and *Shin Lib* looked down upon the Japanese. They thought that the Japanese would be easily crumbled like the *Jurchens* or *Wokou* in the past. The *Ming* commander was overly confident because of the success in the second battle of *Pyongyang* where their firepower, especially cannons, gave them an absolute victory.

<sup>382</sup> *Ibid.*, p.231-233

<sup>383</sup> *Ibid.*, p.236

were successive battles to recapture the Japanese castle (three great sieges at *Ulsan*, *Sunchon*, and *Sachon*). The sudden death of the Japanese autocrat *Hideyoshi* and the other in his will to withdraw the expedition force caused the Japanese headquarter to make a decision to end the futile war. Finally they withdrew from *Joseon* and the *Imjin Wars* came to an end.

*Joseon's* cooperative castle on the hill defence strategy, with the Scorched Earth tactics, using mountainous topography was based on the experience of military debacle in the initial phase of war. The *Cholla* province defence campaign became a heavy burden to the Japanese. However, *Joseon's* strategy did not bring success everywhere. Like *Namwon*, the commander in charge scraped the plan and as in the case of *Hwangseok Sanseong*, the quality of commander and troops were not good enough to carry out the strategy. However, throughout the second invasion and the later stage of first invasion, the Japanese effort to capture the Castle on the Hill was either unsuccessful (the First siege of *Chinju* Castle, the Battle of *Haengju Sanseong*, and the battle of *Dok Sanseong*; July, 1593) or too costly (the second siege of *Chinju* Castle; 22<sup>nd</sup> of June, 1593 - 29<sup>th</sup> of June). Therefore, the *Joseon* navy's victory in *Myongnyang* inevitably led to the cutting off of supplies from the sea route. Also, Scorched Earth tactics and the Japanese hesitation to attack the Castle on the Hill during the second invasion made it hard to get local and inland supplies, bringing a logistics problem.<sup>384</sup>

In addition, the Japanese could not have had more preponderance, and better training and firepower (Harquebus) after the Chinese engagement. Following the defeat of *Chiksan*, they were still able to keep hold of *Cholla* and *Chungchong* province. Instead, they withdrew to their original position along the coastal towns of *Gyeongsang* province mainly because of the supply problem. It was a totally different approach from the *Joseon* side which did not adopt stalling tactics using natural barriers in the initial phase of war to earn crucial time.

From the analysis of the initial military debacle, the *Cholla* province defence campaign, and the Japanese reinvasion, it is not right to say that the geographic dimension alone changed the whole course of war. However, *Joseon's* gradual transformation of an approach to the

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<sup>384</sup> Local supply was only possible if they capture the Castle on the Hill. Because of the natural steep slope and the strengthened wall during the interwar period, the Castle on the Hill became almost impregnable. Therefore, many Castles on Hills on their rear line were left intact and became a real burden for the Japanese once they were held by the *Joseon* and *Ming* joint force in *Chiksan*.

defensive warfare using their geographic edge became a turning point of the war by worsening the Japanese supply and keeping the supply depot of *Cholla* province. This contributed to the eventual Japanese withdrawal.

## Conclusion

War is not a simple game decided by a single factor; rather it has many dimensions that interact closely together until there is an ultimate outcome. The *Imjin Wars* were likewise not decided by a single factor. *Joseon* was not able to compete with the Japanese, who had an expanded military organization because of the warring state period, in the number of troops available because of the *Gunjeoksupo*. However their preponderance gap became smaller due to the mobilised local militia. In addition, with the Chinese engagement preponderance was no longer a problem. The number of troops available also increased after the introduction of *Sokogun* during the interwar period.

In terms of training and morale factors, there was a huge gap between the two before the *Imjin Wars*. The Japanese had vast real combat experience, and enjoyed high morale and a good chain of command. However, *Joseon* had enjoyed long peace which in turn led to the lack of actual combat experience and training, and the military culture was held in contempt. This obviously contributed to the low morale in the initial period of war. During the *Imjin Wars*, the *Joseon* forces first experienced real combat. The *Joseon* government also raised professional soldiers from *Hunryeondogam*, whose training methods were based on *Ming's Zhejiang* tactics and improved the standard of the local forces through *Sokogun*. Their morale was also significantly boosted by the grudge against the Japanese.

In terms of unit tactics, *Joseon* only possessed the tactics they had used against the *Jurchens*, battle formation warfare with long-range weaponry. This was not suitable to Japanese close infantry tactics. It was also supplemented by *Ming's Zhejiang* tactics during the interwar period.

The geographic dimension was the most significant factor to decide the fate of this war. The strengthening of traditional defensive strategy using geographical edge contributed significantly to the outcome. Before the *Imjin Wars*, in terms of strategy, *Joseon* adopted the

*Jeseungbanryak* defence system whose key was the concentrated use of force, and army dominating defence strategy. Ultimately, their strategic approach turned out to be a great catastrophe. The main reason behind it was that the *Joseon* Army failed to use their mountainous topography or their deep and wide rivers for checking or delaying the Japanese advance to earn crucial time in the initial phase of war. Instead, their force was either dismantled because of the delayed dispatch of central government military commander, such as the *Taegu* case (which was also because the *Joseon* force failed to earn time in *Jakwonguan*) or they chose the plain as a battlefield such as *Sangju* and *Chungju*. Their defensive strategy using geographic edge gradually became a prominent component of their strategy, and made a great success against the Japanese invasion force during the *Cholla* province defence campaign. The successful defence of *Cholla* province eventually became a turning point of war since *Cholla* province became an immense supply depot for *Joseon*. The Japanese started to suffer the supply problem because of the *Joseon* navy and the local militia who were based in and operated in the *Cholla* province.

With the Japanese first invasion experience, and with time, during the interwar period the *Joseon* government completed the defensive strategy using its geographic edge. At the centre of this strategy was the aim to repair or build the Castle on the Hill and the installation of a gateway in the border pass. The Castle on the Hill asked for a heavy cost once the Japanese tried to occupy it because of the natural steep slopes and bolstered walls during the interwar period. It also reduced the firepower of the Japanese arquebus and became an evacuation camp according to the Scorched Earth tactics. The Castle on the Hill strengthened their effectiveness as a defensive bulwark through the close coordination with the neighbouring castle and became an important subsystem of the *Jingauan* defence system. The existence of the Castles on Hills gave the strategic dilemma to the Japanese that, if they attacked the castle, it would cost them much time and casualties; and if they did not, it would threaten their rear and supply line. In fact, the Japanese could advance quickly and without many casualties to *Chiksan* by avoiding the Castle on the Hill combat in their advance route. But, local supply became almost impossible by the cooperative Castle on the Hill defence with the Scorched Earth tactics and inland supply was also threatened by the Castle on the Hill combatants and the local militia's guerrilla warfare. Therefore, *Joseon's* Castle on the Hill defence contributed to the withdrawal of the Japanese force to their original position in the southern coastal towns.

In conclusion, *Joseon's* defence strategy, using their geographical edge, also worked effectively during the *Imjin Wars*. From the transformation of *Joseon's* defensive strategy to use their geographic edge and its eventual outcome on the fate of the war, it is quite right to say, first, that the Koreans have been good at defensive warfare using their topography and that they have learned a lot from the past. Secondly, the Korean peninsula is a great place to wage a defensive war using natural barriers such as the deep and wide rivers and steep mountains. Thirdly, the outcome of the whole course of war was quite often decided by how the defender (the Koreans) used their geographic edge. Finally, from the *Imjin Wars'* experience, the efficiency of the operation plan or a military strategy using geographic edge will depend upon the quality of the commander and the training of the troops. Like the early phase of war and the battle of *Hwangseok Sanseong*, the quality of troops and commander was decisive in the outcome of the war even though the defender possessed the geographic edge. However, as one can see from the battle of *Imjin River*, in the initial phase of war, a less competent commander and troops could still enjoy the geographic edge against a potent foe, while the competent one could use its fullest potential.

The *Imjin Wars* also provided invaluable information that is applicable to modern Korean warfare strategy. The steep mountains and deep and wide rivers of the Korean peninsula are suitable for defensive warfare: the Korean forces defeated the Chinese and Japanese invaders who were sometimes at a tremendous technological advantage: these facts made both of the Koreas recognize the importance of defensive warfare using topography and to prepare their defensive warfare strategy accordingly. It also brought to attention the significance of the commander and the troop's quality. As will be analysed below in the Korean War section, the geography itself was a significant component of the Korean War. Both Koreas also realized through the analysis of past wars and the Korean War that, with better command and training the worth of this strategy could be enhanced. Therefore, both Koreas have strongly invested in training and improving commanders' quality, both during the Korean War and also the post-Korean War era.

# Chapter 5 Technological and Geographic Dimensions of the Korean War

## Introduction

The Korean War was the international war of its era, including both Koreas, the People's Republic of China (PRC), the United States of America and sixteen other UN nations. Consequently, an extensive amount of research has been documented. However, this chapter will concentrate on the issue of efficiency of military technology in the Korean peninsula.

This chapter will focus initially on analysing the Korean War battles order of events, but at the end of each significant campaign analysis, it will classify and analyse each according to the defender and aggressor's technological and geographic advantages in the war. This process of analysis aims to examine the core objective of this research, which is that military technology superiority alone would not guarantee an ultimate military success against the North Korean forces, because they were able to use the geographic edge on their own terms. Ultimately, this chapter also aims to add to Biddle's research on the relevance between the modern technology and geography which is the core theoretical background of this research.

## 5-1 Outbreak of War and North Korea's Initial Success

### The NKPA<sup>385</sup>

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<sup>385</sup> To review the North and South Korean military strength and strategy,

The Graduate School of North Korean Studies, op.cit., p.63-97

S.C. Hwang, *BukHanEuiHanGukJeonJeonRyak-MuEosIJeonJaengEulSeungRiRoIGgeuNeunGa*, Seoul, Bukkorea, 2008, p.77-239

Department of military history, op.cit., p.12-17

IMHC, *SoRyeonGunSaDanJangRaJuBaYeFEui6.25JeonJaengBoGoSeol*, p.113-139

IMHC, *HanGukJeonJaengSang*, Seoul, Guningongjehwae, 1995, p.23-61

Y.H. Choi, *6.25JeonJaengEuiSilPaeSaRyeWaGyoHun*, ROK Army Headquarter, 2004, p.11-45

## The NKPA's Foundation and Capability Before the Korean War

The NKPA's roots can be traced to anti-Japanese guerrilla groups that operated in Korea and *Manchuria* in the years prior to and during the Second World War.<sup>386</sup> Some of these anti-Japanese guerrillas switched to communists and built the North Korean armed forces with the help of the former Soviet Union and the PRC.

Therefore, from the inception they were heavily influenced by a communist style of warfare, especially since their forces were founded with help from the former Soviet Union. Kim *Il-sung*, the president of North Korea from 1945 to 1994, also admitted that the NKPA was formed under heavy influence from the former Soviet Union in a speech given at the high ranking officer committee under the title of "Strengthening the NKPA" on the 24<sup>th</sup> of December, 1952. Here, he mentioned that "The NKPA was founded in February, 1948, organized under the principles of the Soviet Army with the consideration of their abundant experience. It was also based upon the advanced Soviet military technology and strategy which were successfully employed during the Second World War".<sup>387</sup> They followed thoroughly the Soviet army model. Arms and equipment were provided according to ordinary Soviet force establishment. The Soviet military advisor also used a Soviet drill book to train the NKPA.<sup>388</sup>

The NKPA's capability dramatically strengthened after the Soviet forces decided to withdraw from North Korea in December, 1948. Terenti Shtykov, the Soviet ambassador to North Korea, reported to Stalin on the 9<sup>th</sup> of December, 1948 that the NKPA, which had 29,000

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Y.J. Yang, HanGukJeonJaengJikJeonNamBukHanEuiGunSaJeongChaekBiGyo, *Jeonsa in ROK*, 1: Sep, 1999, p.143-183

Y.J. Yang, J.O. Nam, G.S. Son, and D.C. Park, *6.25JeonJaengSa2-BukHanEuiNamChimGuaChoGiBangEoJeonTu*, Seoul, IMHC, 2005, p.3-52

M.S. Jang, op.cit., p.167-171

R.E. Appleman, op.cit., p.1-18

S. Sandler, *The Korean War: No Victors, No Vanquished*, London, UCL Press, 1999, p.18-46

<sup>386</sup> M. Varhola, *Fire & Ice – The Korean War, 1950-1953*, Da Capo Press, 2000, p.151

<sup>387</sup> I.S. Kim, *KimIlSungSeonJib 4*, Pyongyang, Joseonrodongdang Press, 1954, p.346, 358

<sup>388</sup> The Graduate School of North Korean Studies, op.cit., p.74

soldiers at the time, was inferior to the South Korean counterpart, which possessed 55,000 soldiers and would therefore require further reinforcement.<sup>389</sup> Upon receipt of the report, Stalin called the North Korean military delegate to Moscow on 25<sup>th</sup> of December and agreed to help strengthen the NKPA's capability until June, 1950.<sup>390</sup>

North Korea and China also agreed to send Korean soldiers in the PLA back to North Korea until the end of 1949. There were 28,000 soldiers sent back to North Korea by January, 1949. According to these two agreements, North Korea was able to build six heavy infantry divisions and a capable Air Force. Around 5,000 Korean soldiers in the Soviet army who served during the Second World War also returned to North Korea in early 1949. Finally, about 10,000 Korean soldiers who still remained in the PLA also returned to North Korea and formed the 7<sup>th</sup> Infantry Division in May, 1950. Therefore, around 30% of NKPA was comprised of battle hardened veterans from the Second World War and the Chinese Civil War.<sup>391</sup>

Due to the massive amount of received Soviet military aid, North Korea succeeded in strengthening their mobile warfare capability and firepower. More than anything else, they acquired the T-34 tanks which the ROK did not have and were able to apply the Soviet style mobile warfare. In addition, North Korea also had access to 122mm howitzers which had a longer range and were adaptable to a greater range of numbers than the ROK 105m howitzer. On top of that, they had also gradually strengthened their Air Force and were able to retain about 200 air craft before the Korean War.<sup>392</sup> Therefore, the NKPA became one of the most

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<sup>389</sup> A.Y. Mansourov, *Communist War Coalition Formation and the Origins of the Korean War*, PhD dissertation, Columbia University, 1997, p.87

<sup>390</sup> They agreed on the following.

- (1) Strengthen the NKPA capability by introducing Korean soldiers in the PLA
- (2) Organizing the armoured division with the aid of around 500 tanks
- (3) Increasing the North Korean army division up to a total 22 divisions

Excerpted from the Department of Military History, op.cit., p.13

<sup>391</sup> Jeonjaengginyeonsaeophwae (The ROK War Memorial), *HanGukJeonJaengSa2*, Seoul, Haenglimchulpansa, 1990, p.470-472

<sup>392</sup> Hwang, op.cit., p.130-133

When the war began, the NKPA Air Force possessed around 210 airplanes including IL-10 Ground Attack aircraft, YAK-9, YAK-11 and YAK-18 air-fighters. They were a prop-driven air force unit

heavily armed, disciplined, and effective forces in the world. They were ready to invade the South.<sup>393</sup>

## NKPA's strategy and initial operation plan

Even though Stalin agreed to strengthen North Korea, he was initially reluctant to approve North Korea's invasion of the South. After a meeting of Shtykov and *Kim* was held on the 12<sup>th</sup> and 13<sup>th</sup> of August; Shtykov reported to Stalin regarding *Kim*'s intention to invade the South. However, *Kim*'s proposal was quickly refused by Stalin. Stalin stated the following as the reasons of his decision.<sup>394</sup>

- 1) The ROK was already recognized as a nation state by the US and there was a high possibility that the US would engage in the conflict.
- 2) North Korea's invasion of the South could be used as propaganda for activating the anti-Soviet movement
- 3) Even though they might have political support from the South Koreans, North Korea still did not possess any overwhelming military superiority against the South

However, Stalin changed his mind in January, 1950 and the preparation of war was accelerated. At a luncheon on the 17<sup>th</sup> of January, 1950, *Kim* asked Shtykov again to approve the invasion to the South saying, "It is our turn after the communization of China". Then Shtykov reported to Vyshinsky on the 19<sup>th</sup> of January. However, unlike the previous pleas,

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until they adopted MIG-15s after the Chinese engagement in late 1950. However, the prop-driven air force was still superior to the ROK Air Force that was barely equipped with a few propeller training aircrafts.

<sup>393</sup> M. Varhola, op.cit., p.151

<sup>394</sup> Analysed from "Telegram from Shtykov to Vyshinsky" (3<sup>rd</sup> of September, 1949) and "Telegram from Tunkin to Soviet Foreign Ministry, in reply to 11 September telegram" (14<sup>th</sup> of September, 1949) Acquired from the Woodrow Wilson International centre for Scholars, Cold War International History Project Virtual archive,

[http://www.wilsoncenter.org/index.cfm?topic\\_id=1409&fuseaction=va2.document&identifier=5034C6D8-96B6-175C-9FFA83512DC39318&sort=Collection&item=The%20Korean%20War](http://www.wilsoncenter.org/index.cfm?topic_id=1409&fuseaction=va2.document&identifier=5034C6D8-96B6-175C-9FFA83512DC39318&sort=Collection&item=The%20Korean%20War), (Accessed on the 20<sup>th</sup> of July, 2009)

this time Stalin approved and wanted to discuss it with *Kim* saying, “This kind of matter should be prepared cautiously and perfectly”.<sup>395</sup>

As a first step, Stalin sent a military advisory group in February that consisted of experienced officers of the Second World War and appointed the Second World War hero Alexandre Vasiliev as the Chief. *Kim* also visited Moscow from the 30<sup>th</sup> of March to the 25<sup>th</sup> of April as requested. In that visit, he and Stalin discussed the basic idea of war. Stalin gave a strategic suggestion that 1) Troops must be assembled in the 38<sup>th</sup> Parallel beforehand, 2) North Korea has to suggest the new proposal on the peaceful reunification, 3) Once the South has rejected it, launch the surprise attack. He further said that “War has to be quick and hold a surprising nature and there will be a chance to break through the enemy defence line and if so, the NKPA should not give any chance for the US to breathe, resist, and further mobilise international aid”.<sup>396</sup> Stalin demanded a quick victory. He suggested political deception as a first step, followed by military measures including a surprise attack, the concentrated use of force, and a pursuing operation to annihilate the enemy capability. This is obviously reflected in the North Korean invasion plan, “Counter-attack plan”.<sup>397</sup>

The already dispatched Soviet military advisory group, along with a few NKPA headquarter members drafted the invasion plan based on the Stalin’s suggestion and Soviet military strategy. Therefore, with Soviet style military training based on their military drill book, and

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<sup>395</sup> Analysed from “Telegram from Shtykov to Vyshinsky (19<sup>th</sup> of January, 1950) and “ Telegram from Stalin to Shtykov (30<sup>th</sup> Of January, 1950)” Source; Woodrow Wilson International centre for Scholars, Cold War International History Project Virtual archive, [http://www.wilsoncenter.org/index.cfm?topic\\_id=1409&fuseaction=va2.document&identifier=5034C6D8-96B6-175C-9FFA83512DC39318&sort=Collection&item=The%20Korean%20War](http://www.wilsoncenter.org/index.cfm?topic_id=1409&fuseaction=va2.document&identifier=5034C6D8-96B6-175C-9FFA83512DC39318&sort=Collection&item=The%20Korean%20War), (Accessed on the 20<sup>th</sup> of July, 2009)

<sup>396</sup> K.R. Kim, *SoRyeonEuiJaRyoRoBonHanGukJeonJaengEuiJeonMal*, Seoul, Yeolim, 1998, p.53-54 It was the Korean Translation of Russian source: E. Bazhanov, N Bazhanova, *Analysis of the Korean War from the Soviet document*.

<sup>397</sup> The counter-attack plan was founded on Razuvayev’s Report. To avoid criticism from international society as a result of full scale invasion, the former Soviet Union and North Korea tried to explain the Korean War was the counter-attack on the ROK invasion to the North. Therefore, they named the invasion plan ‘the counter-attack plan’.

operation plans drafted by the Soviet military advisor group, the NKPA followed exactly the Soviet army strategy during the initial phase of the Korean War. Its characteristics were the concentration of force, surprise attack, breakthrough, and outflanking movements to annihilate the enemy capability.

## Initial Contact with the NKPA and the Relevance of Technology and Geography

### The NKPA's First Phase Operation Plan

The NKPA drafted the counter-attack plan for the all-out offensive to the South. According to this plan, the NKPA's first phase target was to reach the *Suwon* and *Samchok* line in three days, at a depth of 90km.<sup>398</sup> Accordingly, the NKPA 1<sup>st</sup> Corps in the Western front became the main attack to capture *Seoul* and the 2<sup>nd</sup> Corps (Central and Eastern Front) became the supportive attack to advance to *Seoul* and *Suwon* through *Chunchon* and support the 1<sup>st</sup> Corps movement. In the western front, the NKPA 6<sup>th</sup> Infantry Division advanced to capture the *Ongjin* peninsula and then landed on *Kimpo* to advance to *Seoul* (*Kimpo* Axis). The 1<sup>st</sup> Infantry Division marched from the North West of *Seoul* (called *Munsan* Axis) to *Seoul*. The 4<sup>th</sup> Infantry Division along with the 105<sup>th</sup> Tank Brigade attacked the right above *Seoul* and the 3<sup>rd</sup> Infantry Division along with elements of the 105<sup>th</sup> Tank Brigade also marched to *Seoul* from the North East. Both 3<sup>rd</sup> and 4<sup>th</sup> Infantry Invasion route was called the *Uijongbu* Axis because, even though both of these forces started to advance from different positions, they planned to meet in *Uijongbu* and advance again to *Seoul*. Therefore, among the NKPA 1<sup>st</sup> Corps, the forces comprising the main attack were the 4<sup>th</sup> Division, 105<sup>th</sup> Tank Brigade, and the 3<sup>rd</sup> Infantry Division, which had a role in making a breakthrough. The 6<sup>th</sup> and 1<sup>st</sup> Divisions marching from the Northwest, became a supportive attack to surround and annihilate the ROK forces in *Seoul* and the North of *Seoul*.

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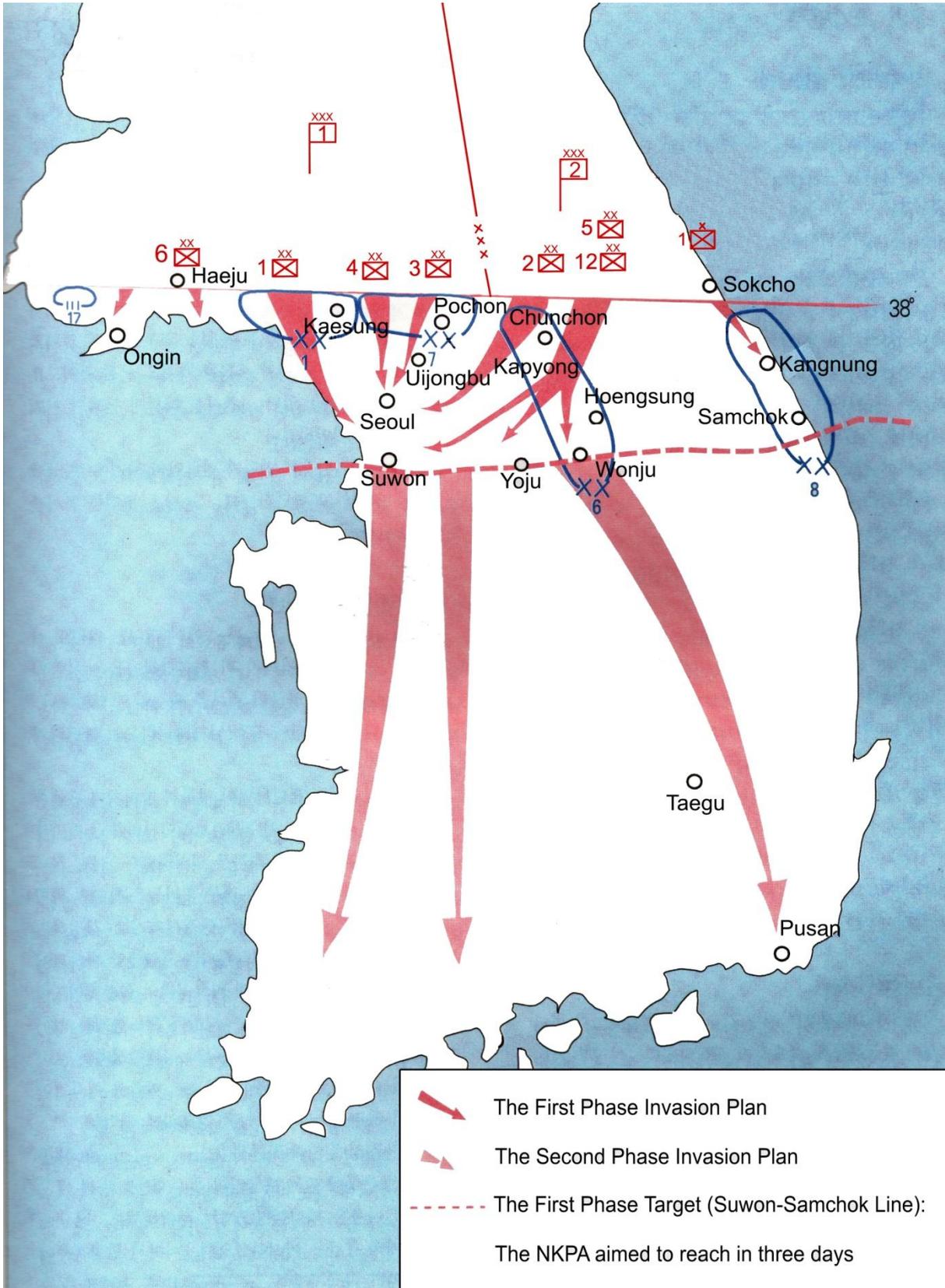
<sup>398</sup> There are a few analyses about the North Korean counter-attack plan in the first phase; however, all the analysis is based on the Razuvayev Report. The objective of this small chapter is to explain North Korea's initial operation plan showing that they were hugely influenced by the Soviet way of warfare, thus only the original source will be cited here. All the analysis of the counter-attack plan here is based on IMHC, *SoRyeonGunSaDanJangRaJuBaYeFEui6.25JeonJaengBoGoSeo1*, p.135-139.

Among the NKPA 2<sup>nd</sup> Corps, the 2<sup>nd</sup> Infantry Division as a supportive attack to *Seoul* aimed at surrounding *Seoul* from the North-east, marching through *Chunchon*, *Hwachon*, *Kapyong* (*Chunchon* Axis). The 12<sup>th</sup> Division aimed at advancing through *Inje* and *Hongchon* (*Hongchon* Axis) and, after the breakthrough in *Hongchon* Axis, some elements (the 12<sup>th</sup> Infantry Division and the 603th Motorcycle Regiment) were destined to advance westward to *Suwon* to form a second envelopment line. The remaining element (the Reserve Force of the 2<sup>nd</sup> Corps; the 5<sup>th</sup> Infantry Division (except for 10<sup>th</sup> Regiment)) advanced straight forward to *Wonju* to cut off the reinforcements. Another supportive attack (Eastern coast Axis) was launched to cut off the reinforcement to *Chunchon* and *Hongchon* Axis and reach the *Samchok* line. Under this objective, the 1<sup>st</sup> Border constabulary brigade and an attached Infantry Regiment (10<sup>th</sup> Regiment) of the 5th Infantry Division advanced to the Eastern coast while the 766<sup>th</sup> Independent Unit and Navy 945<sup>th</sup> Independent Marine Unit landed at the rear to cut off the ROK's 8<sup>th</sup> Division retreat route.<sup>399</sup>

This operational concept followed the Soviet military strategy thoroughly. They used mobile power and firepower as sources for the main attack (3<sup>rd</sup>, 4<sup>th</sup> Infantry Division, and 105<sup>th</sup> Tank brigade). Then, they made a breakthrough in the most important defence sector, captured the strategically most important target, and chased the remaining enemy forces (ROK's main defensive line: *Uijongbu* defence sector and *Seoul*). The supportive attack (1<sup>st</sup>, 2<sup>nd</sup>, 6<sup>th</sup> and 12<sup>th</sup> Infantry Division) was required to surround the enemy's main force at *Seoul* and annihilate them north of the *Han* River.

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<sup>399</sup> Its analysis of North Korean invasion plan during the initial period of war based on the research of Y.J. Yang, op.cit., p.7-48 and Department of military history, op.cit., p.15-17



Map 5-1 The North Korean Invasion Plan<sup>400</sup>

<sup>400</sup> Excerpted and modified from- Department of military history, op.cit., p.17

## Preparations of the ROK

The ROK forces were officially founded on the day of official independence: 15<sup>th</sup> of August, 1948, with a size of about 50,000 army and 3,000 navy.<sup>401</sup> At the time of the foundation, the ROK Department of National Defence thought that they needed around 230,000 forces considering the threat of North Korea and *Manchuria*, however, their available forces were just ¼ of what they thought to defend their territory.<sup>402</sup> Moreover, the US residential forces were withdrawn by the 30<sup>th</sup> of June, 1949 and only 500 hundred military advisors (The Korean Military Advisory Group) were kept there.<sup>403</sup> Even though there was a Wedmeyer report (September, 1947) which warned about the possibility of North Korean invasion, the US decision was made according to the Foreign Residential Force Readjustment Plan after they cut down their size of force (12 million in 1945 to 1.74 million in 1947) and reduced the military budget.<sup>404</sup>

In addition, because of the hasty foundation, they also had to deal with the communists inside their forces.<sup>405</sup> Therefore, from the foundation, the ROK armed force had to cope with many internal and external problems. However, they kept trying to increase their infantry and saw them reach six brigades and twenty regiments by January, 1949 and take over the 38<sup>th</sup> parallel defence duty – which meant that the ROK practically took the national defence duties from the US.

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<sup>401</sup>IMHC, *HanGukJeonJaengSang*, p.49

<sup>402</sup> Ibid., p.50

<sup>403</sup> Ibid., p.52-53

<sup>404</sup> The US JCS raised several reasons for the withdrawal

- 1) Korean Peninsula is not an absolutely important place for the US national defence
- 2) The existence of the USFK would give an excuse of automatic engagement of other parties in case of conflict.
- 3) The conflict in Korea could be sorted out with the Naval and airpower.

Excerpted from Department of Military History, op.cit., p.12

<sup>405</sup> There had been a few incidents organized by the communist inside of the ROK forces before the Korean War which were *Yosu* and *Sunchon* revolt (19<sup>th</sup> of October, 1948, 14<sup>th</sup> regiment), *Taegu* revolt (2nd of November, 1948, 6<sup>th</sup> regiment) and The first and second battalion of 8<sup>th</sup> regiment was crossing over to North Korea (5<sup>th</sup> of May, 1949) Excerpted from- B.C. NO, *IGeosIHanGukJeonJaengIDa*, Seoul, 21segigunsayeonguso, 2000, p.261-262

However, the fundamental North and South military capability imbalance could not be solved. Among the weaponry handed over to the ROK forces, 105mm howitzer had a shorter shooting-range than the North Korean 122mm and lacked numbers; 57mm and 37mm anti-tank guns were out-dated and not powerful enough to penetrate the armour of the NKPA T-34 tanks. It was due to the US Foreign Military Aid policy towards Korea that the “The ROK armed forces had to develop only up to a standard of strength that can maintain domestic security and deter the North Korean invasion”.<sup>406</sup> But the ROK already recognized the enhanced threat posed by North Korea and demanded further military aid. Even though the US military advisory group also insisted on further military aid in the year of 1950 to meet the minimum level for self-defence requirements, the US government was not keen on military aid to the ROK. Therefore, the ROK military capability could not be matched with the NKPA before the Korean War began.<sup>407</sup>

## Terrain, Technology, and the Initial Phases of the Korean War

Before the US engagement, North Korea enjoyed technological superiority against the ROK. Due to the massive Soviet military aid, they were equipped with a reasonable capability to wage Soviet style mobile and firepower warfare, and drafted an operation plan aimed at maximizing their mobile and firepower capability. On the contrary, in terms of capability, the South was well behind that of North Korea due to the passive US military aid. According to Biddle’s explanation, the technological superiority was decided before the Korean War and the efficiency would depend upon how the ROK utilized their defensive edge.

In this sub-chapter, it will be shown how it happened that, even though North Korea-enjoyed the technological superiority and overwhelming victory in the initial phase of war, they failed to annihilate the ROK Forces and gave the US crucial time to engage in the Korean War.

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<sup>406</sup>IMHC, *HanGukJeonJaengSang*, p.53

<sup>407</sup> Ibid., p.58-59 Razubayev also mentioned in his reports that “due to the mountainous Korean peninsula topography, the tank was not provided and long-range artillery was also not offered in enough numbers.” He also mentioned that “even though the ROK tried hard, Navy and Air Force were not strong enough, the ROK mainly used the US weapons but the number of weapons were still inadequate, and they also used vast numbers of old Japanese weaponry so it became very difficult for the ROK to strengthen their forces and raise the reserve.” Cited from-IMHC, *SoRyeonGunSaDanJangRaJuBaYeFEui6.25JeonJaengBoGoSeo1*, p.113-121

Ultimately, this sub-chapter will explain that the efficiency of military technology (North Korea's) will depend on how the defender (the ROK) used their defensive edge.

## An Overwhelming, but not Perfect Victory and The Battle of *Chunchon*

### Leadership, Fortification, and Training

As analysed, the ROK forces were ill-equipped and did not have the capability to hold out against the North Korean invasion. However, its weakness became much worse due to poor human resource management (Commander's quality) and an ill-prepared defensive position. Therefore, the ROK was not ready to use their defensive strategies and was on the verge of completely being overwhelmed by North Korean's technological dominance.

The ROK President *Rhee Syngman*'s human resource management style was to control and balance through division and rule, therefore he did not like to appoint powerful figures as ministers in his cabinet.<sup>408</sup> He appointed *Shin Sungmo* as the Minister of National Defence. *Shin* was not politically ambitious and did not have any expertise since his previous career was serving as the captain of a British shipping company. The appointment of young *Chae Byungdeok*, in April, 1950 as the Chief of the General Staff was also a logical conclusion, since *Rhee* was reluctant to appoint anyone with a brilliant military career and strong opinion.<sup>409</sup> Through insufficient time and inexperience, *Chae* made crucial mistakes during the first stage of war and was eventually sacked on the 30<sup>th</sup> of June, just five days after the Korean War broke out.<sup>410</sup> The war headquarters was compromised by the President's personal

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<sup>408</sup> Y.H. Choi, op.cit., p.36

<sup>409</sup> Ibid., p.28-30 and p.36

*Chae* did not have any actual field commanding experience since he was an Ordnance Officer in the Imperial Japanese Army.

<sup>410</sup> Ibid., p.77

- 1) Drastic personnel changes went into effect just before war to put his men into the significant position and as a consequence, the ROK forces were inadequately prepared for war
- 2) Incomplete Anti-tank measures

political tastes leaving the ROK to pay the price for these decisions during the initial phase of war. In addition, due to the defeat of the ruling party in the second election of members for the National Assembly on the 30<sup>th</sup> of May, there was a massive overhaul in personnel changes in the armed forces with the newly appointed *Chae* assigning his own men to significant positions. Therefore, the newly appointed armed force commanders who were not even able to grasp their defence sector had to cope with the North Korean invasion.<sup>411</sup>

The ROK military authorities also gave a defence guide (*Yukbonjakjeongyehoek38ho*- Army Headquarter Operation Plan 38<sup>th</sup>: 25<sup>th</sup> of March, 1950). According to this plan, they assumed that the NKPA main attack would be heading to the *Uijongbu* axis and planned to secure the 38<sup>th</sup> Parallel with a defensive concentration in the *Uijongbu* defence sector. To secure the *Uijongbu* defence sector, they planned to set up three defensive lines in front of *Uijongbu*, place the local force in the first line and reserve forces in the second and third line. They would defeat the NKPA in these three consecutive defensive lines.<sup>412</sup> This defence concept was given to the ROK troops, the Guard, usually in line with the border trench, the Main defence position trench, and the Final protective line. But, the defence line fortification using the mountainous topography of Korean peninsula showed only slow progress.

Following the USFK withdrawal, the ROK took over the 38<sup>th</sup> Parallel defence duty. There was only a guard post to check the personnel and traffic passage and the defensive trench was totally nonexistent.<sup>413</sup> In this circumstance, the defensive line fortification started, and because the North Koreans had already taken the geographically advantageous position, the fortification became a much more difficult task than initially thought.<sup>414</sup> To help this

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- 3) Too many resources were focused on holding on to *Seoul* and as a consequence, wasted the crucial reserve since he ordered the counter-attack in *Uijongbu*.
  - 4) Prematurely blowing up the *Han* River bridge consequently, the ROK forces lost almost entire main force since most of them was still located at the North of *Han* River
  - 5) Incomplete demolition of the *Han* River bridge subsequently, the ROK unwittingly allowed the early river crossing of the NKPA's tank

<sup>411</sup> Ibid., p.39

<sup>412</sup> Y.J. Yang, op.cit., p.157

<sup>413</sup> The ROK Army Headquarter, *YukGunBalJeonSaSang*, The Army headquarter, 1970, p.278-279

<sup>414</sup> Y. J. Yang, op.cit., p.169

fortification, the Ministry of National Defence included the fortification cost in their 1950 budget, but, the National Assembly made major cuts. In addition, due to the guerrilla movement in the rear, they also experienced a tremendous lack of personnel to handle this new situation.<sup>415</sup> Under these circumstances (The North Korean hindrance, lack of pre-constructed trenches, personnel, and cost), an adequate fortification could not be realized.

Still, with diligence, they managed to make slight progress by June, 1950. At that point, most of the 38<sup>th</sup> Parallel guard defensive trench was a cover trench made of concrete or logs, and possessed two barbed wire lines at the front and anti-personnel land mines. In the main resistance line and reserve trenches, they only managed to set up access and individual trenches without a cover. Artificial obstacles such as landmines and barbed wires were not implanted. They did not have any anti-tank mines, so their anti-tank measures were incomplete. Under these circumstances, the ROK defensive trenches were not fully equipped with the facilities necessary to protect their forces and instruments from the enemy's howitzers and trench mortars. In addition, they did not have sufficient defence in depth and anti-tank measures since their second and third defence line was not fully prepared and did not possess anti-tank mines.<sup>416</sup>

In his report, Razuvayev also gave his opinion on the ROK defensive line.<sup>417</sup>

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At that point, the North and South border was the straight line divided by the 38<sup>th</sup> parallel without any consideration of geographic characteristics. Therefore, there were no defensive facilities immediately after the division. North Korea, who inherited the 38<sup>th</sup> parallel defence duty earlier than the ROK, could take the geographically advantageous position and disturb the fortification of the ROK defensive position.

<sup>415</sup> As mentioned in the *Imjin Wars* case study, the steep mountainous area existed between *Gyeongsang* and *Cholla* province which also became the provincial border. This mountainous area became the main operation ground for the communist guerrillas before and during the Korean War. It was suitable for doing hit and runs, and the peasant class, mostly tenant farmers in this area, were sympathetic to the communists because many landlords had helped the Japanese colonial regimes, and the ROK government did not put them on the trial and delayed the proposed land reform

<sup>416</sup> Jeonsapyeonchaneuiwonhwa, *HanGukJeonJaengSaJe-HaeBangGwaGeonGun (1945-1950.6)*, Seoul, ROKMND, Jeonsapyeonchaneuiwonhwa, 1968, p.396-398

<sup>417</sup> IMHC, *SoRyeonGunSaDanJangRaJuBaYeFEui6.25JeonJaengBoGoSeo1*, p.129

- (1) The ROK military authorities were not interested in laying out the consecutive defensive lines along the 38<sup>th</sup> Parallel since they had a conviction that their force had a capability to beat the NKPA and advance to the North Korean territory.
- (2) Most of the ROK trenches were built without much consideration of local strategic characteristics and cooperation with the neighbouring facilities.
- (3) The 38<sup>th</sup> Parallel defence was not built systemically and did not correspond to the principle of the mountainous topography defence trenches. Only *Uijongbu* defensive sector trenches were relatively sound
- (4) Most of the defence trench was built along the 38<sup>th</sup> Parallel and they did not have a defensive trench line after the first defence line. Only *Ujongbu* axis had a defence in depth.

In conclusion, even though the ROK had tried to fortify their defensive trenches, until the Korean War began their level of preparation did not reach a level that could rival the North Korean offensive preparation.

The ROK forces were also facing a lack of systematic training.<sup>418</sup> They did not have a time to complete systematic training since they had a duty to guard the 38<sup>th</sup> parallel and many of them were mobilised for anti-guerrilla operations.<sup>419</sup> Their first attempts (*GoyukgakseoIho*: the First training note) to complete a systematic training were delayed until January, 1950, and because of the increased burden of anti-guerrilla operations it was not achieved as planned. The Army headquarters gave the second training note on the 14<sup>th</sup> of March but this order was only achieved by 25% of the ROK battalion (15 among 65 battalions) before the Korean War began.

On the contrary, along with the military capability build up, the NKPA also planned the systematic training for the offensive operations. They completed the division self-training by

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<sup>418</sup> Due to the increased and heavy duties, the ROK forces were not able to exercise the battalion level tactical defence or manoeuvre training as well as the regiment and division level comprehensive operational training.

<sup>419</sup> Before the Korean War began, among 8 ROK Infantry Divisions, the 1,7,6 and 8<sup>th</sup> Division was deployed on the front line while the 2, 3 and 5<sup>th</sup> Division was mobilised for anti-guerrilla operation Excerpted from- IMHC, *HanGukJeonJaengSang*, p.122

the early 1949, and started a division level comprehensive military tactic training from the end of 1949. This also gave them a chance to evaluate the offensive operation plan and revised the plan based on the evaluation.<sup>420</sup> At the end of February, 1950, they carried out the massive size joint training called “*Jeokeuijinjidolpateuksoohunryeonmichdohajakjeonhunryeon* (Special Training for the Penetration of the Enemy Trench and River Crossing Operation)” which was attended by two infantry divisions and tank troops. They evaluated this training as satisfactory.<sup>421</sup> They finished the manoeuvre warfare exercise at the end of March. From April, their high ranking officers also secretly started to research the ROK and its forces for an improved military command. Therefore, with the inclusion of the Korean veterans who previously served for the PLA and Soviet army, and continuous hard training, the level of NKPA’s training and readiness was far better than those of the ROK counterpart.

### The First Phase of North Korean Invasion and the Central Eastern Front

Biddle’s argument about military technology efficiency was that, since the NKPA enjoyed the technological advantage and the South was not prepared for combat using their defensive edge without proper training, adequate trenches, and suitable command, the fate of war was inevitably in the favour of the NKPA. In fact, the NKPA enjoyed an overwhelming victory and captured *Seoul* in three days. They gave the ROK crucial time to regroup in the South of the *Han* River, and the US time to engage, and they failed to deliver a finishing blow to the ROK forces. This meant their initial success was not a decisive and perfect one. Even though they managed to find a breakthrough, the outflanking troops failed to envelope and completely annihilate the ROK forces.

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<sup>420</sup> Y.J. Yang, op.cit., p.167

Also, in February, there was an engineer corps’ trench breakthrough special training and river crossing training. Especially, trench breakthrough special training was designed to train the special assignment troops in the engineer corps who had a duty to remove the artificial obstacles in front of enemy trenches such as the barbed wire and land mines and blow up the enemy fortified trenches to make a breakthrough in them. Therefore, before the Korean War began, the NKPA already finished the trench offence training. Excerpted from- Ibid., p.170

<sup>421</sup> Jeongbochammobu, the ROK Army, *BukGwawNamChimBunSeok*, Seoul, Army Headquarter, 1970, p.50

Especially the NKPA 2<sup>nd</sup> Corps which was supposed to envelop the ROK forces by an outflanking movement did not fully achieve their objective. This small section will reveal why the NKPA 2<sup>nd</sup> Division (*Chunchon* Axis) and the 12<sup>th</sup> Division (*Inje-Hongchon* Axis) failed to outflank the ROK main force around *Seoul*. Ultimately, it will explore why technological superiority was not fully utilized when the defender has a well-trained force and a leader who can utilize the well-fortified defensive position.

The objective of the NKPA 2<sup>nd</sup> Corps in the first phase of the operation, which was designed to finish in two days, was to reach the ROK 6<sup>th</sup> Division reserve's stationed post in a day, although it was 23-35 km south of 38<sup>th</sup> Parallel. In the second day, they aimed at guaranteeing the mobile troops (the 603<sup>th</sup> Motor cycle regiment) reaching the South of *Suwon* and to begin the following troops' (Corps Reserve: 5<sup>th</sup> Infantry Division) advance to *Wonju* to cut the ROK reinforcement and defensive line in two.<sup>422</sup>

The 12<sup>th</sup> Division, which invaded the *Hongchon* Axis as a main attack had two roles to achieve. First, they were assigned the duty to occupy *Hongchon* and cut off the road between *Wonju* and *Yoju* to prohibit the reinforcement to *Seoul*. Secondly, they had a plan to support the 603<sup>th</sup> Motor Cycle Regiment's High-Speed penetration movement whose objective was to reach *Suwon* as quickly as possible, and then advance to *Suwon* marching through *Hongchon* and *Yoju* to cut off the ROK forces' withdrawal route and envelop them.<sup>423</sup>

The 2<sup>nd</sup> Division which invaded *Chunchon* Axis (*Chunchon*, *Kapyong*, and *Seoul*) planned to occupy *Chunchon*, *Kapyong*, and cross the *Han* River to attack *Seoul*. They aimed to cut off the ROK reinforcement, protect the left flank of their main force (3<sup>rd</sup>, 4<sup>th</sup> Infantry division, 105<sup>th</sup> Tank Brigade of the 1<sup>st</sup> Corps), and envelope the ROK forces in *Seoul* from the East. The 5<sup>th</sup> Division as a reserve planned to follow the 12<sup>th</sup> Infantry Division and advance to *Wonju* to cut off the ROK reinforcement and defensive line in two.<sup>424</sup> Therefore, the ROK 6<sup>th</sup>

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<sup>422</sup> *Wonju* is located in the middle of the *Suwon* and *Samchok* line and one of the points to reach during the first phase of operation. Excerpted from- Y.J. Yang, *et. al.*, op.cit., p.34

<sup>423</sup> *Ibid.*, p.34-36

<sup>424</sup> *Ibid.*, p.36-39

Infantry Division who took charge of the Central Eastern front had to cope with the NKPA's three infantry divisions and one Motor cycle Regiment.<sup>425</sup>

The role of the ROK 6<sup>th</sup> Infantry Division was to wage both defensive and guerrilla warfare using steep mountainous topography, check the enemy's advance to *Seoul* from the Central Eastern front (2<sup>nd</sup> and 12<sup>th</sup> Infantry Division), and give firepower support to the North Eastern front of the 7<sup>th</sup> Infantry Division defence sector to turn the tide of war on the main battlefield in the ROK's favour.<sup>426</sup> For the defence of the Central Eastern front, the concentration of defence was in *Chunchon*, since they believed the enemy main force would advance from *Hwachon* to *Chunchon*.<sup>427</sup> They aimed at keeping the 38<sup>th</sup> parallel by repelling the enemy in front of *Chunchon*. Therefore, they placed the 16<sup>th</sup> Artillery Battalion in *Chunchon* for the concentrated use of firepower.<sup>428</sup> They also placed the 7<sup>th</sup> Regiment on the North Western perimeter (*Chunchon* Axis), the 2<sup>nd</sup> Regiment on the North Eastern perimeter (*Hongchon* Axis), and used the 19<sup>th</sup> Regiment stationed at *Wonju* as a reserve.

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<sup>425</sup> Ibid., p.419

<sup>426</sup> IMHC, *HanGukJeonJaengSang*, p.96 Since the ROK defence capability and strategy was centred on the defence of *Seoul*, the 6<sup>th</sup> Division, which was in charge of Central Eastern front, took excessive amount of duties. For the defence of *Seoul*, the 6<sup>th</sup> Division had a duty to support the 7<sup>th</sup> Division which was in charge of *Uijongbu* defence sector, an area which both Koreas regarded as the most significant defence sector to defend *Seoul*.

<sup>427</sup> For the NKPA 2<sup>nd</sup> Corps, the shortest and quickest way to reach *Seoul* was using *Chunchon* Axis (*Hwachon*, *Chunchon*, *Kapyong*, and *Seoul*). That was the reason why the 6<sup>th</sup> Division thought that the NKPA main force would be heading to *Chunchon*. In addition, if the NKPA mechanized or mobile troops which were stationed in *Hwachon* or *Yanggu* wanted to advance to *Seoul* they had to pass *Chunchon* so strategically *Chunchon* was very important place for the NKPA. (Route 5<sup>th</sup> (*Hwachon-Chunchon-Hongchon*), Route 46<sup>th</sup> (*Yanggu-Chunchon-Seoul*)) However, even though the NKPA 12<sup>th</sup> division was heading to *Chunchon*, it was as the supportive attack and the NKPA's 2<sup>nd</sup> Corps had a bigger picture than this. They aimed at annihilating the ROK main force in *Suwon* by outflanking movement and envelopment. Excerpted from- Jeonsapyeonchaneuiwonhwa, *HanGukJeonJaengJeonTuSa-38DoSeonChoGiJeonTu(JungDongBuJeonSeonPyeon)*, Seoul, Samwhainswae, 1982, p.30-31

<sup>428</sup> The 6<sup>th</sup> infantry division *Jakjeonmyeongryeongje42ho* (Operation order the 42<sup>nd</sup>, 18<sup>th</sup> of May, 1950) Excerpted from- Jeonjaengginyeonsaephwa, *HanGukJeonJaengSa3*, Seoul, Haenglimchulpansa, 1992, p.84

In terms of the 6<sup>th</sup> Division defence sector topography, there were plenty of natural barriers to wage defensive warfare. The 6<sup>th</sup> Division's defence sector had a very irregular topography where the steep mountains linked vertically and horizontally to each other. Around the 38<sup>th</sup> parallel, there was a mountainous topography where the *Maebong* (615m), *Obong* (779m), and *Buyong* (882m) Mountain linked into each other. *Bongui* Mountain (301m) which is located in the southern bank of *Soyang* River, could dominate the surrounding area. The *Mal Gogae* (the Horse pass) located in front of *Hongchon* was a steep mountainous pass where the defender could easily check the enemy's advance. Therefore the topography in general was in favour of the defender.

In addition, the steep mountainous topography and thick forest was perfect in preventing observation by the enemy, the rapid movement of mechanized troops, and increasing the efficiency of high-angle guns rather than direct-angle ones.<sup>429</sup> The river served as another natural barrier. The *Soyang* River flowed from the forward area of the defensive sector westward, and the *Bukhan* River flowed from *Hwachon* southward to meet in the north of *Chunchon*. This became a severe natural barrier in the summer since the increased introduction of water during the rainy season, usually starting from the middle of June and averaging 100-250mm rainfall, made any attempts at crossing the river a great ordeal.<sup>430</sup>

At the Central Eastern Front, the 7<sup>th</sup> Regiment which had been stationed in the *Chunchon* defence sector from May, 1949 knew the local topography very well and enjoyed a sound civil military relationship. They laid the main defence line in front of *Chunchon* with the concrete or log-covered trench, barbed wire and anti-personnel mine in front of the trench. They also built the anti-tank trenches composed of ferro-concrete along the road to *Chuchon*.<sup>431</sup>

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<sup>429</sup> One could easily think that the NKPA advantage of numbers and shooting-range of howitzers would be prominent; however, the ROK 6<sup>th</sup> Brigade Artillery Battalion already knew their defensive sector in and out, had proper training, and was under capable command; so at least the application of high-angle gun was in balance. Moreover, the thick forest and steep topography as well as the river made the NKPA mobile power such as the self-propelled howitzer, tank, and motor cycle less prominent.

<sup>430</sup> M.S. Son, ChoGiJeonTuChunchon,HongCheonJeonTuYeongGu, *Jeonsa* 2 of ROK: Dec, 1999, p. 186

<sup>431</sup> *Ibid.*, p.189

In terms of training and command, the regimental commander, *Im Butaek* (lieutenant colonel) was particularly concerned with education and training. Therefore, all of his regiment finished battalion combat training which was achieved at an average of 25% of the ROK battalion. He tried to improve the quality of officers by sending them to the Army infantry or artillery school when most of the other commanders were not keen on a re-education spell.<sup>432</sup> In addition, the 16<sup>th</sup> Artillery Battalion commander (Major *Kim Sung*) who was in charge of firepower support in the *Chunchon* Axis was also in favour of the training and education. After he finished his courses at the artillery school, he sent three of his battery commanders to the course, and trained his battalion intensively. Therefore, the level of training and command of the 16<sup>th</sup> Artillery Battalion was also high.<sup>433</sup>

Moreover, at least at the *Chunchon* Axis where the NKPA enjoyed the technological and numerical advantage, the ROK forces possessed relatively well-constructed trenches in a mountainous topography. These could be used due to the adequate training and command. According to Biddle's argument, the North Korean technological superiority would not be fully exerted in this area since the ROK force in that sector had the capability to use their geographic edge. So, even though the NKPA fully enjoyed their technological superiority at almost the entire front, it was highly expected that the NKPA would struggle in the *Chunchon* Axis. Through analysing the Battle of *Chunchon*, the section below will examine the adequacy of Biddle's argument and the significance of the defensive warfare using the defensive topography in the Korean Peninsula.

### The Battle of *Chunchon* and the Efficiency of Military Technology in the Korean Peninsula<sup>434</sup>

The 7<sup>th</sup> Regiment finished the fortification of the trenches based on the "Three Consecutive Defensive Line Defence" concept. At the guard (border) trench line, they did not set up

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<sup>432</sup> Y.J. Yang, *et. al.*, *op.cit.*, p.446

<sup>433</sup> I.H. Shin, *16PoByongDaeDaeJangKimSung (16<sup>th</sup> Artillery Battalion Commander Kim Sung)*, Seoul, Kookbanilbo (The Korea Defence daily), 27<sup>th</sup> of August, 2002)

<sup>434</sup> To Review the Battle of *Chunchon*,

The ROK Army Headquarter, *HanGukJeonJaengJeonSaRyo: Je6SaDanJeonTuSangBO* (53), 1987  
M.S. Son, *op.cit.*, p.183-215

trenches at great depth since given the limited resources available, they believed that the enemy's main forces would not attack at this axis<sup>435</sup>, and they had to consider the phase of the main battlefield and flexibility of defence.<sup>436</sup> Therefore, their fortification of trenches was concentrated on Hill 164 (the main resistance line) which could dominate the *Chunchon* basin and the riverside of the *Soyang River*<sup>437</sup> (the final protective line). This battle lasted four phases which were: the battle in the guard trenches, the main resistance line, the final protective line, and the stalling combat aiming to earn time for the withdrawal. Especially analysing the last three phases of this battle, it would seem that the technological advantage in mountainous topography like the Korean Peninsula would be diminished once its counterpart possessed the properly fortified trenches, used the mountainous topography and maximized its worth through proper training and command.

The NKPA 2<sup>nd</sup> Division tried to swiftly occupy *Chunchon* using Route 5. But, the ROK forces already planned to repel the NKPA along the main resistance line. So, in the first line defence (Guard Border trenches) they only placed a few troops. As a consequence, the NKPA swiftly passed the ROK first line of defence.<sup>438</sup> Therefore, the first full scale contact occurred around the ROK main resistance line. Following this easy victory, with the SU-76 self-propelled gun in front, the NKPA 2<sup>nd</sup> Division 6<sup>th</sup> Regiment advanced to *Chunchon* along Route 5. When they reached near to Hill 164, the ROK 1<sup>st</sup> battalion of 7<sup>th</sup> Regiment placed in Hill 164 lured them into open fire and crushed them with the joint firepower of the infantry and artillery.<sup>439</sup>

Their first attempt was foiled and they attempted to occupy the hill again by employing massive amounts of 122mm howitzer fire support. However, their firepower advantage did

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<sup>435</sup> They believed that the NKPA main attack would invade in the *Uijongbu* axis which was correct but they failed to recognize the sheer size of invasion.

<sup>436</sup> They believed that they would beat the NKPA and at least keep the 38<sup>th</sup> Parallel line. The guard trench only had a role to retard the enemy advance and they had a plan to wage a decisive battle on a main resistance line and recuperate the 38<sup>th</sup> parallel once they were able to repel the NKPA in a main resistance line or at most along in the final protective line. It was revealed in the 6<sup>th</sup> Infantry Division commander's decision not to blow up the bridge in the *Soyang River* for further counter-attack

<sup>437</sup> *Ibid.*, p.447

<sup>438</sup> *Ibid.*, p.449-456

<sup>439</sup> *Ibid.*, p.458

not make much of a dent in this attempt since their self-propelled howitzer did not actually make any impact thanks to the topography.<sup>440</sup> Moreover, the 122mm howitzer's firepower was also offset by fortification completed before the war. Thus, their second attempt was also foiled. Following the failure of the second attempt, the NKPA tried to outflank Hill 164 and cross the *Soyang* River (Western Point) to occupy *Chunchon*. However, on the Western flank of Hill 164 was an open field, and their outflanking movement was quickly noticed and rendered them into easy prey for the well-trained ROK Infantry and artillery joint operation.<sup>441</sup> But, for the ROK, the main resistance line defence also bore problems. Even though the NKPA only attacked Hill 164 and the Western flank at that time, if they changed their attacking route to the Eastern flank of the main defence line and crossed the *Soyang* River,<sup>442</sup> the ROK forces would unwittingly allow the enemy an easy passing of the river and occupation of *Chunchon*. In addition, their forces stationed at the North of the *Soyang* River (1<sup>st</sup> Battalion in Hill 164 and 19<sup>th</sup> Regiment element on *Udu* Mountain) would be outflanked and encircled.

In fact, the ROK 6<sup>th</sup> Division already seized the enemy movement at the Eastern riverside of the *Soyang* River and heard a North Korean prisoner's statement that there would be reinforcements in that flank. Therefore, the outflanking threat became a reality, forcing withdrawal to the southern riverside of *Soyang* River (The Final protective line) to shrink their front and concentrate their forces.<sup>443</sup> The ROK forces managed to repel the NKPA in the main resistance line and forced enemy reinforcement on that front. The success was due in part because they fortified the main resistance line trenches properly using the steep hill dominating the basin. They succeeded in the joint operation of the infantry and artillery because of proper training and command.

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<sup>440</sup>Due to the mountainous topography in this sector, the mobility of the self-propelled howitzer was severely restricted; therefore, it could not support the frontal assault unit properly.

<sup>441</sup> Ibid., p.456-465

<sup>442</sup> The *Soyang* River is averagely 200-300m wide and quite deep. However, at this point, they could cross the river by wading.

<sup>443</sup> After the 2<sup>nd</sup> Division attempts to occupy *Chunchon* foiled until the 26<sup>th</sup> of June, the 2<sup>nd</sup> Corps orders 2 regiments of 12<sup>th</sup> Division which was attacking *Hongchon* axis to reinforce the 2<sup>nd</sup> Division. Excerpted from- IMHC, *HanGukJeonJaengSang*, p.137

Following the withdrawal from the main resistance line, the 6<sup>th</sup> Division placed the 7<sup>th</sup> Regiment along the left flank of the *Soyang* River and the 19<sup>th</sup> on the right.<sup>444</sup> However, the division headquarter made crucial mistakes during the final protective line phase. First, they did not blow up the bridge which linked the Northern and Southern bank of the *Soyang* River. The decision was made since the 6<sup>th</sup> Division commander thought that, without much information of the other fronts, if they blew up the bridge, they would lose the chance of counter-attack and recovering the 38<sup>th</sup> Parallel. In hindsight, this was the wrong course of action to follow since it allowed the enemy's mechanized troop a passage to the defence line.<sup>445</sup> That bridge was only blocked by broken instruments but those were quickly removed and used by the NKPA armoured troops which became an additional pressure to the defender. The newly arrived reinforcement from the 12<sup>th</sup> Division was another blow to the defender.

However, the 6<sup>th</sup> Division's headquarter made another mistake by retreating to the 19<sup>th</sup> Regiment stationed on the eastern bank of the *Soyang* River for fear of encirclement and securing *Hongchon*.<sup>446</sup> The threat of the *Hongchon* Axis was dramatically reduced due to the reinforcing movement of the NKPA 12<sup>th</sup> Division, and the NKPA threat toward *Chunchon* became much greater. Therefore, the 7<sup>th</sup> Regiment, which was in the defence around the *Soyang* River South Western bank and *Bongui* Mountain, received massive pressure from the Eastern and Northern fronts due to these two decisions. Thus, it was struggling to hold onto the final protective line and had to withdraw from *Chunchon*.<sup>447</sup> They also withdrew to *Hongchon* doing a consecutive stalling combat, using the mountainous topography like

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<sup>444</sup> M.S. Son, op.cit., p.195

<sup>445</sup> The Commander of the Engineer's Battalion recommended the blasting the bridge according to the Division Operation Plan but that suggestion was refused. The first communication with the Army headquarters was completed after the 7<sup>th</sup> Regiment was fought with the NKPA in the final protective line on the 27<sup>th</sup> of June which was the breakdown of western front and order of retreat. Excerpted from- Y.J. Yang, *et. al.*, op.cit., p.468

<sup>446</sup> If the NKPA 12<sup>th</sup> Division (*Hongchon* Axis) managed to beat the 2<sup>nd</sup> Regiment and captured *Hongchon*, ROK 6<sup>th</sup> Division would lose the retreating route and be surrounded. Excerpted from- M.S. Son, op.cit., p.196

<sup>447</sup> The ROK Army Headquarter, *HanGukJeonJaengJeonSaRyo:Je6SaDanJeonTuSangBO*, p.113

*Wonchang Gogae* for instance.<sup>448</sup> The NKPA 2<sup>nd</sup> Corps finally managed to occupy *Chunchon* after three days of heavy battle (this was only a 14km advance from the 38<sup>th</sup> Parallel).

This final protective line defence also gave a critical message to the defenders: that, once a technologically-advanced force could use their advantage, it would be tough for the defender to hold on to their defensive line, even though the defender enjoyed the sound advantage of geographical knowledge. In this phase of battle, the ROK 6<sup>th</sup> Division allowed the NKPA 2<sup>nd</sup> Corps to fully utilize their strength of technology and preponderance to allow an outflanking movement from the North Eastern bank of the *Soyang* River to *Chunchon*, because of the misjudgement and tactical mistake in the failure to blow up the bridge. In the battle of *Chunchon*, the NKPA lost a lot more than the ROK did. The NKPA 2<sup>nd</sup> Division lost the chance to envelop the ROK main force in the North of *Seoul* since they failed to occupy *Chunchon* as planned (in a day). Their feet tied for three days due to the 7<sup>th</sup> Regiment's stalling warfare using their advantage of topography. The 12<sup>th</sup> Division (*Hongchon* Axis) also delayed their advance to *Hongchon* and lost the chance to cut off the ROK retreat route in *Suwon* through the outflanking movement, since they had to support the 2<sup>nd</sup> Division<sup>449</sup>

In conclusion, an examination of the battle of *Chunchon* reveals that, in the Korean peninsula topography, which boasts of steep mountains and deep and wide rivers, the technological advantage (the North Korean advantage of fire and mobile power) can be offset by the defender's proper defensive line fortification. In addition, training and command could force the defender to make the most of the fortified defensive line using the advantage of geography.<sup>450</sup> It also demonstrates through the final protective line combat that, even though the defender possessed the geographic advantage (*Soyang* River and *Bonggeui* Mountain), if

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<sup>448</sup> It was located in the middle of road between *Hongchon* and *Chunchon*. It was 600m high and boasted of steep northern slope. Therefore, it was a good place for the defender to wage a stalling warfare. Excerpted from- M.S. Son, op.cit., p.198

<sup>449</sup> The NKPA discussed the strategic and tactical mistakes of the Korean War during the Third Plenum of the Second KWP Central Committee. One of them was the failure of annihilating the enemy capability (the failure of outflanking and annihilation operation). It meant the failure of annihilating the ROK forces around *Seoul* due to several logistical and tactical mistakes. It is certain that the battle of *Chunchon* was one of the main reasons for the NKPA to fail to annihilate the ROK main force around *Seoul*. Excerpted from- M.S. Jang, op.cit., p.152

<sup>450</sup> It was the case in the main resistance line combat.

they cannot utilize it<sup>451</sup> the aggressor will use their technological advantage to punish the defender. This revelation coincides with Biddle's argument on the efficiency of military technology, skill and geography, as well as this project's core argument that the NKPA, who possessed a geographic defensive edge while keeping the decent level of training and command edge, would not be deterred by the technology only.

## 5-2 The US Engagement and the *Naktong* River Line Campaign

### Topography of the *Naktong* River line <sup>452</sup>

The NKPA plan was to annihilate the ROK main force in the *Suwon–Samchok* line in the first phase of invasion and mop up the remnants of the defeated army. This plan was not realized since the ROK main force was not completely annihilated and managed to form the *Han* River defence line, earning crucial time for the US to engage. However, the US engagement did not make much of an impact during the initial phase of war. The NKPA was heavily-armed and well-trained, and the under-armed and ill-trained first US contingent (The 24<sup>th</sup> Division) could not turn the tide of war. After the 24<sup>th</sup> Division was demolished in *Kum* (River)-*Sobaek* (Mountains) defence line, the idea of organizing defence along the *Naktong* River was discussed. Considering various factors such as the UN reinforcement, topography, condition of *Pusan* harbour, Navy and Air Force support, supply and so on, General Walker (The commander of the US 8<sup>th</sup> Army which controlled the US ground forces initially, then

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<sup>451</sup>1) The allowance of outflanking movement from the North Eastern bank of *Soyang* River to *Chunchon* due to the misjudgement.

2) The failure of blowing up the bridge which enabled the NKPA to use their mobile power

<sup>452</sup> R.E. Appleman, op.cit., p.248-262 and 289-487

IMHC, *HanGukJeonJaengSang*, p.295-391

Department of Military History, op.cit., p.66-86

T.R. Fehrenbach, *This Kind of War–The Classic Korean War History (50<sup>th</sup> Anniversary Edition)*, Dulles Virginia, Potoman Books, 2000, p.108-159

controlled all the UN and ROK ground forces afterwards) and his staff chose the *Naktong* River defence line as their final resistance line.<sup>453</sup>

This defence line was organized along the *Naktong* River, and was shaped like an inverted L stretching for 80Km from east-west and 160Km north-south, connecting *Masan-Namji-Nakjongri-Yongdok* from the south-west to the northeast. The *Naktong* Line was composed of three sections. The first sector utilized the *Naktong* River as a natural defence line and linked *Nakjongri-Waegan-Namji*. At that time, the *Naktong* River was at a width of 400-800 meters and a depth of 1-1.5m. The second sector was from *Namji* to *Chindongri* to the west of *Masan*. This sector was from the confluence of the *Naktong* and *Nam* River all the way to the Southern coast. It also has a rough topography featuring *Chontu* Mountain (661m) *Pil-bong* (743m), and *Sobuk* Mountain (738m). The final sector was from *Nakjongril* to *Yongdok*, and included the rugged hills of the *Taebaek* Mountains in the upper *Naktong* region.<sup>454</sup>

Overall, the defence line ran along the rivers and mountains in the *Naktong* region, and these natural obstacles bolstered the frontal defence. Moreover, the well-developed road network from *Pusan* to major towns on the defence line aided interior operations.<sup>455</sup> In addition, the *Naktong* River line was the first defensive line which linked the entire front. The close coordination among defence troops became possible and prevented the NKPA's outflanking movement. Finally, the UN and ROK joint force also established an alternative defence line called "Davidson line" to secure a landing spot (*Pusan*) even in a contingency situation.<sup>456</sup> In conclusion, for the defender, the *Naktong* River line was the defence line which utilized the utmost of topography (steep mountains and river); and for the offender, and it was a defensive line which would require enormous sacrifice to occupy.

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<sup>453</sup> R.K. Flint, T.F. Smith and the 24<sup>th</sup> Division: Delay and Withdrawal, 5-19<sup>th</sup> July, 1950 in Charles E.H. Heller and W.A. Stofft, *America's First Battle (1776-1965)*, University press of Kansas, 1988, p.296 This defence line was also called as the *Pusan* Perimeter or Walker line.

<sup>454</sup> IMHC, *HanGukJeonJaengSang*, p.296

<sup>455</sup> In other words, due to the well-managed road and rail network from *Pusan* (Main supply base) to frontal towns such as *Masan*, *Taegu*, *Yongchon*, and *Pohang*, the UN and ROK troops had an advantage of an effective supply, troop relocation, and improved counter-attack capability by dispatching reserves wherever required. Excerpted from- The Department of Military History, op.cit., p.66

<sup>456</sup> Ibid., p.66

## The Enfeebled NKPA and UN force

The NKPA started to lose their dominance in the areas of technology, training, and preponderance following the UN's engagement. At First, the US Air Force took command in the air. The US initially intended to repel the NKPA with their air and naval power, so they started to use the US FEAF strength. This destroyed the North Korean airpower in a few days.<sup>457</sup> Meanwhile, in late July, the US Navy carrier, Boxer, arrived in Japan with 145 F-51 Mustangs. In early August, the US FEAF had 626 F-80 fighter planes and 264 F-51s which carried out a mission of CAS, strategic bombing strikes, reconnaissance and cargo sorties.<sup>458</sup> Thus, due to the US air dominance, many of the NKPA supply depots were destroyed. They were forced to transport during the night to escape the UN air raid in the day time.

In these circumstances, they could not support their front unit properly. Their armoured units were no exception. They had been so severely damaged in consecutive fights that they no longer had the capability similar to what they had shown in the initial phase of war.<sup>459</sup> The first large tank replacement for the NKPA's August offensive (21 new tanks and 200 tank crews) was almost destroyed by the UN air strikes before they could reach the battle zone.<sup>460</sup> In addition, on the 31<sup>st</sup> of July 1950, the US FEAF and Strategic Air Command began a strategic bombing campaign by B-29s. Due to this strategic bombing, their five major industrial centres *Wonsan* (Oil factory), *Pyongyang* (A railway switchyard and Arsenal, Aluminium mill nearby *Chinnampo*), *Heungnam* (Synthesizing Chemical Factory), *Chongjin* (Iron Works), and *Najin* (Pier facilities)) had been completely demolished. Above all, the

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<sup>457</sup> Truman initially authorized MacArthur to use the Far East naval and airpower in support of the ROK against the entirety of enemy targets south of the 38th Parallel. On the 27<sup>th</sup> of June, General MacArthur had authorization to intervene in Korea with air and naval forces. R.E. Appleman, op.cit., p.28 (Telecon TT3426, 27<sup>th</sup> of Jun, 1950)

<sup>458</sup> Ibid., p.256-257

<sup>459</sup> Ibid., p.264, 376

On 5<sup>th</sup> of August, many of the NKPA division were at half strength; the total of combat strength of its eleven divisions could not have been more than 70,000 and they had no more than 40 tanks. Excerpted from- T.R. Fehrenbach, op.cit., p.113

<sup>460</sup> R.E. Appleman, op.cit., p.264

communication route between North Korea and Siberia was cut off. Therefore, the North Korean combat support capability was virtually exhausted.<sup>461</sup>

Moreover, the ROK division were given effective anti-tank weapons<sup>462</sup> and long-range artillery along with UN forces against the NKPA armoured troops and long-range artillery. The US tank battalion also started to deploy in the *Naktong* River line.<sup>463</sup> This made a big difference in the *Naktong* River line defence campaign. Therefore, for the ROK, their technological vulnerability quickly was overcome and the ROK–UN joint force started to gain the technological advantage. Under these circumstances, the NKPA division deployed in the *Naktong* River line was generally reduced to 50 to 60 percent of fighting strength compared to the initial phase of the war. Ultimately, along with their loss of technological advantage to the UN force, they lost the edge of their training because of the heavy loss of the battle-hardened force, and their morale also dropped due to the poor supply of troops and instrument.

## Success of the Defender and the Relevance of Technology and Geography

The NKPA launched two big offensives (the August offensive and September offensive) in the *Naktong* defence line to occupy *Pusan* and finish the war. According to the NKPA

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<sup>461</sup> R.A. Pape, *Bombing to Win*, Cornell University Press, 1996, p.144-145

<sup>462</sup> The ROK forces was initially equipped with 37mm and M18 57mm recoilless rifle, and M9/M9A1 2.36 Inch Rocket launcher which could not penetrate the NKPA T-34 tank armour. However, during the *Naktong* River line campaign, they were supplied with effective anti-tank weapons such as the M20 3.6 inch rocket launcher and the M20 75mm recoilless launcher. The artillery unit, the weakest link of the ROK Army, was supplied with the new 30 105mm Howitzers on the 12<sup>th</sup> of August and expanded from 6 105mm Howitzer artillery battalions before war to 10 battalions by the 10<sup>th</sup> of September. Excerpted From- Jeonsapyeonchaneuiwonhwae, *GukBangSa2*, Seoul, ROKMND, 1987, p. 328, 363

<sup>463</sup> On the 3<sup>rd</sup> of August, 1950, the 89<sup>th</sup> Medium Tank Battalion, for the first time, arrived in Korea with 50 M4A3 tanks to be attached to the US 25<sup>th</sup> division. By the 19<sup>th</sup> of August, there would be 500 tanks, outnumbering the enemy armour by more than five to one. Excerpted from- IMHC, *HanGukJeonJaengSang*, p.305 and T.R. Fehrenbach, op.cit., p.113

supreme commander's order 81 (13<sup>th</sup> of August, 1950),<sup>464</sup> they pushed to occupy *Pusan* before the 15<sup>th</sup> of August. The NKPA troops were ordered to cross the river and attack and chase the ROK and UN forces to *Pusan* before a formidable defence line was formed. In detail, their main attack was heading to *Taegu* while they attacked the entire approachable route, and then they planned to exploit the breakthrough in any route.<sup>465</sup> However, the NKPA's August offensive reached the critical point without even occupying *Taegu*, let alone *Pusan*. Therefore, they prepared the last offensive from the 21<sup>st</sup> of August to the 30<sup>th</sup> and launched the September offensive. Their operation directive was to attack hard at the *Naktong* defence line through two echelons advancing from the West and North, and then envelop and destroy the ROK and UN main forces around *Taegu* and *Yongchon*, ultimately wiping out the enemy operation base in *Pusan*.<sup>466</sup> However, those two attempts were foiled.

In this campaign, the defender possessed the geographic edge due to the nearby wide and deep river and steep mountains along the defensive line, and also had a logistical advantage due to the relatively well-developed road and rail network from the defender's main base to the frontal towns. The NKPA was slow to cross the river because of the loss of personnel and instruments through consecutive battles before they reached the *Naktong* defence line. This gave crucial time for the ROK and UN troops to regroup and fortify their defence line. In addition, because of the improved military command, training, and morale of the UN and ROK forces<sup>467</sup>, they were crucially able to use the defensive topography, and thus could

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<sup>464</sup> The 15<sup>th</sup> of August is the liberation day from the Japanese occupation: it has, therefore, a significant meaning. Their intention to occupy the entire Korean peninsula till that date was also shown in the NKPA's propaganda leaflet on the 6<sup>th</sup> of August and *Kim Il-sung's* visit to *Suanbo* (The NKPA Frontal Headquarter) on the 20<sup>th</sup> of July where he urged the NKPA to occupy *Pusan* till the 15<sup>th</sup> of August. Excerpted From- IMHC, *HanGukJeonJaengSang*, p.341

<sup>465</sup> *Ibid.*, p.302

<sup>466</sup> Sahoiguahakryeoksayeonguso, *JoSeonJeonSa25-HyunDaePyeonJoGukHaeBangJeonJaengSa1*, Pyongyang, Gwahakbaekgwasa jeonjonghabchulpansa, 1981, p.272

<sup>467</sup> In July, the ROK President placed the ROK forces under General MacArthur, the United Nations commander. Excerpted from- R.E. Appleman, *op.cit.*, p.111-112

From then on, due to the handover of military command to the UN, the ROK forces which suffered from the incompetent command of the Headquarter due to inexperience and political consideration, received the better command from the Headquarters. The ROK forces also had experienced the

maximize their geographic edge. According to Biddle, under these conditions the offender would struggle even with a technological advantage. However, the NKPA had already lost their advantage of technology, training and preponderance.<sup>468</sup> The NKPA was no match with the ROK and UN forces in any respect. Therefore, the NKPA August and September offensive was doomed to fail.

In conclusion, this campaign gives us a few lessons. Firstly, from the NKPA's August and September offensives, one can learn that having the technological advantage would have a much more devastating effect on an ill-prepared opponent in the open field. In these two offensives, the UN forces possessed the technological advantage while the NKPA became weakened in terms of training and equipment compared to the initial phase of war due to the relentless US air bombardment and frictional consecutive ground battles. However, the NKPA was ordered to attack the UN and ROK defence line which, in most cases, had to go through the open field in the *Naktong* River bank or the open slope of the mountains. In the end, they failed to achieve their objective with much cost which clearly shows that the technology would become much more effective against the ill-prepared enemy in the open field. Secondly, once the technologically advanced defender can hold the defence line with the proper fortification using their geographic edge, command, and training, they can guarantee the maximization of their geographic edge, thus rendering the offender's frontal attack as suicidal. Thirdly, the Korean Peninsula is an adequate place to wage a defensive warfare. The steep mountainous topography and deep and wide rivers, on the one hand would

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several months of hard fight and their morale was also raised due to the better military supply following the US engagement.

<sup>468</sup> The fact of how much the NKPA had struggled after the UN engagement due to the UN's military technology dominance (especially their Airpower) was shown in their discussion regarding strategic and tactical problems during the Third Plenum of the Second KWP Central Committee where they indicated the immaturity of their night and highland combat skills under the enemy's predominant firepower (especially the UN air supremacy) along with the lack of supply from the rear to front among several military defects. In this discussion, they also presented several suggestions to fix their military defects while many were regarding how to overcome various technological vulnerabilities such as the improvement of highland and night combat skills under their air supremacy, mastery of land mine warfare to weaken the enemy mobility, enhancing the logistical capability. Excerpted from- M.S. Jang, op.cit., p.152-153

prevent the offender from using their fire, air, and mobile power<sup>469</sup>, on the other hand give a natural cover for the defender from the enemy fire, mobile, and airpower.

## 5-3 Chinese Engagement and the New Phase of War

### The Initial Objective, Strategy and Capability of PVA

The NKPA was exhausted following the failure of two offensives and fled to the North following the UN success on the *Inchon* landing operation and the successful counterattack on the *Naktong* River line. The Korean peninsula reunification under the US guidance would not be welcomed for the Chinese. They were reluctant to see a capitalist regime in their backyard and wanted a buffer zone to prevent direct US influence to the continent.

The PRC warned against entry into the Korean War in various ways. On the 25th of September, a proxy of the Chief of Staff, PLA, directly warned *K.M. Panikkar*, India's ambassador to China said: "Chinese people will not tolerate the US Forces' crossing of the 38<sup>th</sup> Parallel".<sup>470</sup> On the 3<sup>rd</sup> of October, the PRC Foreign Secretary, *Zhou Enlai*, warned again the Indian Ambassador that "China will not stand idly by if the UN forces cross the 38th Parallel".<sup>471</sup> However, the US ignored these warnings due to the optimistic mood of war and their belief that they could beat the Chinese since they had petty equipment.

In 1950, the Communists had won the Chinese civil war only one year before and had not gotten over the devastation of the longstanding war. In terms of military capability, even though the PRC possessed a battle-hardened 5 million veterans in the Army, the Navy and the

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<sup>469</sup> For example, the NKPA could not use their mechanized power properly due to the natural barrier in the *Naktong* River and *Sobaek* Mountains.

<sup>470</sup> Jeonsapyeonchaneuiwonhwae, *HanGukJeonJaengSaJe4-ChongBanGyeokJeonGi(15.09.1950-30.11)*, Seoul, ROKMND, Jeonsapyeonchaneuiwonhwae, 1971, p.488

<sup>471</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa* (Korean Translation of The Research institute of Military History, Chinese Academy of Military Science, *Chinese People's Volunteer Army's War history of Resist America and Aid Korea*, Beijing, Military Science Publishing Co, 1988), Seoul, Segyungsa, 1991, p.8

Air Force were still in the early stage of development and Army equipment was really outdated.<sup>472</sup> *Mao* hesitated to send his troops and his hesitation as was shown in his telegram to Stalin on the 2<sup>nd</sup> of October. However, after careful discussion of the Central Committee of the Communist Party of China under the supervision of *Mao Zedong* from 1<sup>st</sup> of October to 15<sup>th</sup> of October, the PRC finally decided to send their troops. *Mao* explained his decision thus: “If we do not dispatch our troops to Korea, the enemy will approach the *Yalu* River, internal and international reactionary element will increase. Therefore, we will be in a disadvantageous position. More than anything else, the North Eastern Border Defence Army will be contained and the South Manchuria would be in danger”.<sup>473</sup>

*Mao* assumed two possible scenarios of military action in Korea. One was the problem-solving, which was to eliminate the US troops within Korea or drive them out of Korea. Another was war expansion: waging a general war with the US. The scenarios aimed at eliminating the US troops within Korea or driving them out of Korea. They assumed that, even though there was a possibility of general war with the US because of the entry of the Korean War, if they eliminated the US troops, the situation would turn to favour the revolutionary force and China. The possible general war would be of limited scale and would not last long, and they could drag the US into the negotiation table on their terms.<sup>474</sup> Therefore, their military objective was to eliminate the US force or at least give them a crucial blow to drag the US to the negotiation table.

The PVA initially avoided an offensive against the UN forces, which possessed a dominant mobile and firepower, and intended to conduct a strategic defence in North Korea. They initially dispatched twelve divisions and planned to move to the mountainous area (*Tokchon*) about 120miles northeast of *Pyongyang*. Here, the UN troops would hesitate or cease advancing onward, check the enemy advance from *Wonsan* and *Pyongyang*, and earn time for their troops to train and equip. On the 5<sup>th</sup> of October, *Mao* informed *Zhou Enlai* of his specific plan for fighting a defensive war in Korea. They planned to build two or three defensive perimeters around the *Tokchon* areas north of the *Pyongyang* and *Wonsan* Railway

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<sup>472</sup> Ibid., p.9

<sup>473</sup> Ibid., p.10

<sup>474</sup> Ibid., p.11

and South of the *Tokchon-Yongwon Road*.<sup>475</sup> In this first phase of war (strategic defence), they planned to destroy the UN troops in front of the well-constructed trenches once the UN troops advanced. Meanwhile, the PVA would wait for Soviet weapons to become better equipped. Then they would coordinate with the NKPA to launch the offensive against the UN troops.<sup>476</sup>

Their strategy applied in the Korean War can be inferred from *Peng Dehai* (The PVA Supreme Commander)'s speech in the first PVA officer meeting in *Shenyang*.<sup>477</sup> In his speech at the PVA High Ranking Officer meeting, he spoke regarding the issue of strategy, saying "Our current task is to preserve and protect a revolutionary base whereby to annihilate the enemy force at an appropriate time while we will actively assist the Korean people fighting against the invaders". Given the technical and ordnance superiority of the UN forces and the narrowness of the Korean peninsula, he concluded that, "The mobile war strategy that we employed in our civil wars does not fit in with the Korean battleground" In his view, the best plan was to fight a "combined positional and mobile warfare". He explained that "We will firmly resist the enemy advance to keep it from forwarding even one more step; meanwhile, we will make a quick decision to strike out by penetrating into enemy's rear wherever, there is a weak point". Finally, *Peng* reiterated that "our present task is to preserve a base but, more importantly, is to annihilate the enemy strength. Therefore our defence is not completely defensive. It should enable us not only to defend our position but also to eliminate the enemy."<sup>478</sup> The PVA adopted the strategy that under the enemy's technological superiority, they lure the enemy in deeply while checking the enemy advance using the well-constructed trench in the Korean peninsula's steep mountain<sup>479</sup> (Strategic defence). Once the enemy

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<sup>475</sup> S.H. Zhang, *Mao's Military Romanticism—China and the Korean War, 1950-1953*, University press of Kansas, 1995, p.87

<sup>476</sup> *Ibid.*, p.79

<sup>477</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.13

<sup>478</sup> S.H. Zhang, *op.cit.*, p.89-90

<sup>479</sup> To review the *Mao's* military principles of strategic defence, strategic offensive, how to spot and utilize the enemy weakness, mobile warfare, and war of attrition and annihilation, See) the Selected Works of Mao Tse-Tung Volume 2, pecking, foreign language press, 1965, p.102-106, 157-179

showed their weakness,<sup>480</sup> they planned to turn to the offensive as quickly as possible, and envelop and annihilate them.

In terms of tactics, to escape from the UN firepower and reach the UN defence line without much casualty, the PVA used the bad weather and invisibility of night time, and hard to pass routes which would avoid enemy observation. During the assault, they attacked the enemy on either flanks or one flank with their main force while the support attack drew the enemy attention and firepower.<sup>481</sup> Once this attack was successful, they went into the enveloping stage. They cut off the enemy's main operation route and enveloped the enemy. Ultimately, if the enemy retreated from the front, they would destroy them in the pre-occupied enemy main operation route. The frontal unit was encouraged to carry as many grenades as possible since they were lacking firepower to support the assault, and heavy instrumentation could hamper mobility in the mountainous topography.<sup>482</sup>

## Progress of War Following the PVA Engagement and the Relevance of Geography and Technology

### The PVA 1-3<sup>rd</sup> Offensives

The NKPA already lost the will to fight due to the shock of the *Inchon* landing operation and the immense casualties and costs suffered in the August and September offensives. Consequently, the UN forces' advance speed was incredibly fast. They occupied the

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<sup>480</sup> On the 24<sup>th</sup> of October, MacArthur removed the advance restriction line which was set by the UN forces General Headquarter operation order 2 (2<sup>nd</sup> of October) and 4 (17<sup>th</sup> of October). Therefore, the US force in the Western front (the 8<sup>th</sup> US army) and the Eastern front (the US 10<sup>th</sup> Corps) were entitled to advance with all speed, utilizing all the available forces. However, they were exposed to great danger, as they dashed in disarray as if they had been in competing in a race to the border. The PVA noticed the UN troops' weakness and turned to the offensive to envelope and annihilate them. Excerpted from- IMHC, *HanGukJeonJaengJung*, Seoul, IMHC,1996, p.98

<sup>481</sup> During the Korean War, they would usually attack the ROK Army on the flank which was under-armed, lack of training, and suffering ill-command.

<sup>482</sup> Department of Military History, op.cit., p.114 and Y.H. Choi, op.cit., p.248

strategically important cities on the Eastern Front (*Wonsan*) and Western Front (*Pyongyang*) on the 10<sup>th</sup> of October and the 20<sup>th</sup> of October, and kept advancing toward the MacArthur line.<sup>483</sup>

However, upon crossing the *Chongchon* River, MacArthur overturned his operation order (no more limits were placed upon the advance) and ordered his troops to advance to the border line of North Korea and China. This 'MacArthur line' was the narrowest straight defence line in the Korean Peninsula. As they advanced toward the North, the topography became rougher and their defence front broadened. In addition, the UN unit's competitive race to the border had serious problems. Most of all, the UN Forces suffered ill communication and cooperation between adjacent units. Because of the hasty, poorly coordinated and communicated advance, the Marching North Operation experienced several problems such as an overstretched defence front and the scattering of the advancing troops. Eventually there was a wide 50 mile wide gap between the Western and Eastern Front. Therefore, they were in danger of being defeated one by one once a breakthrough was made in this wide gap and the enemy were allowed to infiltrate to their rear.<sup>484</sup>

The PVA initially planned a strategic defence. They could not miss this chance and launched the first offensive (25<sup>th</sup> of October–5<sup>th</sup> of November). *Mao* ordered a surprise attack to annihilate the ill-equipped ROK 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> Division in the Western front and make a breakthrough and infiltrate the enemy rear. After they were able to cut the US and British forces operation route, they would destroy the US and British troops while ambushing the advancing troops and deploying minimum defensive forces in the Eastern Front.

Accordingly they made a surprise attack on the ROK 1<sup>st</sup> Division in *Unsan* and the 6<sup>th</sup> Division in *Onjong-ri*. Their initial operation was successful but was not fully exploited since the ROK 1<sup>st</sup> Division and 6<sup>th</sup> Division kept a hold of *Yongbyon* and *Piho* Mountain. This did not allow the PVA to infiltrate to the UN troops' rear line. However, the PVA struck a fatal

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<sup>483</sup> It was drafted according to the MacArthur Operation Order 4 and the narrowest straight defence line in the Korean Peninsula running from *Sonchon* in the Yellow Sea to *Songjin* in the East Sea. It kept the principle of the September 27 directive (Do not stimulate the Chinese and Russian). Excerpted from- B.C. NO, op.cit., p.92-99

<sup>484</sup> Department of Military History, op.cit., p.110

blow at the ROK 1<sup>st</sup> and 6<sup>th</sup> Division and advance to the North of *Chongchon* River.<sup>485</sup> After the first offensive, the PVA analysed the battle of *Unsan*, published the education material called “The Conclusion of the Battle of *Unsan* Experience” and distributed it to their unit. In that material, they regarded highly the US forces’ cooperative operation capability amongst their infantry, tanks, and artillery. They also thought the US airpower would be a great threat to them. They concluded that the US infantry was relatively weak, feared death and did not possess the required courage during the battle. They also thought that the US forces in general had a weakness in night and close combat, because of a heavy reliance on the airpower, artillery, and tank forces, which would be thrown into chaos once they made a breakthrough. They would have no answer once they cut off the supply route.<sup>486</sup> All things considered, the PVA drafted the combat principles as below:

- 1) Outflank the enemy as quickly as possible
- 2) Cut off the enemy rear with the main force
- 3) Give a first consideration to night and mountains combat
- 4) Keep communication close between small units

These strategic and tactical approaches were almost identical to the ideas outlined in *Peng*’s speech regarding strategy and tactics before their engagement (spotting the enemy weakness, dispersing the enemy main forces’ attention, outflanking, and cutting off the operation route, enveloping and destroying the retreating enemy unit) and were usually observed by the PVA. In addition, they evaluated that the ROK forces displayed immaturity in almost every area except for showcasing a reasonable level of fighting spirit. The PVA also thought that the firepower and combat capability of the ROK forces was less than 1/3 of those of the US forces. Therefore, the PVA usually attacked the ROK units to outflank or make a breakthrough.<sup>487</sup> In conclusion, the PVA kept their style of mobile warfare strategy (dispersing attention and outflanking, enveloping and destroying the enemy) during their offensive. After the first offensive, the PVA units were exhausted and short of food and ammunition. In the meantime the NKPA also needed time to regroup. Therefore, on the 4<sup>th</sup> of November, *Peng* decided to take the “Induce and counter-offensive strategy as the next

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<sup>485</sup> Y.H. Choi, op.cit., p.243-245

<sup>486</sup> Department of Military History, op.cit., p.118

<sup>487</sup> Y.H. Choi, op.cit., p.253

operation policy”.<sup>488</sup> This was the strategy the PVA had utilized in their first offensive. They planned to lure the UN troops deep into their territory, strike the flank units first and then infiltrate and exploit the breakthrough.

On the UN side, after the PVA offensive ended, they planned a final offensive to win the Korean War. However, the UN forces failed to evaluate the enemy situation accurately. On the 9<sup>th</sup> of November, The UNC notified the US 8<sup>th</sup> Army that the Chinese might have sent around 76,800 regular troops into North Korea.<sup>489</sup> Since the 8<sup>th</sup> Army also estimated that the numbers of PVA soldiers would be around 60,000, they believed the UNC notice and planned the Christmas offensive based on the estimate. The number of PVA and NKPA totalled around 420,000, which was far more than the 8<sup>th</sup> Army estimates. The misjudgement of numbers was due to the lack of reliable strategic intelligence but it was also caused both by their heavy reliance on the aerial reconnaissance and PVA’s covert and night time manoeuvre.<sup>490</sup>

The UN forces also underestimated the PVA combat capability. They thought the PVA combat capability was better than the NKPA’s but their morale was quite low due to poor supply. They also thought that, even though the PVA was experienced at night combat and mountainous manoeuvres using machineguns and trench mortars, they assessed that their fire and mobile power was quite weak. This was because their weaponry was usually American or Japanese ones taken during the Chinese civil war or Second World War, their artillery was borrowed from the NKPA, and they possessed a small numbers of tanks.<sup>491</sup>

Based on this false analysis, the UN forces launched the ‘Christmas offensive’ on the 24<sup>th</sup> of November to repel the NKPA and PVA, and liberate the Korean peninsula. Their offensive was concentrated on the *Kangye-Huichon* line where the communist Army main supply line was located. In the initial phase of this offensive, the PVA allowed the UN forces to advance deep into their territory and, once they spotted the UN forces’ weakness of long operation line, launched a counter-offensive on the 25<sup>th</sup> of November as planned. They outflanked the

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<sup>488</sup> IMHC, *HanGukJeonJaengJung*, p.174

<sup>489</sup> IMHC, *CheongChongGangJeonTu*, Seoul, IMHC,1985, p.170

<sup>490</sup> IMHC, *HanGukJeonJaengJung*, p.179-180

<sup>491</sup> Department of Military History, *op.cit.*, p.124

ROK 2<sup>nd</sup> Corps on the right flank and planned to envelop the UN forces in two circles. The PVA 38<sup>th</sup> Army (3 Infantry divisions) as inner circle envelopment troops were targeting *Yongwon-ri*, and the 42<sup>nd</sup> Army (3 Infantry divisions) were the outer circle envelopment troops. They had planned to advance to the *Pyongyang–Wonsan* line in this counter-offensive. Their counter-offensive was a massive success. Their outer circle envelopment was not successful because of the US 1<sup>st</sup> Cavalry Divisions' hard fight and their eventual success in checking the PVA 42<sup>nd</sup> Army element's enveloping movement in the North of *Sunchon*. But their inner circle envelopment was successful and the US 2<sup>nd</sup> Division suffered a heavy loss due to the retreat route cut off by the PVA 38<sup>th</sup> Army element, later named the "Indian Gauntlet" or "Tragedy of *Kunwu-ri*." <sup>492</sup>

The PVA adopted the same strategy in the 2<sup>nd</sup> offensive as in the first offensive but its better result was attributable to the success of outflanking the ROK 2<sup>nd</sup> Corps and cutting off the US 2<sup>nd</sup> Division retreat route from the original position in *Kunwuri* to *Sunchon* in *Kalgoge* (Mountainous pass). This was unlike the first offensive, whose enveloping movement was foiled at *Piho* Mountain and *Yongbyon*. Ultimately the UN forces lost their stronghold at the strategically important *Cheongchon* River and decided to withdraw the defence line around the 38<sup>th</sup> Parallel because of the fear that they would be surrounded by the outnumbering PVA. They had adopted the outflanking and enveloping strategy using the mountainous gap between the Western front US 8<sup>th</sup> Army and Eastern front 10<sup>th</sup> Corps during the night time. <sup>493</sup>

The UN forces decided to lay the defensive line running from the southern bank of the *Imjin* River, *Hwachon* to *Yangyang* in the East Sea. The PVA countered and launched the 3<sup>rd</sup> offensive (30<sup>th</sup> of December, 1950–7<sup>th</sup> of January, 1951). *Peng* was pessimistic about launching another offensive and wanted two or three months' time to regroup and rearm themselves, *Mao*, however, ordered the offensive be launched again, mentioning "If we stop our offensive, the 38<sup>th</sup> Parallel would be fixed; therefore, we need to chase the UN troops". <sup>494</sup>

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<sup>492</sup> Y.H. Choi, op.cit., p.259-260

<sup>493</sup> R.E. Appleman, *Disaster in Korea: The Chinese Confront MacArthur*, Texas A & M University Press, 2009, p.294-296, Department of Military History, op.cit., p.132, and Y.H. Choi, op.cit., p.272-273

<sup>494</sup> Y.H. Choi, op.cit., p.281-282

Because of this chasing offensive, the UN forces again lost *Seoul* and retreated to the *Pyongtaek-Ansong* Line.

However, the miraculous PVA victory did not last until the end of the Korean War. After analysing the PVA's 1<sup>st</sup>-3<sup>rd</sup> offensive, one can easily conclude that the offenders could overcome the defender's technological prowess through shrewd strategies and tactics, using their experience, training, command, manoeuvre and so on as the PVA did. However, in modern warfare, there is a certain limit to an offender's prowess with human elements against the defender's technological dominance. Even though there were brilliant PVA strategies, tactics, training, and command, the UN forces' military debacle was also because of their ignorance and slighting attitude toward the PVA, and their tactics and strategies. They did not know the number of PVA troops sent to Korea and looked down on the PVA capability. These mistakes led to the decision to launch the catastrophic Christmas offensive. Their ignorance and unfamiliarity with the PVA's strategies and tactics (allurement, outflanking, enveloping and destroying the retreating forces) also helped contribute to the early PVA success.

In terms of geography, the UN forces did not study enough of the Korean topography. Firstly, the advance beyond the MacArthur line was risky due to the fact that the defence front would be widened and they would meet the steepest topography in the Korean peninsula. Secondly, without the coordinated and paralleled advance, they would be easily penetrated and encircled due to the widened defence sector and mountainous topography. On the other hand, the PVA took a chance on the exposed UN forces' weakness. They penetrated the ill-coordinated UN forces' defence line utilizing the manoeuvre of mountainous topography and eventually encircled the UN forces. Obviously, the geographic factor contributed significantly to the outcome of offensives. Ultimately, the lack of UN preparation and understanding of the PVA's well-prepared tactics was the catalyst for the UN forces' military debacle at the time.

## PVA 4<sup>th</sup> Offensive

The argument that there is a certain limit of an offender's prowess with human elements when compared to a defender's technological dominance can be examined in the PVA 4<sup>th</sup> - 6<sup>th</sup>

Offensives and the UN Forces' counter-offensive strike. Once the PVA 3<sup>rd</sup> Offensive had run out of momentum, the UN forces, which recovered from the panic of the early stage of PVA engagement, started to plan the counter-offensive.<sup>495</sup> Before they launched the counter-offensive; they planned a limited size reconnaissance in force operation called "Wolfhound" to probe the PVA deployment, size, and future offensive plan as well as to contain the communist forces' pressure on the Central Eastern front.<sup>496</sup> Through the reconnaissance in force, the UN forces recognized that the PVA defence line was running from *Suwon* to *Ichon*, and their firepower support and supply was quite poor as well as the fact that the PVA could not launch the offensive in the near future.<sup>497</sup>

In addition, the UN defence line became stabilized with better morale. The UN forces' headquarters also believed that since the communist forces were still attempting to expel the UN troops, if the UN forces stood still in the fixed defence line, the UN force would inflict much more damage. Therefore, rather than securing the area, the UN forces planned to attack the enemy while they were in the process of moving, since it would cause a maximum amount of damage or delay to their offensive actions. Eventually, the UN forces decided to transform their defensive operations into offensive ones.<sup>498</sup> Before the UN troops launched the counter-offensive, General Ridgway drafted the operation guide line and distributed it to the relevant units. This draft was later known as "The Crusher Tactics".<sup>499</sup>

- (1) To contain the PVA's human wave tactic which is based on their preponderance, our friendly troops will exploit our fire and mobile power advantage to the maximum degree. To achieve these blood shedding tactics (Inflict as many casualties and costs upon the enemy as possible) with the advantage of our fire and mobile power, the close coordination of all branches of services such as artillery, infantry, cavalry

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<sup>495</sup>On the UN side, Matthew B. Ridgway was appointed as the US 8<sup>th</sup> Corps commander following the sudden death of General Walker due to the car accident on the 23<sup>rd</sup> of December.

<sup>496</sup> During the 3<sup>rd</sup> communist offensive, while the PVA stopped chasing the UN troops, the NKPA in the Central Eastern front and the local guerrilla in the UN forces rear line tried to make a breakthrough in *Wonju* and outflank to *Chongju* and *Taejon* to envelope the UN main force in *Pyongtaek* and *Ansong*. Excerpted from- Department of Military History, op.cit., p.137 and Y.H. Choi, op.cit., p.285-286

<sup>497</sup> Y.H. Choi, op.cit., p.301

<sup>498</sup> IMHC, *HanGukJeonJaengJung*, p.364

<sup>499</sup> Department of Military History, op.cit., p.366 and IMHC, *HanGukJeonJaengJung*, p.138

(Armoured troops) has to be achieved. Air force and Navy will also be required to give fire support for the ground operation.

- (2) My objective is killing the enemy rather than securing a territory. Likewise, the main operation objective lies in minimizing the friendly losses and maximizing the damage to the enemy troops and material.
- (3) In any assault, performing a reconnaissance in force with a smaller unit is advisable. Only after the enemy situation is identified, we should increase the level of contact with the enemy such as more intense combat patrols or all-out attack to achieve the limited goal.<sup>500</sup>
- (4) During the assault, the lateral coordination and maintenance of the links with the adjacent units is more crucial than the advance speed. To achieve this, control lines will be gradually established. To prohibit attacking echelons from protruding outside the friendly front line or to prevent them from advancing by-passing the enemy, all the attacking echelons must obtain prior permission from the Corps-level Commanders before crossing a control line.<sup>501</sup>
- (5) If the large scale enemy offensive is launched, the friendly forces will withdraw in order to a planned defensive line, while maintaining communication and coordination with adjacent units. In this circumstance, we should not cause the imbalance of the front line which could be created by the hasty withdrawal of a unit since this imbalance would allow the enemy to break through our front line or penetrate into our rear area.<sup>502</sup>
- (6) All the units in the process of withdrawal should maintain the contact with the enemy, carry out a delaying action, and if there is any chance, we have to inflict as much bloodshed as possible on the enemy. We need to try to trap the enemy main force into

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<sup>500</sup> This operation guideline is to avoid the adventurous operation and prudently attack limited enemy targets in an effort to avoid the unnecessary loss of friendly forces.

<sup>501</sup> This is a Meat grinder type of tactic which places emphasize on the annihilation of enemy troops rather than speed or occupying territory.

<sup>502</sup> By keeping the connection of the defensive line, it could prevent the PVA from outflanking or breaking through the UN troops.

the killing zone, and once successful, we should strike them with concentrated ground and air firepower.<sup>503</sup>

- (7) When the enemy's offensive reaches its limit, the friendly force should immediately turn into counter-attack. On the phase of counter-attack, through continuous manoeuvring, we have to compel the enemy to consume and bloodshed.<sup>504</sup>

Even though the UN troops retreated to the 37<sup>th</sup> Parallel, they started to better understand the PVA's strength, capability, strategy, and tactics, and prepared their countermeasures. They also developed tactics and strategies which could maximize their strength (technology and supply) as shown in the Ridgway operation guide lines.

In addition, the US 10<sup>th</sup> Corps which was under the direct control of Far East Command (FECOM) until the 26th of December, 1950, and took charge of the Eastern Front, was assigned to the 8<sup>th</sup> Army for the command unification. This came from the instructions of the PVA 1-2 offensives, where the PVA utilized the 50 mile gap between the ill-coordinated 8<sup>th</sup> Army in the West and 10<sup>th</sup> Corps in the East to infiltrate to the 8<sup>th</sup> Army rear.<sup>505</sup>

At this point, Ridgway also recognized the fatal PVA weakness was logistics issues and tenacity of offensive as a consequence. He discovered that the PVA offensive up to that point had only lasted 8 days<sup>506</sup> and there was one month gap from one offensive to another. He thought the main reason for stopping the offensive at the critical stage (8 days after launching offensive; the exploitation stage) was a fundamental logistics problem.<sup>507</sup>

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<sup>503</sup> They tried to establish the concept that withdrawal is not a mere retreat but wanted to use it as a bait to lure the enemy and destroy them with their technological advantage.

<sup>504</sup> Using the mobile power advantage, the UN troops targeted at annihilating the enemy capability.

<sup>505</sup> Far East Command (Controlled the all the US forces in Japan, ROK, the Philippines);

-Commanding general of FECOM also became the Commander-in-Chief, UNC (CINCUNC)

- 8th Army, FEAF, Naval Forces Far East (NAVFE) was also under control of FECOM

Excerpted from- G.L. Rottman, *Korean War Order of Battle-United States, United Nations, and Communist Ground, Naval, and Air Forces, 1950-1953*, Praeger Publishing, 2002, p.1-2

<sup>506</sup> 1<sup>st</sup> Offensive (25<sup>th</sup> of October-1<sup>st</sup> of November), 2<sup>nd</sup> Offensive (25<sup>th</sup> of November-2<sup>nd</sup> of December), 3<sup>rd</sup> Offensive ( 31<sup>st</sup> of December, 1950-7<sup>th</sup> of January, 1951)

<sup>507</sup> Y.H. Choi, op.cit., p.311

Accordingly, the UN forces expanded their air interdiction efforts to worsen enemy logistics and planned to attack the enemy once the enemy supply reached a critical point. However, in the eagerness to catch and destroy the withdrawing UN Forces, the advancing PVA troops abandoned their usual methods of moving only at night under strict marching and camouflage discipline. Therefore, the UN Air Forces inflicted terrible damage on the PVA until they returned to the original moving principle in the middle of December. Also, the supply to the PVA divisions was mainly by porters or animals. Therefore, at this point, the PVA logistics were too meagre to maintain good shape.<sup>508</sup> At the turn of year, the better organized and prepared UN troops became ready to launch the counter-offensive against the ill-supplied PVA and on the 25<sup>th</sup> of January, 1951, they launched a counter-offensive at the Western front (25<sup>th</sup> of January, Thunderbolt operation) which was followed by the Central and Eastern Front Counter-Offensive. (5<sup>th</sup> of February, Round-Up operation) The UN Forces managed to advance an average of 30-60km on all fronts from their original position around the 37<sup>th</sup> Parallel. The progress of battle in 1951 was not favourable to the PVA, unlike their 1<sup>st</sup> to 3<sup>rd</sup> offensives, since the UN troops did not underrate the PVA's capability anymore. They had started to establish a good understanding the PVA's strategy and tactics as well as being ready to use their strength in technology.

According to the plan in *Peng's* mind<sup>509</sup>, while the remaining PVA in the Western front halted the UN troops from advance using the natural barrier of the *Han* River, the PVA's main attack was initially assembled in *Kapyong* and *Hongchon*. They launched the 4<sup>th</sup> Offensive (11<sup>th</sup> of February–16<sup>th</sup> of February) in the salience (*Yangpyong* and *Hoensong*) in the UN Central front. The military objective of this offensive was initially attacking the ROK 8<sup>th</sup> and 3<sup>rd</sup> Division, whose units were insufficient in mobile and firepower and stationed in *Hoensong*. Also to be attacked were the UN troops in *Chipyong-ri* which belonged to *Yangpyong* County afterwards. Ultimately, they extended their front line to the *Wonju–Chungju* line. The ROK 3<sup>rd</sup> and 8<sup>th</sup> Division was crushed by the outnumbered communist forces (11 PVA and NKPA divisions attacked *Hoensong*) and withdrew to *Wonju*. At that moment, Ridgway tried to secure *Wonju* and *Chipyongri*. *Wonju* was located in the heart of the Central front and was a major transportation point. Once the UN forces lost *Chipyong-ri*,

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<sup>508</sup> C.R. Shrader, *Communist Logistics in the Korean War*, Greenwood Press, 1995, p.173-174

<sup>509</sup> "Seize and destroy the UN main forces on the Central front"

there would be a crevice between the US 9<sup>th</sup> corps in the West and 10<sup>th</sup> Corps in the East, so the right flank of the UN's main force would be exposed.<sup>510</sup>

The battle of *Chipyong-ri* (13<sup>th</sup> of February–16<sup>th</sup> of February), however, was a strategically important case since it could demonstrate the difference of UN approaches to the PVA offensive. Following the success on the *Hoengsong* front, the PVA units were flocking to the *Chipyong-ri* area.<sup>511</sup> They first cut off the retreat route to the South, enveloped the forces in *Chipyong-ri*, and laid a strong defence line around *Chipyong-ri* to repel any reinforcing movement. However, the UN troops in *Chipyong-ri* did not retreat in a disorderly fashion as they had done in *Kunwu-ri* during the 2<sup>nd</sup> PVA offensive. They secured firepower dominance through close coordination between the ground and air, managed to unshackle the surrounding forces through the much-strengthened salvation operation, and ultimately repelled the PVA, who bore many logistical costs and casualties during the battle.<sup>512</sup>

The PVA 4<sup>th</sup> Offensive, especially the battle of *Chipyong-ri* is quite the thought provoking case. From the PVA's point of view, they started to realize the reality that their strategies and tactics were not a panacea to the UN troops, who were adequately equipped and soundly commanded. The PVA's strategy and tactics were still working well against the ROK forces that were ill-equipped and badly commanded. In addition, they also learned that even though there was a breakthrough or success from an outflanking movement, it came at a high cost to achieve it, resulting in many casualties, unlike the 1-3<sup>rd</sup> offensives. During the offensive, the PVA tried to capture *Wonju* following their success in *Hoengsong*. On their way to *Wonju*, they lost around 30,000 personnel due to the UN troops' blood-shedding tactic. Because of the supply crisis coupled with the defeat in *Chipyong-ri*, they ceased their offensive and started to withdraw.<sup>513</sup>

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<sup>510</sup> Y.H. Choi, op.cit., p.312-315, Department of Military History, op.cit., p.140, IMHC, *HanGukJeonJaengJung*, p.397-406, and KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.104-107

<sup>511</sup> *Chipyong-ri* was held by the US 23<sup>rd</sup> Regiment of 2<sup>nd</sup> Division.

<sup>512</sup> T.R. Fehrenbach, op.cit., p.251-266, Y.H. Choi, op.cit., p.315-323, IMHC, *HanGukJeonJaengJung*, p.406-413, and KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.108-117

<sup>513</sup> Department of military history, op.cit., p.140

After the failure of the PVA 4<sup>th</sup> offensive, the UN forces organized the 2<sup>nd</sup> counter-offensive and launched it on the 11<sup>th</sup> of February from the Western Front to ease the pressure of Central Front, and expanded it to the entire front. The offensive last until the PVA launched the 5<sup>th</sup> offensive on 22<sup>nd</sup> of April. During the counter-offensive, the UN forces recovered *Seoul* and the Kansas line<sup>514</sup>, and advanced further to take the Wyoming line.<sup>515</sup> They managed to advance only to the Utah line<sup>516</sup> during the last offensive operation (Dauntless operation: 11<sup>th</sup> of April–22<sup>th</sup> of April). In April, there was a significant personnel change in the UN troops. The Commander-in-Chief of UNC, General MacArthur was dismissed on the 11<sup>th</sup> and replaced by Ridgway. General Van Fleet was appointed as the US 8<sup>th</sup> Army commander. Dauntless Operation – to secure the Wyoming line as a part of the 2<sup>nd</sup> counter-offensive – was beginning to halt from the 22<sup>nd</sup> of April due to the heavy resistance from the communist forces (the initiation of the PVA 5<sup>th</sup> offensive). Accordingly, Van Fleet ordered his troops to

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<sup>514</sup> It runs generally parallel and to the north of 38<sup>th</sup> Parallel except on the left, where it would follow the twists and turns of the *Imjin* River to the Sea (It runs along the *Imjin* River, the *Hwachon* Reservoir, and to *Yangyang* in the East Sea). It was designed as the UN main resistance line which linked the topography that was advantageous to the defender.

Excerpted from, M.B. Ridgway, *the Korean War*, New York, Doubleday&Co, 1967, p.116, Department of Military History, op.cit., p.142, and Y.H. Choi, op.cit., p.387

<sup>515</sup> The Wyoming line was the defence line located above the 10-20 km of Kansas line which is very close to the current cease-fire line. However, at that time, it was set as the outpost of Kansas line. Excerpted from- Y.H. Choi, op.cit, p.387, and M.B. Ridgway, op.cit., p.123

<sup>516</sup> It is located between the Kansas line and Wyoming line. The Utah line lies along the northward bulge on the Kansas line to put the UN troops in a position to strike at the Iron Triangle. Excerpted from- M.B. Ridgway, op.cit., p.121

The Iron triangle which linked *Chorwon*, *Kimhwa* and *Pyongyang*, is the most valuable area to command the central front. This area is generally a mountainous topography and there were several mountains which could dominate the Central front. This area was also located at the Central part of Korean peninsula and used as an important transportation junction. One of the main reasons of the UN Forces' retreat to the 38<sup>th</sup> Parallel during the PVA 2<sup>nd</sup> Offensive was the withdrawn NKPA troops from the *Naktong* River line which recognized the importance of the Iron Triangle and laid the second front in this area to harass the UN supply and communication utilizing the mountainous topography. The size of forces in the second front was so immense that the UNC was worried that their retreat route could be cut off and eventually enveloped by the PVA to the North and NKPA in the South. Excerpted from- B. Ridgway, op.cit., p.178, and Department of Military History, op.cit., p.124

turn into a defensive position to cope with the expected PVA offensive. Therefore, the 2<sup>nd</sup> counter-offensive finished and the defensive warfare against the PVA 5<sup>th</sup> Offensive began.<sup>517</sup>

The PVA 4<sup>th</sup> offensive can be divided into three phases: The battle of *Hoengsong*, the battle of *Chipyong-ri*, and the UN forces' counteroffensive. In terms of geography, technology and the tactical dimension of war, the *Hoengsong* battle front was geographically advantageous to the defender. But, because of the lack of training, command, and firepower, the advantage could not be utilized and the defence line was easily penetrated. Even though the US and French forces were deployed in geographically less advantageous positions<sup>518</sup>, they managed to halt the PVA advance. As analysed, this was due to the combined effort of technology (fire and airpower), and human elements of war such as training, morale, and command. Finally in the UN counter-offensive period, even though the UN forces also had to pass through the central highlands of the Korean Peninsula, they could easily advance to their strategic targets. At that point, the PVA had an obvious geographic edge. Since they were intoxicated by the early success, they were overly aggressive and made some mistakes during the offensive.<sup>519</sup> In terms of geographic and tactical dimension of war, even though the Korean Peninsula is geographically advantageous to the defender in general, once the defender was not prepared to use the advantage (fortification, trained troops, command, and proper firepower support), the advantage could not be utilized, as was the case in the battle of *Hoengsong* and the UN counter-offensive. As was shown in the battle of *Chipyong-ri*, the combination of skill, technology, and geographic edge in the modern warfare can give a tremendous advantage to the defender.

## The PVA 5<sup>th</sup> Offensive

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<sup>517</sup> Y.H. Choi, op.cit., p.331

<sup>518</sup> A French infantry battalion which was composed of volunteered professional soldiers was attached to the US 2<sup>nd</sup> infantry division and deployed in the *Chipyong-ri* front. *Chipyong-ri* was the major transport junction; however, the topography itself was rather flat compared to the *Hoengsong* front.

<sup>519</sup> They put too much reserve into the offensive, did not prepare the defence position in the central highlands, and were also extremely exhausted and suffered logistic problems due to the prolonged offensive.

The PVA prepared the 5<sup>th</sup> Offensive over a long time. On the 1<sup>st</sup> of March, *Mao* sent a telegram to *Peng* ordering his troops to destroy the US and ROK forces around the 38<sup>th</sup> Parallel and advance to the Southern Bank of the *Namhan* River. He also said that the Offensive preparation had to be long enough to perfect manoeuvres, but the operation's duration must be short. Accordingly, they planned to launch the Offensive around the 20<sup>th</sup> of April if the UN advance was quick or at the beginning of May if the UN advance was slow.<sup>520</sup> Under guidance given by *Mao*, *Peng* aimed at destroying the UN troops through enveloping them in *Seoul* using the massive 305,000 communist forces including 37,500 NKPA forces and going on to recapture *Seoul* on 1<sup>st</sup> of May (Labour Day).

In order to envelop *Seoul*, the PVA main attack on the Western front approached three Axes<sup>521</sup> while the remaining element of the 9<sup>th</sup> Group Army (6 divisions) waited in the Central Front as another main attack advanced to *Seoul* through the *Hwachon–Chunchon* Axis. The NKPA also joined the offensive as a supporting attack assaulting *Inje* and *Sinnam*. The PVA as usual planned to make a breakthrough or to outflank the under-armed ROK forces, then advance to the rear line, cut off the operation route, and envelop the UN forces.<sup>522</sup>

During the PVA 5<sup>th</sup> Offensive, there was an especially bloody battle in the *Kaesong-Munsan* Axis. In this Axis, the ROK 1<sup>st</sup> Division in the *Papyong* Mountain and the Gloster battalion of British 29<sup>th</sup> Brigade in *Solma-ri* succeeded in stalling and beginning blood-shedding warfare. Their success contributed to foiling the PVA 5<sup>th</sup> Offensive. In those two battles, even though the ROK 1<sup>st</sup> Division and Gloster Battalion met massive numbers of the PVA in their position, and they were enveloped, they succeeded in stalling the PVA through the massive air and firepower aid while holding onto their main base. However, in the *Hwachon-Chunchon* Axis, the ROK 6<sup>th</sup> Division was heavily defeated by the PVA and withdrew to the *Kansas* line nearby *Chunchon*. The PVA avoided contacting the US 1<sup>st</sup> Marine Division in

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<sup>520</sup>KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.132-133

<sup>521</sup> *Kaeseong-Munsan* Axis (The PVA 19<sup>th</sup> Group Army; 9 divisions), *Yonchon-Tongduchon* Axis (The PVA 3<sup>rd</sup> Group Army; 9 divisions), and *Kimwha-Pochon* Axis (The PVA 9<sup>th</sup> Group Army; 9 divisions)

<sup>522</sup> Department of Military History, op.cit., p.144-146, Y.H. Choi, op.cit., p.341, IMHC, *HanGukJeonJaengJung*, p.496-503, and KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.139-144

this front and contacted the under-armed ROK 6<sup>th</sup> Division. This decision led the PVA to achieve the great initial success on this front. They failed to exploit this success because of the hard fight of British 27<sup>th</sup> Brigade which checked the PVA 9<sup>th</sup> Group Army's penetration to *Seoul* from the North East.<sup>523</sup> The PVA 5<sup>th</sup> Offensive was also finished without much gain on the 29<sup>th</sup> of April because, along with the huge casualties suffered by the UN forces' blood-shedding tactics, their main force's advance toward the Western front was severely delayed in the *Papyong* Mountain and *Seolmari*. Their breakthrough in the *Hwachon–Chunchon* Axis was not exploited because of the British 27<sup>th</sup> Brigade's tenacious fight. The 5<sup>th</sup> Offensive ended without much gain to the Communist forces but they did suffer tremendous casualties. *Peng* reported to *Mao* regarding the next offensive on the 26<sup>th</sup> of April. In this report, he pointed out the main reasons of their poor offensive results were the fear of the UN landing operation behind the line once they advanced too deep. The UN troops' disposition was too dense to outflank or penetrate, and the UN troops' resistance was quite adamant compared to previous attempts.<sup>524</sup>

In conclusion, as one can see from *Peng*'s report to *Mao*, the UN force started to overcome their weaknesses of being easily penetrated, outflanked, and forced to retreat once their operation route was cut off. In contrast, the PVA strategy and tactics were still positively working against the ROK forces who were ill-equipped and poorly commanded unless there was immense firepower assistance (The battle of the *Papyong* Mountain). Like the 4<sup>th</sup> Offensive, due to the UN Forces' stalling and blood-shedding tactics, using their technological dominance even during the withdrawing phase, the PVA lost around 80,000 men in the North of *Seoul*.<sup>525</sup>

The PVA 5<sup>th</sup> Offensive experienced a similar course of action and fate as had the 4<sup>th</sup>: (1) Making a breakthrough in the ROK defence sector (geographically advantageous but the lack of firepower support and skill); (2) They failed to exploit the breakthrough because of the stubborn resistance of skilful and fully firepower-supported UN forces' defence position; (3) The UN Forces' counter-offensive returned to their original position. However, during the 5<sup>th</sup> Offensive, the PVA suffered more casualties and cost than in the 4<sup>th</sup> Offensive. This was

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<sup>523</sup> Y.H. Choi, op.cit., p.346

<sup>524</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.142-143

<sup>525</sup> Y.H. Choi, op.cit., p.347

because the UN forces had a better understanding of PVA tactics, Korean peninsula geography, and how to combine and maximize their advantage in geography and technology.<sup>526</sup> Through an analysis of the PVA's 4<sup>th</sup> and 5<sup>th</sup> Offensives, one can learn that once the technologically superior forces recognized their ignorance and started to become familiar with the opponent's strategy and tactics, their opponents, who had a prowess in the human elements of war such as well-trained forces, well-established command structure, strategy, and tactics, could not enjoy the success they had before. Based on the experience of the PVA 1-3<sup>rd</sup> offensives, the UN forces did not deeply penetrate enemy territory to prevent the encirclement. They maximized their firepower prowess through fortifying the three consecutive defence lines Kansas, Utah, and Wyoming, using the Korean peninsula's central highland.

## The PVA 6<sup>th</sup> Offensive

The 5<sup>th</sup> Offensive suffered huge casualties to achieve the political and geographic objective of capturing *Seoul*, because of the heavily disposed UN fire, air, and mobile power along the Western and Central fronts.<sup>527</sup> Based on this experience, *Peng* decided to attack the under-armed ROK units in the Central Eastern and Eastern Front. These were deployed mostly in the mountainous topography prohibiting the fire and mobile power's utmost application.<sup>528</sup> Their military object was to annihilate six of the ten ROK divisions in the Central Eastern front. *Peng* believed that if they destroyed the ROK units in the Central Eastern and Eastern

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<sup>526</sup> During the battle of *Chipyeong-ri*, they learned that even though an operation route was cut off and encircled due to the PVA outflanking movement (the Key element of PVA tactics), if they did not withdraw but instead fought in the defence position keeping high morale and discipline with the support of fire and airpower, they could foil the PVA offensive due to their major advantage in technology and geography.

<sup>527</sup> During the 5<sup>th</sup> Offensive, even though they mainly targeted the ROK units such as the 1<sup>st</sup> Division in the *Kaesong–Munsan* Axis and the 6<sup>th</sup> Division in the *Hwachon–Chunchon* Axis, because the Western and Central Western front were mainly composed of plains which were a better topography to deal with rather than the mountains to apply fire and mobile power, this front was mainly defended by the UN troops. Therefore, even though they were able to achieve a breakthrough, they could not exploit it due to heavily concentrated UN firepower.

<sup>528</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.149-150

front, they could isolate and threaten the UN forces on the Western Front thus attaining an advantageous position in the ceasefire talk.<sup>529</sup>

Among the available thirty eight divisions, twelve at the Western front aimed to contain and deceive the UN's main forces, and eight along the Central front aimed to make a deep breakthrough to separate the UN forces' Western and Eastern front. This would prohibit reinforcements from the Western Front getting to the Central Eastern Front where the Communist Forces' main attack was being directed.<sup>530</sup>

The Communist Forces main attack consisting of 20 divisions launched the Offensive on the 15<sup>th</sup> of May against 4 ROK divisions (5<sup>th</sup>, 7<sup>th</sup>, 9<sup>th</sup> and 3<sup>rd</sup> Division) on the Central Eastern Front. Their main strategies were to envelop and destroy the ROK divisions through outflanking movements on both flanks. They tried three tier envelopment lines to ensure the complete destruction of ROK divisions on this front. They also drafted an operation plan to destroy two other ROK divisions on the Eastern Front (The Capital and 11<sup>th</sup> Division) once the initial offensive proved to be successful. The PVA strategy of the 6<sup>th</sup> Offensive<sup>531</sup> also observed their basic strategy in the Korean War in which the main attack was to outflank or make a breakthrough in the ROK forces' front and cut off their operation route, envelop, and destroy the withdrawing forces while the supportive attack tied the enemy's main force through deception.

At this point, the UN Forces believed that the communist forces would again invade *Seoul* and thus concentrated their firepower and reserves to the Western front. Therefore, the adequate reinforcement and firepower support became a much more difficult task than

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<sup>529</sup> Their operation objectives were transformed from a geographic and politically-centred one toward focusing on completely annihilating enemy troops, and their main forces attacking points were switched from the Western and Central Western front to the Central Eastern and Eastern front. Excerpted from- Y.H. Choi, op.cit., p.353-354

<sup>530</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.146-148

<sup>531</sup> The Chinese Military History described the 5<sup>th</sup> Offensive as the first phase of 5<sup>th</sup> Offensive and 6<sup>th</sup> Offensive as the second phase. From the analysis of KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.129-168 However, those two offensives had a different military objective and their main attack was heading toward different fronts. Therefore, the US and ROK military history generally described the former offensive as the 5<sup>th</sup> and the later as the 6<sup>th</sup> offensive.

originally planned on the Central Eastern front.<sup>532</sup> During the 6<sup>th</sup> offensive, the communist forces tried to envelop 4 ROK divisions in three tiers from the west and east. However, the third tier enveloping them from the west was not successful, since the PVA 12<sup>th</sup> Army was stuck in Bunker Hill (800m).<sup>533</sup> The ROK 3<sup>rd</sup> Corps (3<sup>rd</sup> and 9<sup>th</sup> Division) defending the *Hyon-ri* defence sector was surrounded by the PVA in two tiers from the west.<sup>534</sup> However, unlike the US forces in *Chipyong-ri* and British forces in *Solma-ri* which tried to hold on to their defence sector, because of the fear of encirclement, the ROK 3<sup>rd</sup> Corps was dissolved into pieces and withdrawn without orders. This was exactly the same scenario used by *Kunwu-ri* in the PVA 2<sup>nd</sup> Offensive. Fortunately for the ROK 3<sup>rd</sup> Corps, their withdrawal route to the South East (*Pangdae* Mountain) was not cut off by the NKPA 5<sup>th</sup> Corps, unlike their initial plan<sup>535</sup> and managed to withdraw to *Hajinburi*, 70 km away from their original line of contact.<sup>536</sup>

However, when they reached the vicinity of *Soksa-ri*, there was a visible change in the front. First, because of the logistics problems and casualties suffered from the UN Forces' fire and airpower, the PVA's advance stagnated and their last penetrating movement in this offensive, from the *Hyonri* breakthrough to *Kangnung* to envelop and destroy the ROK 11<sup>th</sup> Division and the Capital Division, were checked at *Taegwalryong*.<sup>537</sup> Secondly, the UN troops became

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<sup>532</sup>IMHC, *HanGukJeonJaengJung*, p.548-549

<sup>533</sup> The PVA thought that this defence sector (*Chauri*) was defended by the ROK 5<sup>th</sup> division but it was actually defended by the US 2<sup>nd</sup> division and they had a heavy fight with the US forces in Bunker Hill.

<sup>534</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.145-152, Y.H. Choi, op.cit., p.355-359, Department of Military History, op.cit., p.146-147, and IMHC, *HanGukJeonJaengJung*, p.496-503

<sup>535</sup> The NKPA 5<sup>th</sup> Corps which was the first tier enveloping force from the Eastern flank could not reach the *Pangdae* Mountain because of the mountainous topography in that region. The second and third tier enveloping force from the Eastern flank (NKPA 2<sup>nd</sup> Corps) also could not reach their target because of the heavy snow and steep mountains.

<sup>536</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.149-150, and Y.H. Choi, op.cit., p.359-360

<sup>537</sup> The topography of *Taegwalryong* is very steep, the PVA attacking unit was relatively exhausted and the ROK Capital division could obtain enough firepower support especially from the US 7<sup>th</sup> fleet in the East Sea. Excerpted from IMHC, *HanGukJeonJaengJung*, p.577-579

very adept at moving their reserves from the Western front.<sup>538</sup> During the first five days of the offensive, through the well-organized delaying actions of the UN troops, their artillery fire and air strikes were able to inflict heavy losses on the PVA. The PVA's 12<sup>th</sup> and 15<sup>th</sup> Armies already suffered huge casualties after contacting the US 2<sup>nd</sup> Division on their way to *Soksa-ri*. After their supportive attack's advance on the West and Central front was stalled and their initial attack on *Taegwalryong* was foiled, the PVA's 20<sup>th</sup> and 27<sup>th</sup> Armies and the NKPA 2<sup>nd</sup> Corps were in danger of being cut off by the ROK and UN Forces. The PVA could commit further reinforcements along the front but, they were hesitant to since they had already suffered a great deal of casualties, not only from frontal assault to the UN position, but also from the incessant artillery fire and air strikes on their approach to the UN front.<sup>539</sup>

After reviewing the situation at hand, *Peng* decided to end the offensive and issued an order for a rapid withdrawal on the 21<sup>st</sup> of May. During the 6<sup>th</sup> Offensive, the PVA learned the military technology's dreadful effect on modern warfare and turned to positional warfare. Even though they made a massive breakthrough on the *Hyon-ri* Front, their exploitation of this breakthrough was hindered when their advance was checked at *Bunker Hill*, *Yongmun* Mountain, and *Taegwalryong* by the US or ROK troops hanging on to the hill with much fire and airpower support. The PVA also suffered heavy losses because of the UN forces' blood-shedding tactics (the PVA called these tactics the Sea of Fire tactics) based upon the Ridgway guidelines in applying their fire and airpower dominance. Furthermore, in this offensive, the UN forces who had become accustomed to the PVA strategy and tactics, acquired the strategy and tactics necessary to maximize their strength. They applied the counter-envelopment strategy which used their dominant mobile power to cut off the PVA's retreat route, thus enveloping and destroying them.<sup>540</sup> The outcome of this counter-envelopment was

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<sup>538</sup> The UNC recognized that the Communist movement in the Western front was only a deception and the PVA attempt to penetrate deep into the Central front and separate the Western and Eastern front was foiled when the PVA's 63<sup>rd</sup> Army were checked and destroyed in the *Yongmun* Mountain held by the ROK's 6<sup>th</sup> division which were heavily supported by neighbouring UN fire and airpower. Taken from The Department of Military History, *HanGukJeonJaengSaBuDo*, p.146, and Y.H. Choi, *6.25JeonJaengEuiSilPaeSaRyeWaGyoHun*, p.362

<sup>539</sup> B.C. Mossman, op.cit., p.466-467, IMHC, *HanGukJeonJaengJung*, p.596-598, and KRIS, *JungGongGunEuiHanGukJeonJaengSa- HangMiWonJoJeonJaengSa*, p.151-152

<sup>540</sup> General Van Fleet believed that even though the PVA made a huge breakthrough on the *Hyon-ri* front, it also rendered their forces salient. Therefore, once the offensive was stalled as it had been due

disaster for the PVA. During the 6<sup>th</sup> Offensive, they suffered their heaviest casualties during the entire Korean War thereby allowing for a massive counter-attack from the UN forces. The size of the PVA 5<sup>th</sup> and 6<sup>th</sup> Offensive was bigger than any other offensives completed during the Korean War. Still, they could not achieve their objective (5<sup>th</sup>; recapture *Seoul* and destroy the UN's main force, 6<sup>th</sup>; destroy the ROK divisions along the Central Eastern and Eastern front ultimately threatening the UN forces on the Western front) and consequently lost 85,000 men during these two offensives<sup>541</sup> because of the UN forces' immense fire, air and mobile power.<sup>542</sup>

*Peng* mentioned in his retreat order that, "the front became too widened, the supply of food and ammunition is quite a difficult task due to the lack of transport means, the troops are too tired, and consequently we cannot advance anymore". In this spring offensive (5<sup>th</sup> and 6<sup>th</sup> offensive), the PVA recognized that the reason for their defeat was mainly technological inferiority. They vowed to prepare the new offensive through improving their military instruments and modern warfare operation's capability.<sup>543</sup>

The PVA 6<sup>th</sup> Offensive followed a similar course of action as HAD the 4<sup>th</sup> and 5<sup>th</sup> Offensives. However, in this offensive, the PVA realized that their approaches to war were no longer effective against the UN forces and could be countermined by the UN forces. In this offensive, the UN Forces adopted the counter-envelopment strategy which reflected the weakness of the PVA strategy and tactics, as well as their understanding of the Korean

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to the logistic problems, the PVA would retreat and the UN troops could give them a decisive blow by cutting off the line of communications along the enemy's rear line thus trapping the enemy in a long bag, allowing them to launch the counter-offensive. Excerpted from, B.C. Mossman, op.cit., p.465

According to his judgement, the US 3<sup>rd</sup> division cut off *Unduryong* which was located along the transport junction between *Hyon-ri* and *Soksa-ri*, The US 2<sup>nd</sup> division was also cut off at the *Soyang* River crossing point which was the crucial retreat route to the North for the Communist forces at the *Hyon-ri* breakthrough. Therefore, the Communist forces along the Central Eastern front were counter-enveloped in two tiers.

<sup>541</sup> The casualty figure is varied. This figure is from the Chinese source which is obviously cites the most generous one.

<sup>542</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa- HangMiWonJoJeonJaengSa*, p.160

<sup>543</sup> IMHC, *HanGukJeonJaengJung*, p.594-595, Y.H. Choi, op.cit., p.389-391, and KRIS, *JungGongGunEuiHanGukJeonJaengSa- HangMiWonJoJeonJaengSa*, p.160-167

peninsula topography. Due to the steep mountainous topography, the mobility and operation route was severely limited in the central highlands of the Korean Peninsula.<sup>544</sup> Moreover, there are a few deep and wide rivers and streams in this region such as the *Soyang*, *Namhan*, and *Bukhan* rivers which also restricted the manoeuvre.<sup>545</sup> The communist forces used the geographic characteristics (mountain paths), easily cut off the withdrawal route of the *Hyon-ri* defence sector ROK forces easily, and gave a decisive blow to the retreating force. However, unlike the previous offensive, the UN forces adopted a counter-enveloping strategy, combining the weakness of PVA offensive strategy<sup>546</sup>, the geographic characteristics of the central highlands and their advantage in technology. The communists made a breakthrough in the *Hyon-ri* defence sector but failed to exploit that breakthrough because of logistics problems and stubborn resistance. Eventually they were forced to withdraw. They enveloped the retreating communist forces, though. Unlike the PVA who were equipped with the light weaponry, the UN forces utilized their strength in technology and poured everything they could muster in this sector. In the end, the communist forces' casualty toll was the greatest in this offensive. It showed that the UN forces were beyond the understanding of weaknesses and strengths of the PVA as well as their own, and had reached a level which understood the geographic characteristics and how to combine and maximize the geographic characteristics with their technological advantage. It was a great shock to the communists and they decided to delay the further massive offensive until they reached a similar technology level (especially logistics, air and firepower) as the UN forces.

After they had experienced several PVA major offensives, the UN forces started to recognize the significance of geographic factors in the Korean peninsula, and prepared the antidote to the PVA ways of warfare by contemplating how to combine and maximize their strengths in technology, geography, and skill (manoeuvre, training, and command) that raised their

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<sup>544</sup> During the Korean War, the situation was much worse than now. There were few roads to use for the operation and if there were roads, they were usually narrow and winding mountainous roads.

<sup>545</sup> During the initial phase of the *Imjin* Wars, the geographic characteristics of the central highlands were one of the main reasons for the Japanese decision not to pacify the *Gangwon* province where the central highlands are located.

<sup>546</sup> 1) The tenacity of offensive due to the logistics problems

2) The limited mobile and firepower.

technological and geographic edge. The efficiency of this new approach proved to be decisive in the UN forces' counter-offensive.

It can easily be judged that the technologically inferior offender can overcome the defender's superiority in technology through the advantages of the human elements of war: the PVA's absolute success during the 1<sup>st</sup>-3<sup>rd</sup> offensives and the partial success during the 4<sup>th</sup> to 6<sup>th</sup> offensives against the poorly equipped and commanded ROK divisions in *Hoengsong* and *Hyon-ri*. After the UN force fully appreciated the PVA's capability and became accustomed to the PVA way of warfare, they were not easily defeated by the PVA, except for the ROK troops that were not well-equipped compared to the normal standard held by US and British forces. Therefore, one can infer that, in modern warfare, even if the offender is well-prepared in the human element of war, it is not easy to overcome the defender who is technologically superior and who can fight with the geographic edge.

Also, from the analysis of PVA's 4-6<sup>th</sup> offensive, it can be inferred that it is highly probable that a potential North Korean invasion will culminate in result similar (more or less likely to be even worse) to the PVA's 4<sup>th</sup>-6<sup>th</sup> offensives. On the one hand, like the PVA in these offensives, the North was presumably strong with the human element of war such as preponderance, and possibly the individual training level due to the long service period. On the other hand, like the UN Forces in these offensives, the ROK military authorities have a better understanding of the NKPA tactical and strategic approaches to the possible war, and are technologically superior except for certain areas such as ballistic missiles.

## 5-3 Stalemate (Position Warfare) and Ceasefire

### The PVA Strategy and Tactics Transformation

The PVA headquarters analysed that, "Even though they were victorious in the 5<sup>th</sup> Offensive (5<sup>th</sup> and 6<sup>th</sup> offensive for their view), they faced difficulties caused by a disparity in equipment."<sup>547</sup> After having suffered heavy casualties due to enemy fire and airpower, they

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<sup>547</sup> *Mao* cabled *Peng* on the 26<sup>th</sup> of May, saying "Our enveloping, outflanking, and penetration operation at both campaigns have encountered such great difficulties that we were prevented from

realized the importance of technology in modern warfare. They also understood that with their modern warfare capability, they could not win the war through an offensive-based strategy. Accordingly, they accepted the US Armistices Proposal to earn time for their rearmament. In an area of military operation, they called for a war of attrition, piecemeal warfare, and active defence to leave the enemy exhausted and demoralized.<sup>548</sup> The piecemeal warfare and active defence strategy included not only the defensive position warfare in the trenches but also involved various tactical offensives (if the enemy were to expose the weakness, they would then launch a counter-attack to inflict heavy casualties on the enemy) during the seesaw battles around the 38<sup>th</sup> parallel.

While they lay the solid defence line by using favourable terrain in an aim to destroy the UN troop's combat capabilities, they would also strengthen their operation capability by improving equipment and training, then aim to reduce the gap of combat power between friend and foe. This ultimately allowed them to achieve the final victory or at least force the enemy to face insurmountable difficulties and withdraw.<sup>549</sup> In this circumstance, the Korean War was transformed into positional warfare in order to capture the dominant hill.

From the PVA's military point of view, in order to wage an active defence and piecemeal warfare strategy, they first needed to lay a defensive line in their favourable position and enhance their logistics capabilities since the strong defensive line would inflict heavy losses on the offender and become a base for the counter-attack. The defender could not hold the

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achieving the goal of completely annihilating several US divisions or the whole US division or regiment." He also said that, "due to the strong will of the US and British forces, they suffered huge losses." However, only through willingness could not give a significant blow to the PVA. The UN troops' will to hold on to their defensive line unlike the 1-3<sup>rd</sup> offensives was one of the major factors of the PVA defeat but the understanding of the PVA's way of warfare and maximization of their strength (technical dominance) were more prominent factors contributing to the PVA's disaster during the Spring offensive. Then *Peng* directed that instead of targeting the UN forces at the division or regimental level, each PVA army unit should only "aim at completely destroying one of two battalions of the US, British and Turkish troops." He ordered a transformation to the piecemeal warfare. Excerpted from- S.H. Zhang, op.cit., p.154

<sup>548</sup>KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.160-167, and IMHC, *HanGukJeonJaengJung*, p.594-595

<sup>549</sup> KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.163-167

line without a proper supply. The PVA had previously relied on small individual bunkers against UN artillery and air raids, and set up the defence in depth along the hilly area. This defence line had too much exposure to the UN fire and airpower and would allow the UN troops easy access to penetrate their main defence line trenches, which consequently caused severe casualties.<sup>550</sup>

They also discovered the usefulness of U-shaped tunnels and started to use them. The tunnel in position warfare had many strong points for the defender, who was suffering from technological disparity. This would first guarantee the fluid coordination of defence troops wherever there was going to be an enemy assault since most of the important holding points, including the anti-tank defence position in the valley<sup>551</sup> and the possible enemy airborne unit landing point in the rear were all linked together through the tunnel. Secondly, the tunnel gave proper protection against enemy air and firepower and became a safe depot for supplies and troops. Thirdly, from the tactical point of view, if the trench became overrun or was demolished by enemy firepower, the defender could still hold the line and give a blow to the offender either by holding out the entrance of the tunnel or by counterattacking the offender using a different exit of the tunnel. Fourthly, since the tunnel guaranteed the safety of the defending troops, the PVA could direct the fire on their position. Finally, since the defender could keep their forces intact in the tunnel, they could use them as a reserve to repel the offender's final assault to the main trench or counter-attack the retreating offender.<sup>552</sup> After they found out the effectiveness of the tunnel, the PVA's headquarters urged the troops to dig tunnels on the main defensive position. Therefore, the tunnel became the base of the PVA's active defence and piecemeal warfare strategy.

## Defensive Warfare Using the Geographical Edge and Technology

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<sup>550</sup> Ibid., p.200

<sup>551</sup> The UN tanks could not be fully used in the Korean peninsula trench warfare due to the mobility problem in the steep slope. Instead, in many cases, the UN tanks were used to cut off the enemy retreating route and envelope them using the valley and the narrow road between mountains

<sup>552</sup> IMHC, *JungGongGunEuiJeonRyakJeonSulByeonCheonsa*, Seoul, Guningongjehwae, 1996, p.456-464

After the PVA's 6<sup>th</sup> Offensive, the UN forces overwhelmed the Communist forces and took the initiative in the war. From the US point of view, an expanding war to achieve the reunification of Korea would have more losses than gains. Most of all, it would increase the possibility of direct Soviet engagement which could inevitably lead to a 3<sup>rd</sup> World War. Strategically, the war in Korea was not important enough for them to risk such great casualties and cost.<sup>553</sup> Therefore, what the US wanted at this point was to achieve an honourable armistice. Accordingly, they pressed the communists hard to accept the armistice agreement on their terms. Meanwhile they tried to secure the dominant hills<sup>554</sup> for the better defence position, and then worked to set up a stronger defence line to repel any communist offensives before the ceasefire agreement.<sup>555</sup>

So, after the 6<sup>th</sup> offensive, the war spiralled into a stalemate which resulted in a scramble to secure the dominant hill, because of the US political position and the PVA's active defence strategy. This stalemate was sustained until the PVA launched the 7<sup>th</sup> offensive just before the ceasefire agreement. During this stalemate, even though there was no massive offensive from either side, there were many scrambles for the dominant hill. Among these, it would be beneficial to analyse the battle of Bloody Ridge Line and Heartbreak, which were typical of the type of struggles held between the technologically dominant UN troops and the Communist forces who had a eagerness and capability to hold on to the geographically advantageous defending position.

## The Battle of Bloody Ridge Line and Heartbreak Ridge Line

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<sup>553</sup> Y.H. Choi, op.ict., p.385

<sup>554</sup> The Korean peninsula is full of mountains, most of all in the central highland of the Korean peninsula where lots of trench combats were committed during the stalemate. Among those mountains and hills, several hills were strategically important since it was possible to monitor the enemy's movement from these high hills. These hills also were able to give a severe defensive edge. For example, the battle of Bloody Ridge and Heartbreak line were committed to secure dominant hills in order to defend *Yanggu*. Those dominant hills would also give them a strategic edge since they could watch out for the PVA movement in *Oseong* Mountain (1,050m) and its vicinity where the most significant PVA Central Eastern front defence position was existed.

<sup>555</sup> Ibid.,p.389

Even though the armistice talks were initiated in July, no real progress was achieved during the talks. Therefore, the UN forces tried pressuring the communists to engage in the talk positively by way of limited objective attacks, strategic bombing and the air interdiction of the enemy supply depot and route.<sup>556</sup> Accordingly, General Van Fleet ordered to launch operation “Creeper” on the 14<sup>th</sup> of August. It was a pre-operation initiative that was supposed to be launched before they were to attack *Punchbowl*.<sup>557</sup> Its objective was to capture the cross compartment J Ridge consisting of Hills of 884, 924, and 1030, East of *Punchbowl* and the *Sohwa* Valley, then advance forward up to the *Nam* River, and exercise pressure upon the enemy on *Punchbowl* from the East.<sup>558</sup> Van Fleet also ordered the attack of Hill 983 (The Principal crest of Bloody Ridge) in the west of *Punchbowl* and to assist this attack, the UN attacked Hills 554 and 883 located to the west of Hill 983. The UN troops also attacked the Hill 1211 between *Punchbowl* and Hill 983 to envelope *Punchbowl*. Operation Creeper, which was to occupy the Northern ridge of *Punchbowl* through the Eastern ridge line, was extended both to the left and right hill mass of 983.<sup>559</sup>

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<sup>556</sup> During the stalemate, the position warfare was concentrated along the mountainous topography running along the Central and Central Eastern Front. From the US perspective, once they launched the offensive on the Western front, it would include *Kaesong* where the armistice talks were being held and would thereby inevitably expand war which would ultimately collapse the armistice talks. From the Communist perspective, since the Western Front was mainly defended by the UN forces and the topography was relatively plain which allowed the UN forces to use their technological dominance; they were also eager to avoid the Western Front. Excerpted from, Y.H. Choi, op.cit., p.406-407, and IMHC, *HanGukJeonJaengHa*, Seoul, IMHC, 1997, p.226-237

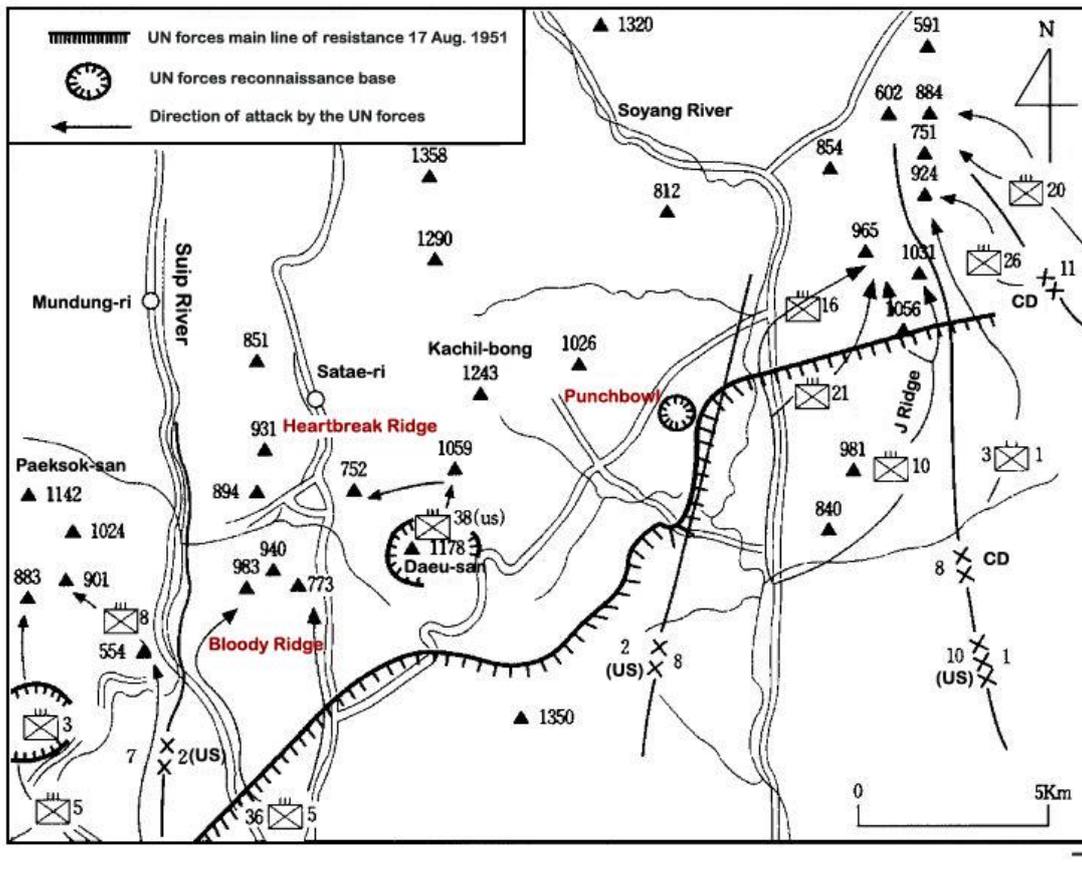
<sup>557</sup> *Punchbowl* is the basin that averages circa 450m height above sea level and around 44.7km<sup>2</sup> which is located in *Yanggu* (Central Eastern front). *Punchbowl* is surrounded by a high hill mass on the West and East. The *Yanggu* defence sector which was located in the South of *Punchbowl* was far behind the ordinary UN forward line on the Central Eastern Front and any movement of supplies or troops would easily be spotted by the dominant hill around *Punchbowl*. Therefore, *Punchbowl* was a very important strategic position for the communists and the vulnerable area of UN forces’ defence line. Therefore, Van Fleet ordered to attack this area preferentially. Excerpted from- Y.H. Choi, op.cit., p.406-407

<sup>558</sup>IMHC, *HanGukJeonJaengHa*, p.102-103

<sup>559</sup> Ibid., p.103-104

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## Operation Creeper



Map 5-2 Operation Creeper<sup>560</sup>

The battle of Bloody Ridge and Heartbreak Ridge Line were the most intensive battles in this operation. These can best demonstrate the model of combat between the defender, who fully utilized the geographic advantage, and the offender who fully utilized his technological advantage, more than any other battles in this operation. Therefore, in this small section, among the several significant position combats during the stalemate, we will focus on the battle of Bloody Ridge and Heartbreak Ridge line.

As the part of Operation Creeper, the US 2<sup>nd</sup> Division was ordered to capture Hill 983. Hill 983, which was the principal crest of an eight kilometre long cross compartment ridge consisting of Hills 731-980-940-773. This ran like a crossbar across the Valleys of *Mundung-ri* and *Sat'ae-ri*. Since the terrain consisted of a steep slope southward, it was advantageous for the defenders. It was also a strategically important dominant hill which enabled the

<sup>560</sup>IMHC, *HanGukJeonJaengHa*, p.101

communists to watch over and bombard the UN forces' troop and supply movements. The purpose of the attack was to remove the weak point of the UN forces' defence line, capture a foothold for future attacks, and eliminate the communist threats to the West flank when the UN forces attacked *Punchbowl*. The communists had not only built up hundreds of shelters, which could cover them from artillery and airpower, but also constructed covered trenches on the reverse slope which were connected to the front trenches through the connecting trenches. They also planted four to five thousand mines in front of their defensive positions and boasted that this defensive position was impregnable.<sup>561</sup>

The US 2<sup>nd</sup> Division gave the duty of capturing Hill 983 to the ROK troops, to improve their combat skill and confidence. However, the command and fire support, which was the weakest point of the ROK troops were supervised and supported by the US 2<sup>nd</sup> Division. Therefore, their combat capability standard was almost equal to that of the ordinary US troops in that front. Under the offensive plan, which included breaking down the enemy position by using the firepower advantage, the US 2<sup>nd</sup> Division poured a massive firepower upon these hills from the 15<sup>th</sup> of August. On the 18<sup>th</sup> of August (D-Day), 126 artillery pieces of seven artillery battalions laid down concentrated preparation fire on the NKPA positions. However, contrary to their expectations, the ROK attacking troops faced many troubles, beginning at their first daytime assault. On their approach toward the hill, they were met with a mine field, fierce enemy supporting artillery fire, and direct fire from the enemy's position. The level of enemy resistance was far greater than they had anticipated, so the attack was stalled. Therefore, the ROK troops asked for fire support to suppress enemy fire, hit the enemy position hard, and to clear the mines. Before dark, they used more than 200 artillery pieces in this 4km front for these purposes. However, even though the firepower support was intense to such a degree that the enemy shelters on the front lines were stripped of their camouflage, the night assault also failed, since the NKPA's defending troops had been waiting amongst covered trenches along the reverse slope during the preparation fire, and upon the ROK troops' advance, they quickly moved into forward positions, and stubbornly resisted.

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<sup>561</sup>J.S. Na, *HanGukJeonJaengJeonTuSa, YangGuJeongTu(PiEuiNeungSeon, DanJangEuiNeungSeon)*, Seoul, IMHC, 1989, p.6-8 and p.19-23, IMHC, *HanGukJeonJaengHa*, p.121-122, Y.H. Choi, op.cit., p.418-419, and IMHC, *HanGukJeonJaengSaJe6Gwon-JeHanJeonSeonEuiGyeokDongGi (1951.5.30-1951.8.30)*, Seoul, ROKMND, 1973, p.57

Eventually they managed to capture Hill 983 on the 22<sup>nd</sup> of August after they succeeded in infiltrating into the enemy's rear line. When the NKPA saw the enemy from the back slope of Hill 983, they were shocked, since they did not think the ROK troops were capable of turning up on their very steep back slope. Thus the NKPA withdrew from the hill.<sup>562</sup> This first stage of the battle of Bloody Ridge Line showed that using only firepower and frontal attack would not guarantee success against the defender who could fully utilize the steep mountainous topography of the Korean Peninsula to their advantage.

Since the US 2<sup>nd</sup> Division failed to rotate the exhausted ROK troops, they lost the hill. Afterwards, the US 2<sup>nd</sup> Division tried to recapture the hill through massive fire support and frontal attack but they suffered heavy losses and could not recapture the hill. Ultimately the NKPA withdrew, but that could not be attributed to the success of the US attack on Hill 983. The ROK 7<sup>th</sup> Division on the West and the US 38<sup>th</sup> Regiment on the East of Bloody Ridge Line made good progress and cut off the NKPA main operation route from the north to Hill

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<sup>562</sup> J.S. Na, op.cit., p.59-64

As mentioned, the steep mountainous topography of the Korean peninsula gives the great advantage to the defender while the offender has a chance to cut off the defender's operation route using the outflanking movement. In small or medium size combat actions, due to the limited space of manoeuvre and access to the defender's position in the Korean highlands, the defender could concentrate their power on the limited front and the direct approach of the offender could take a heavy toll. However, due to the defender's overconfidence in their defending topography and position, and the highly trained offender's novel approach, there have been a few cases in the Korean peninsula military history that the defender was caught in a surprise attack. For example, in the Battle of *Miryang* during the *Imjin* Wars, the Japanese expedition forces avoided direct contact with the *Joseon* defender and attacked the defender by outflanking them and launching a surprise attack using the left and right side of the cliffs. That was also the case in the battle of *Dabudong* during the *Naktong* River line defence campaign (the offence was carried out by the ROK 1<sup>st</sup> Division). However, this kind of combat was committed in unique conditions and does not represent the typical type of battle in the Korean peninsula. First of all, only a few cases were reported and it is only possible when the defender is negligent of the inaccessible topography due to overconfidence or lack of available forces and the offender's troops are highly trained and under great command. Secondly, the inaccessible topography may provide an opportunity but that approach is too risky to take. In this battle, the NKPA was caught in a surprise attack achieved by brave ROK troops who used the inaccessible topography. However, this surprise attack using the inaccessible topography did not happen again in the operation "Creeper".

983. Under the severe pressure of supply and encirclement fear, the NKPA withdrew from Hill 983 and the US 2<sup>nd</sup> Division took the hill on the 5<sup>th</sup> of September.<sup>563</sup> During the battle of Bloody Ridge Line, the UN forces consumed a massive amount of artillery shells but they did not manage to beat the NKPA forces on Hill 983, who used the steep mountainous topography well enough to cover the considerable UN forces' firepower from their artillery pieces, warship guns, and air bombardment.

After the battle of Bloody Ridge Line, Van Fleet realized the harmful effects of trench warfare and planned the massive landing and airborne operations to attack the enemy rear together with the frontal attack on the Central Eastern Front. This would remove the sag in the front line, lay down the straight defence line, and pressure the Communists to attend the armistice talk more positively. However, because of the fear that the Communist forces would retaliate and consequently the armistice would be broken off, Ridgway (Commander of the UN Forces) rejected his idea and only gave permission to wage the limited trench warfare.<sup>564</sup> Therefore, Van Fleet had to continue waging trench warfare, and was ordered to attack the ridge (later called Heartbreak Ridge) composed of Hills 894-931-851 north of Bloody Ridge on the 8<sup>th</sup> of September. He used the US 2<sup>nd</sup> Division to remove the sag in the front line, thus incapacitating the enemy operation base *Mundung-ri*, and eliminating the weakness of the Kansas because it could be observed by the communist forces from the ridge.

Heartbreak Ridge consisted of three crests which were located one after another from the South to North. If the UN forces advanced from the South, they needed to attack the three crests consecutively. These hills were not only steep but also densely forested, which made air reconnaissance and observation of the hills difficult. The NKPA 6<sup>th</sup> Division started to construct a new defensive position during the battle of Bloody Ridge Line and the standard of this defence position was exactly the same as the Bloody Ridge Line.<sup>565</sup> The US 2<sup>nd</sup> Division's first round of the campaign for 13 days (13<sup>th</sup> of September–26<sup>th</sup> of September) was not very successful and suffered heavy casualties due to the NKPA's strong defence line

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<sup>563</sup> Y.H. Choi, op.cit., p.422-424

<sup>564</sup> IMHC, *HanGukJeonJaengHa*, p.104-107

<sup>565</sup> IMHC, *HanGukJeonJaengHa*, p.156-157, and Department of Military History, op.cit., p.152

using steep topography.<sup>566</sup> Accordingly, the US 2<sup>nd</sup> Division commander asked permission to halt the attack which was guaranteed and prepared the new attack with different approaches.<sup>567</sup>

The newly appointed US 2<sup>nd</sup> Division Commander, Robert. N. Young described their initial attack as a fiasco and pointed out all the causes of this failure.<sup>568</sup> Reasons included were that the troops were committed successively to an area of limited manoeuvring space, that the fire support was not properly applied, and that the enemy mortars were not neutralized.<sup>569</sup> He then drafted a new plan for the second round of operation. First, in order to disperse the defender's attention and capability, the offending echelon would attack them from all directions.<sup>570</sup> If the defender's attention could be dispersed, the main attack could strike the main hill (Hill 931). To perfectly deceive the defender, the main attack would wage a surprise night raid without any light or fire support. In the final stages, once the defenders were sent into turmoil due to the loss of the main hill, the offender's tank battalion would outflank the defender's defence line and cut off their operation route, leading them into a position of ever greater turmoil while exploiting their pandemonium to capture the remaining hills. This plan proved to be a great success. After the few days of hard training, the US 2<sup>nd</sup> Division's main attacking echelon (the 2<sup>nd</sup> battalion of 23<sup>rd</sup> regiment) carried out the night surprise assault on Hill 931, resulting in its capture. The defender turned into turmoil just as they had anticipated, leaving the Communist's defence line on the brink of collapse. At that moment, the 72<sup>nd</sup> tank battalion, surprisingly, turned up on the defence line's rear. This was a great shock to them as it meant their main operation route was cut off. Thus the defender had no other options, forcing them to withdraw from the Heartbreak Ridge.<sup>571</sup>

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<sup>566</sup> During the preparation fire, they were hidden in the reverse slope covered trenches. They came out to the forward position and resist stubbornly when the preparation fire stopped.

<sup>567</sup> Y.H. Choi, op.cit., p.429,

<sup>568</sup> He was actually appointed on the 20<sup>th</sup> of September which was during the middle of the first round of operation.

<sup>569</sup> IMHC, *HanGukJeonJaengHa*, p.164, and Y.H. Choi, op.cit., p.430

<sup>570</sup> It will also prevent putting the forces in the limited manoeuvring space which makes the defender's firepower concentrated in that area and caused the severe casualties to the offender.

<sup>571</sup> J.S. Na, op.cit., p.191-252, Y.H. Choi, op.cit., p.430-432, IMHC, *HanGukJeonJaengHa*, p.164-169, and KRIS, *JungGongGunEuiHanGukJeonJaengSa-HangMiWonJoJeonJaengSa*, p.191-194

During the 6<sup>th</sup> Offensive and the UN forces' counter-offensive, the PVA succeeded in using the geographic characteristics of the Korean peninsula in an offensive but failed to use the geographic edge offered by the central highlands in defence. Therefore, to maximize their defence potential with the Korean peninsula's mountainous topography and protect themselves from the UN forces' firepower, the communist forces adopted well-connected tunnels and covered trenches widely in the defence position. With this upgraded approach to the defence, the communist forces could maximize the geographic edge and match the UN forces' massive firepower during the stalemate. The communist forces also raised the skill level by the re-education of officer class and strict new recruit training in *Manchuria* during the winter and spring of 1950 and 1951. The communist forces' morale was immensely improved because of brainwashing and increased the chances of promotion opportunities based on military merit. War is the art of action and reaction. During the Korean War, both parties' approaches to war affected each other's approaches to war. The communist forces' defence strategy also made a reasonable success in the early stage of stalemate, since the UN forces' direct approach to the communist positions with their massive firepower did not bring the expected success.

In both battles, one can see the dynamic action and reaction of both parties and the fact that the right combination of skill, technology and geography is the key to the military success in the Korean peninsula. The battle of Bloody Ridge and first phase of Heartbreak Ridge showed that the UN forces' monotonous direct approach using the technological advantage against the communist forces' defence position could not bring the desirable success to the UN forces. The defenders were heavily fortified, used their geographic advantage, and had skilful and high-morale troops. Accordingly, there was a reaction to the communist forces' action. They adopted night surprise assaults and tank troop outflanking manoeuvres to catch the defender by surprise. This approach was a combination of geography, skill, and technology, culminating in a sum capable of great success.<sup>572</sup>

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<sup>572</sup> Technology– Tank troops' mobile and firepower

Skill- Commander's quality (Creative plan of US 2<sup>nd</sup> Division commander), determination and morale of troops (Engineering troops endeavour to refurbish the road for the tank use), and training of troops (2<sup>nd</sup> battalion's hard night combat training)

## Conclusion

The Korean War finally ended on the 27<sup>th</sup> of July, 1953 after a prolonged armistice talk. In this chapter, analysis has been concentrated on the issue of the military technology and geography. If the Korean War is analysed regarding the issues of military technology and geography, then there are four different types of warfare that can be extracted from this analysis.

First, there is the type in which the offender has an edge in military technology and the defender has a geographic edge but they do not have the necessary capability or willingness (morale) to use this to their advantage (technologically superior offender vs geographically advantaged but less skilled defender). In that case, the offender's advantage of military technology would be intensified. This was the situation in the case of the NKPA's invasion to the Western front and the UN forces' Marching North Operation.

The second of these types of warfare is where the defender holds an advantage in technology and geography. This type of warfare can be further divided into two sub-types. The first is the case where the defender underestimates the offender's capability and does not take the time to fully understand their strategy and tactics, like the PVA 1-3 offensives (skilled offender vs technologically and geographically advantageous but less skilled defender). Here, the UN forces were heavily defeated and forced to withdraw to the 37<sup>th</sup> parallel line. The second sub-type is where the defender completely examines the offender's capability, has a good grasp in the understanding of the offender's strategy and tactics, and prepares the solution for the offender (skilled offender vs technologically and geographically advantaged and skilled defender). This was the case in the NKPA *Naktong* River Line campaign and the PVA 4<sup>th</sup>-6<sup>th</sup> Offensives. The communist became overconfident following these early successes and began to attack recklessly against the enemy's geographically advantaged defence line, which was fully supported by advanced fire, air, and mobile power. The NKPA suffered heavy losses at this time and its exhausted forces were abruptly broken down following the *Inchon* landing operation. The PVA also suffered heavy losses and had to transform their strategy to a

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Geography– Outflanking movement using the narrow mountainous path which was believed as inappropriate for the massive tank manoeuvre and eventually became a great shock and burden to the NKPA

positive defence with a war of attrition, using the steep mountainous topography and simultaneously accepting the armistice talk suggestion.

Moreover, the PVA 1<sup>st</sup>-6<sup>th</sup> Offensives also gave crucial instructions to the possible conflict between the North and South. Like the PVA who achieved great success during the 1<sup>st</sup>-3<sup>rd</sup> Offensives, North Korea believed that they could successfully conquer the ROK who at this time were better equipped, possessed a superior economy to support the forces, built a strong defence line, had a good understanding of the NKPA strategy, and enjoyed the military alliance with the US. However, during the 4<sup>th</sup>-6<sup>th</sup> PVA Offensives, after the UN forces recognized the PVA way of warfare, the PVA assault on the geographically advantageous UN defensive positions, heavily supported by their advanced firepower, ended in a great disaster.<sup>573</sup> Thus it is highly unlikely that the NKPA invasion will be successful against the technologically and economically advanced ROK who also understand the NKPA strategies and tactics quite well. They will not be caught by surprise due to sixty year's confrontation.

Third is the case where the defender has a weakness in technology but has a geographic advantage and the capability and willingness to use that advantage (technologically advanced offender vs geographically advanced and skilled defender). From the battle of *Chunchon* and the communist trench warfare during the stalemate, it is proved that the technological superiority of the offender alone cannot guarantee any military success against the defender, who can use their knowledge of local geography to their advantage. During the battle of *Chunchon*, even though the NKPA possessed a technological advantage, they suffered heavy losses. Their operation was delayed to such an extent that the operation of their other fronts were also affected by the ROK 6<sup>th</sup> Division's well-trained defence strategy using their geographic edge. During the stalemate, even though the UN forces possessed dominant fire, air, and mobile power, they suffered heavy casualties and wasted many resources.<sup>574</sup> This

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<sup>573</sup> As analysed above, the UN forces did not underestimate the enemy capability any more, and prepared the strategic and tactical solution (see the Ridgway Operation Guideline) to the PVA offensive. The prominent cases were the Battle of *Chipyeong-ri* during the 4<sup>th</sup> Offensive, the battle of *Papyong* Mountain and *Solma-ri* during the 5<sup>th</sup> Offensive, and the counter-envelopment operation during the 6<sup>th</sup> Offensive.

<sup>574</sup> Over the course of many battles during the stalemate, they were able to achieve their goals by the end but if the cost of achieving these goals was at a high price, including heavy casualties, like the Battle of the Bloody Ridge and Heartbreak Line, it was only a partial success at best.

type of battle could prove Biddle's argument that even though the offender possessed the dominance of military technology, there is no guarantee of military success against the defender who held the capability and willingness to use their geographic edge. This also serves to prove that if the US–ROK alliance relies too heavily on the technological advantages of the possible offensive, they will struggle against the NKPA who has fortified their territory and raised the capability to use this edge to the highest standards possible. In short, once the US-ROK alliance heavily relies upon their technological advantage, they can defend themselves and maximize their advantages as a result of their sixty years of defence preparation. This has included the fortification of territory, along with an understanding of the NKPA strategies and tactics. However, it is very unlikely that the technological dominance alone would guarantee their ultimate success (an offensive campaign) against North Korea. Furthermore, since it was proved during the Korean War that geography possessed a huge potential in defence and offence, the geographic consideration is still the major dimension of modern Korean peninsula warfare.<sup>575</sup>

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<sup>575</sup> Defence– Battle of *Chunchon* (*Soyang* River and Central Highlands)

*Naktong* River line defence campaign (*Naktong* River and *Sobaek* Mountains)

The UN Christmas offensive (*Kaema* Plateau)

Position warfare during the stalemate (Central Highlands)

Offence– the PVA 1<sup>st</sup>-2<sup>nd</sup> Offensive (Mountainous manoeuvre (outflanking movement) using 50 miles crevice between the UN forces' western and eastern front)

The PVA 6<sup>th</sup> offensive (Mountainous manoeuvre in the *Hyon-ri* defence sector)

The UN counter-offensive following the PVA 6<sup>th</sup> offensive (Counter-envelop strategy)

# Chapter 6 The Future Prospect of Technology and Geography in the Korean Peninsula Conflict

## Introduction

After the Korean War, the US-ROK alliance has been developing military strategies regarding a possible NKPA invasion and the defence of territory. For them, the concentration of their warfare capabilities and strategic plans at the territorial defence matter was only natural. The NKPA has been desperately chasing a communized reunification of the Korean Peninsula, developing the offensive military build-up and strategy after the Korean War, and until recently, it was widely believed that the ROK conventional warfare capabilities would not be any match against those of NKPA's. However, after the Cold War ended, a new scenario of conflict emerged. Based on the confidence in their technology and their conventional power as well as the pressing need of neutralizing the suspicious WMDs targets for their homeland and allies' defence,<sup>576</sup> the US did not rule out the possibility of carrying out a pre-emptive strike against the dubious North Korean WMD targets. In addition, because the US-ROK alliance needs to adopt a positive (offensive) deterrence strategy against North Korea, the need for an offensive strategy has increased in recent years.<sup>577</sup>

From a military perspective, it is quite obvious that two different conflict scenarios would bear seriously different outcomes. In the first case (the US-ROK alliance in defence), the technologically-superior and skilled US-ROK alliance would encounter the NKPA on the highly fortified defensive line. This will be similar to the situation encountered at the *Naktong* River line defence campaign and the PVA 4<sup>th</sup>-6<sup>th</sup> offensive on the UN front during

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<sup>576</sup> (1) The arguable US military success of the First and Second Gulf War boosted their confidence in employing their technology

(2) The vast improvement of ROK armed forces' conventional warfare capability

(3) The North Korean economic crisis

<sup>577</sup> Because of the specific North Korean value evaluation system, the only threat North Korea would succumb to is the regime collapse therefore, for deterrence purposes, the need of offensive strategy and capability has augmented in recent years. The detailed research on the North Korean deterrence issue will be discussed below.

the Korean War. The possible North Korean invasion would be met with severe resistance from the US-ROK joint forces, which, after the Korean War, have vastly improved in terms of military technology, training, command, strategic and tactical preparation, economic tenacity, and defence line fortification. Therefore, even though the NKPA has strengthened the irregular and asymmetric warfare capability recently using WMDs<sup>578</sup>, as analysed above in the Korean War case study of *Naktong* River line defence campaign and the PVA 4<sup>th</sup>-6<sup>th</sup> offensive on the UN front, it is highly probable that a North Korean invasion would result in tremendous disaster without bearing any fruit.

On the other hand, if the US-ROK alliance were to launch an offensive measure, as was the case with the Battle of *Chunchon* and the trench warfare during the stalemate in the Korean War, the technologically-advanced US-ROK joint forces would meet an NKPA that is capable of using their fortified position. After the Korean War, the US-ROK alliance has developed highly competitive military technologies and deployed those. The NKPA has also successfully fortified their territory while simultaneously attempting to offset their technological disadvantages via enhancing their asymmetric power and military readiness. What might happen if conflict in the Korean peninsula were to break out a second time, under this new scenario of the technologically superior offender and the skilled defender who possesses the geographic edge and the capability to use it?

The US-ROK alliance would expect their technological advantage to give them a crucial edge against a stubborn North Korea. However, as was the case in the battle of *Chunchon* and position warfare during the stalemate and the limit of current military technology, which will be analysed in this chapter, even though the military technology serves as a vital element of military success, relying solely upon technology cannot guarantee a complete military

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<sup>578</sup> It is widely believed that the NKPA would use the long-range artillery and ballistic missile in the initial stage of war to spread the war phobia and support the offensive unit in the front. However, Even though it became much more difficult to neutralize the NKPA artillery or Ballistic missiles because of the fortification, eventually those have to come out of the trench to support the advancing units. Therefore, even if the NKPA application of WMD would have a significant impact in the initial stage of war -those can give a significant blow to the ROK front and *Seoul* metropolitan area- those would be easily detected and neutralized once those come out and support the advancing units because of the superior US-ROK intelligence and stand-off power. Therefore it is highly unlikely that those will change the whole course of war.

success against an opponent who holds a geographical advantage and understands how to use that advantage to exploit their opponent's weaknesses. The right balance between the military technology and the human elements of war such as the training, command, preponderance, and strategic and tactical preparation must be found, in order to ensure what would be the key to military success, as was the case in the battle of Heartbreak ridge.

The purpose of this case study is to reveal that possessing advanced military technology alone cannot guarantee the ultimate success of war against a stubborn defender who maintains a formidable defensive edge and knows how to employ it. Chapters 2 and 3 already examined how the US-ROK alliance has transformed their armed forces to one centred on technology, and the complex development of NKPA military strategy revealed how they had developed the defensive strategy using their geographic edge. This chapter will first examine why the US adopted the pre-emptive strike strategy, which meant another scenario of war (the US-ROK in the offensive) would emerge. The second section of research will focus on the deterrence of North Korea which can reveal that the US-ROK alliance has gradually transformed their military strategy towards the offensive for the effective deterrence against North Korea. This section will also reveal that it is crucial for the US-ROK alliance to have a capability to nullify the North Korean HDBTs in the front and rear for deterrence. The final section of research will examine whether current US military technology, which is vital to the US pre-emptive strike strategy, and a US-ROK alliance all-out offensive would be efficient enough to help take out the strategically important but well-protected North Korean targets during a conflict. Thus, this chapter will examine the claim that the contemporary US military's technology alone would not guarantee ultimate military success and deterrence against North Korea, who have fortified their territory using their geographic edge.

## 6-1 The US Pre-emptive Strike Strategy and OPLAN 5027

### WMD and US-ROK Alliance

Since the NKPA pursued an asymmetric warfare strategy with their main means being WMDs, the US-ROK alliance would meet a fresh and difficult security challenge. The North

Korean SSM could reach the US military base in the Korean peninsula and Japan. The missile could load either nuclear or bio-chemical warheads. However, the missile defence system is not easy to establish; not to mention it has no guarantee of neutralizing the missile once launched. Therefore, it poses an obvious security threat for the US-ROK alliance. Once the NKPA are able to develop their current missile technology further to the ICBM level,<sup>579</sup> the US homeland would be within easy reach of their missile range and thus they instantly became a direct threat to various nations' homeland security. Meanwhile, if the North Korean missiles and their technology were to be exported or transferred to a rogue state or terrorist organization, it would also threaten the US and her allies' security.<sup>580</sup> In "The President of the United States, the National Security Strategy of the United States of America-September 2002" the US government admitted that "in the past decade North Korea has become the world's principal purveyor of ballistic missiles, and has tested increasingly capable missiles while developing its own WMD arsenal".

After 9/11, the alerts about WMD have been raised in efforts to cultivate an effective strategy for countering WMD.<sup>581</sup> This became an integral component of the US national security. The US would try a non-proliferation effort such as active non-proliferation diplomacy, multilateral regimes (Missile Technology Control Regime (MTCR), International Atomic Energy Agency (IAEA)), control on nuclear materials, export controls and non-proliferation

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<sup>579</sup> The key of ICBM technology is to have a sufficient rocket propelling power to get out of the atmosphere. North Korea incurs suspicion that they have used two satellite launchings (1<sup>st</sup> of March, 1998 and 5<sup>th</sup> of April, 2009) for the ICBM technology test.

<sup>580</sup> J.Y. Yun, BukHanEuiDaeRyangSalSangMuGiGaeBalHyunHwangMichEuiDoWaJeonMang in BukHakYeonGuHakHwae, *BukHanEuiGunSa*, p.373-374 North Korea already exported around 500 SCUD B (SRBM (Short-Range Ballistic Missile), Range; 300Km and Warhead; 985Kg)/C Variants (SRBM, Range; 500Km and Warhead; 700Kg) to Middle East including Iran, Syria, and UAE by 1998. They also started to export the advanced *Ro-dong 1* missile (MRBM (Medium-Range Ballistic Missile), Range 1,300 Km and Warhead; 1200Kg) to Iran and Pakistan. In addition, it is known that they have been cooperating with Pakistan for the development of the *Gauri* Missile and contributed the development of Iran's *Shahab-3* missile (MRBM, Range; 1300-2500Km, and Warhead; 1200Kg) Excerpted From- Y.S, Han, op.cit., p.347, and [Missilethreat.com-http://www.missilethreat.com/missilesoftheworld](http://www.missilethreat.com/missilesoftheworld), (Accessed on 12<sup>th</sup> of January, 2010)

<sup>581</sup> It is not restricted to the use of WMDs and contains the case of proliferation of technology and arsenal.

sanctions.<sup>582</sup> Once entire diplomatic options have been exhausted or if they want to show their determination on the matter, military activity (counter-proliferation effort) such as pre-emptive surgical operation or interdiction efforts would follow. The U.S government has already decreed that “The United States will continue to make clear that it reserves the right to respond with overwhelming force -including through resort to all of our options- to the use of WMD against the United States, our forces abroad, and friends and allies”.<sup>583</sup>

Therefore, the US government officially decreed their right of pre-emptive attack against the WMDs of rogue states and terrorist organization as self-defence after 9/11. The US government stance which reserves the right of self-defence against the WMDs of rogue states and terrorist organization can be traced back to the Clinton administration.<sup>584</sup> Although PDD-62 and PDD-16 documents did not mention the right of pre-emptive attack as self-defence, OPLAN 5026 and OPLAN 5027-94, which were drafted or modified during the Clinton Administration and will be analysed below, clearly show that the US already considered and adopted the pre-emptive strike as a military option.

The ROK was unwilling to comment on the pre-emptive strike option since they did not want to provoke North Korea to succeed the “Sunshine policy”.<sup>585</sup> However, considering the devastating effect of long-range artillery and missiles once launched, the ROK military authorities also cannot shun the pre-emptive attack option any more. The ROK minister of

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<sup>582</sup> The US Department of State, *National Strategy to Combat Weapons of Mass Destruction- December, 2002*, p.3-5

<sup>583</sup> The President of the United States, *The National Security Strategy of the United States of America –September , 2002*

The US Department of State, *National Strategy to Combat Weapons of Mass Destruction- December, 2002*, p.3

<sup>584</sup> Presidential Decision Directive (PDD) 62 (Protection Against Unconventional Threat to the Homeland and American Overseas): 22<sup>nd</sup> of May, 1998, FAS website: <http://www.fas.org/irp/offdocs/pdd-62.htm> (Accessed on 1<sup>st</sup> of January, 2010)

PDD-18 (Counter-proliferation Initiative): December, 1993, FAS website: <http://www.fas.org/irp/offdocs/pdd18.htm> (Accessed: 1<sup>st</sup> of January, 2010)

<sup>585</sup> The “Sunshine Policy” was the ROK reunification doctrine towards North Korea until the incumbent ROK president *Lee Myungbak* restructured the reunification doctrine. The doctrine stresses the peaceful cooperation, and short-term reconciliation as a prelude to ultimate unification.

National Defence, *Kim Taeyong*, mentioned on the 20<sup>th</sup> of January, 2010 at an open forum (Subject: National Defence Reform and the Prospect of South and North Korea Relations) that, “even though there has been a debate on the lawfulness of pre-emptive strike, due to the severe damage caused once the North Korean nuclear weapons are launched, if there is an obvious sign of North Korean Nuclear attack, we will pre-empt suspicious targets”.<sup>586</sup>

The NKPA asymmetric strategy using WMD forced the US-ROK alliance to think over their existent defensive strategy, prepare the pre-emptive surgical operation plan (OPLAN 5026), and reshuffle their concepts concerning the all-out war scenario (OPLAN 5027). This is because of the devastating effect of these weapons once exploded, and the fact that it is hard to neutralize any missiles once launched, and the threat of its export or technology transfer (proliferation) to the rogue state or terrorist organizations.

## OPLAN 5026, OPLAN 5027, and OPLAN 5029

In June, 1993, when the nuclear crisis was heated, the US drafted the operation plan (OPLAN 5026) for the surgical air-strikes on suspicious North Korean nuclear targets.<sup>587</sup> The Clinton administration ordered the Pacific Command (PC) to draft it. OPLAN 5026 is the USPC operation plan; therefore it is also the USFK OPLAN, which is under the USPC command. However, since the ROK-US CFC wartime command belongs to the US, the USPC OPLAN is automatically the ROK-US CFC OPLAN. After the OPLAN 5026, there was the all-out war scenario reform (5027-94), which was desired at that stage since the fear of all-out war between the North and South was raised by the US threat and operation plan to neutralize the suspicious nuclear targets.<sup>588</sup> The all-out war operation plan (OPLAN 5027) which

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<sup>586</sup> *Jungang Ilbo (Seoul)*, 10<sup>th</sup> of January, 2010

<sup>587</sup> Those plans consisted of deploying additional squadrons of aircraft to the ROK, including F-117s, the deployment of several battalions of ground troops to reinforce elements of the 2<sup>nd</sup> Infantry Division, and the deployment of an additional aircraft carrier battle group with its strike aircraft and Tomahawk cruise missiles. Excerpted from— Global Security; *OPLAN 5026*

<sup>588</sup> OPLAN 5027 was first drafted in 1974 (5027-74) as an all-out war scenario, which aimed at repelling the NKPA to the north of the ceasefire line. The scenario of the OPLAN5027-94 is the ROK armed forces hold the NKPA in the FEBA (Forward Edge of Battle Area, 20–30km south of the

experienced significant transformation in 1994 has been updated every two years. Unlike the previous ones which concentrated on how to defend the territory, the OPLAN 5027-98 included a much more offensive-minded plan, such as the possibility of a pre-emptive attack if the North Korean showed unmistakable signs of preparing to strike. The operation plan was developed in detail to achieve the eventual objective of abolishing North Korea as a functioning state, ending the rule of its leader (*Kim Jongil*), and the reunification of the country. This modification also included a strategy of manoeuvring warfare that would take place north of the DMZ, along with the countering strategy in the case of sudden chemical and biological attack against *Seoul*. Based on the Iraq Freedom Operation success and further development of Missile Defence (MD) especially sensor technology, OPLAN 5027-04 added new plans. These used the latest development of airpower and sensor technology to respond to any possible North Korean missile launching or invasion without waiting for more ground forces to arrive.<sup>589</sup> Therefore, based on the development of OPLAN 5027, it is quite obvious that the ROK-US CFC's all-out war plan was developed in a way which was elaborate, aggressive, and showcased their technological sophistication.

There is also the scenario where the ROK-US alliance has to launch an offensive because of sudden changes in North Korea. Contemporarily, the ROK-US alliance has reportedly been engaged in discussions to flesh out the OPLAN 5029, to prepare a sudden change in North Korea (contingency plan). Based on the various statements Walter Sharp (The USFK Chief) has made, the operation plan currently under discussion by the US and ROK which includes plans for a possible military operation in response to five or six scenarios of upheaval in North Korea. These include the possibility of an outflow of nuclear weapons or other WMDs, a civil war resulting from a regime change or *coup d'état*, a South Korean hostage incident within North Korea, a large scale defection of North Korean residents, or a large scale natural disaster.<sup>590</sup> Therefore, this operation plan also does not rule out the potential offensive against the NKPA.

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ceasefire line) for approximately one month → the US sends reinforcements → US army repel the NKPA along with the landing operation → breakdown of the North regime.

<sup>589</sup> Excerpted and analysed from- Global Security; *OPLAN 5027*

<sup>590</sup> *The Hankyore (Seoul)*, 2<sup>nd</sup> of November, 2009

Briefly, the NKPA persistent military strategy of Two-Front and High-Speed warfare strategy resulted in a defensive-minded stalling strategy for the US-ROK alliance since they hold a geographic defensive edge but would still need to wait for the arrival of US reinforcement to fully repel a North Korean invasion. However, the NKPA's addition of WMDs as an asymmetric warfare has led the US-ROK alliance to review the defensive-minded stalling strategy. This is because of the WMDs effect on potential Korean peninsula conflicts as well as the possibility of WMD technology and arsenal proliferation. As a consequence, they started to seriously consider the pre-emptive strike option and a following offensive operation against North Korea. Therefore, the level of conflict in the Korean peninsula for the US-ROK alliance is not restricted to the territorial defence until the US is fully engaged, and has expanded to the idea of carrying out a pre-emptive strike against strategic North Korean targets. Meanwhile, the all-out offensive warfare to get rid of the North Korean regime that is at the heart of WMD proliferation and continues to jeopardize the regional security has also been developed.

## 6-2 North Korea and Deterrence

In its most general form, deterrence is "simply the persuasion of one's opponent that costs and/or risks of a given course of action he might take outweigh its benefits."<sup>591</sup> To review the North Korean deterrence issue, it is essential to research the specific nature of Korean peninsula security. In the Korean peninsula, most of all, the efficiency of nuclear weapons as a means of deterrence against North Korea is severely limited. There are humanitarian and diplomatic concerns about the side-effects of nuclear weapons and doubts about the real efficiency of nuclear weapons because of the heavy fortifications.<sup>592</sup> Therefore, instead of nuclear weapons, conventional ones would act as the key element of deterrence.

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<sup>591</sup> L. George and R. Smoke, *Deterrence in American Foreign Policy ; theory and practice*, New York, Columbia University Press, 1974, p.11

<sup>592</sup> The detailed research on the humanitarian, diplomatic concern and North Korean fortification will be achieved below.

Second is the distinctive nature of North Korean regime. First, under *Juche* doctrine<sup>593</sup>, North Korea has no choice but to withstand the US pressure and *Juche* provides the rationale for *Pyongyang* to exert defensive power over the US. Even though they are far behind the ROK in terms of economy, military, and foreign diplomacy, they believe that they have an edge over the ROK in one area that has attracted many ROK students and intellectuals over the years: national sovereignty based on *Juche* ideology.<sup>594</sup> Therefore, if they succumbed to the mere American nuclear threat, this would mean giving up the only comparative edge they possibly have over the South, and consequently would signify a complete defeat in the regime competition.

In addition, there are a few necessary conditions for deterrence to function predictably and reliably. Most of all, the enforcer would be required to have a credible capability. Then, the opponent should have rationality in decision making, be well-informed, and possess a value that could be threatened by the enforcer. In addition, it is also desirable for both sides to have reliable and reasonable communications, mutual familiarity and understanding.<sup>595</sup> However, North Korea is an autocratic country so the decision-making rationality is inevitably lower than in democratic countries. The mutual familiarity and understanding between the US and North Korea is also lower compared to the US and the former Soviet Union. Also, North Korea hints that they will wage a suicidal all-out war when their regime is in danger, which means that they put the regime's survival as the prime value. In conclusion, North Korea does not have a rational, reliable regime or the same value evaluation system as the US and the

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<sup>593</sup> For the understanding of *Juche* ideology,

See) B.C. Koh, *Chapter 5 and 11 in The foreign policy systems of North and South Korea*, Berkeley, University of California Press, 1984

*Juche* (self-reliance) ideology in North Korea is the central guideline for both domestic and foreign policy. The core concepts of *Juche*, independence and sovereignty, have been the manifested goal of North Korea's foreign policy and are linked to politics, economics, social life, and even to the very existence of *Kim JongIl's* leadership and his legitimacy. What is important in North Korea's foreign policy with respect to the promotion of *Juche* is the principle of anti-foreign intervention, which is clearly prescribed in their constitution. Excerpted from K.A. Park, North Korea's Defensive power and U.S- North Korea Relations, *Pacific Affairs*, 73(4), Special issue in Flux, Winter 2000-2001, p. 544-545

<sup>594</sup> Ibid., p.547

<sup>595</sup> K.B. Payne, *The Nuclear Posture Review; Setting the Record Straight*, p.138-139

former Soviet Union therefore they are incalculable and irrational. Under these circumstances, North Korea is not easily deterred by the threat of nuclear weapons. Instead, since the North Korean prime value lies in the survival of its regime, the US-ROK alliance has to envisage that any suspicious movement could lead to military action and, ultimately, regime collapse. In other words, to put deterrence into effect in the Korean peninsula, the US-ROK alliance needs to implant the fear in the North Koreans that any challenge, even territorial defence, would result in failure.

Because the US deterrence strategy against North Korea during the Cold War era was focused on the denial of North Korea's communized reunification ambitions by nuclear weapons and massive engagement threat (defence oriented), it was closed to deterrence by denial.<sup>596</sup> However, in the post-Cold War era, to deter North Korea, who have become more incalculable and irrational, the US-ROK alliance needs to have a strong will and capability to threaten the North Korean prime value (regime survival) with conventional means (deterrence by punishment), which are beyond the level of deterrence by denial.<sup>597</sup> The US-ROK alliance has not ostensibly implemented a positive deterrence strategy because of the expected heavy North Korean defiance. But, they have slowly but resolutely pursued the offensive strategy and capability aimed at bringing down the North Korean regime.<sup>598</sup>

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<sup>596</sup> Deterrence by denial is achieved by precluding opponent from actually accomplishing their desire. Excerpted from- R. Crawley eds., *The Reader's Companion to Military History*, Houghton Mifflin, 1995, p.131

<sup>597</sup> The deterrence by punishment is operated by threat.

To see the detailed difference of deterrence by denial and punishment, Read) G. Snyder, *Deterrence and Defense: Toward a Theory of National Security*, Princeton, Princeton University Press, 1961, p.14-16

<sup>598</sup> Dwindling defensive minded deterrence by denial strategy

- 1) The US nuclear weapon withdrawal from the Korean peninsula
- 2) The waiver of trip-wire notion

Emerging positive measures

- 1) Positive measures against the North Korean WMDs: The adoption of pre-emptive strategy (OPLAN 5026) and reinforcing the stand-off precision power
- 2) Upgraded OPLANs

How far has the US-ROK offensive strategy been developed? As one can see from OPLAN 5026 and 5029, the US-ROK alliance declared that they would choose an offensive against North Korea in limited cases. As one can also see from OPLAN 5027, the US-ROK alliance all-out war plan is to repel the North Korean offensive in the prepared defensive position first, and then launch a counter-offensive later. This shows that there is still a deterrence by denial approach in the US-ROK alliance deterrence strategy, since they plan to deny the North Korean intention of communized reunification. However, the final objective of OPLAN is to remove the North Korean regime, which would signal that once the North is committed to a full scale offensive, the only result they will obtain is the regime's collapse. It is a deterrence approach based on threat (deterrence by punishment). Therefore, one could say that the Korean peninsula deterrence approaches have been gradually transformed from a Cold War type deterrence by denial approach to the deterrence by punishment approach. Meanwhile, the significance of offensive warfare capability of the US-ROK alliance has been augmented. Once the US-ROK alliance decides to launch an offensive against the North, which strategy will be applied and how will the geography and technology factors influence this offensive?

The basic US-ROK military strategy against the North is a forward-based offensive strategy. An analysis of this strategy was done in the Introduction (OPLAN 5027-94). The strategy is composed of three operation stages. During Phase 1 (NKPA Attack), the US-ROK forces would perform a vigorous forward defence aimed at defending *Seoul*. Their campaign would be dominated by combined-arms ground battles waged with infantry, artillery, and armour. The US-ROK air and naval forces would conduct CAS, interdiction, and deep strike missions. US-ROK operations in Phase 2 (ROK Defence) would probably focus on seizing key terrain, inflicting additional casualties on enemy forces, and rebuffing further attacks.<sup>599</sup> Their military strategy in these two phases would follow the US Airland Battle strategy against the NKPA armoured troops which would adopt the Soviet OMG. However, considering the specialty of the Korean peninsula security circumstances, they have also implemented the forward defence line concept. In the Korean peninsula, central highlands and a few deep and wide rivers would prevent the manoeuvre of massive mechanized troops, while the strategic importance of the capital is immense. Therefore, the massive mechanized troop battle in the south of *Seoul's* prairie has not been considered. Instead, the US-ROK alliance chooses to

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<sup>599</sup> Global Security; *OPLAN 5027*

defend against the NKPA armoured troops using the central highlands which are north of *Seoul*.

Phase 3 is a counter-offensive aimed at nullifying the NKPA military power. The counter-offensive would start when the US ground build-up was complete and ROK forces were replenished. The war plan envisions an amphibious operation at the narrow waist of North Korea. The US and ROK Marine Corps would land there to establish a beachhead, with substantial Army resources quickly conducting over-the-shore operations.<sup>600</sup> The key element of the US OPLAN 5027 counter-offensive stage is the amphibious operation. Reflecting the success of the *Inchon* landing operation, its intention is to avoid the immense casualties in the central highland and finish the war quickly. However, reflecting upon the *Inchon* landing operation disaster, the NKPA has also strengthened their coastal defences since 1951. *Kim Ilson* visited coast guard units in March and April of 1951, and insisted that “the capability of the coast guard should be raised to make our coastal defence impregnable”.<sup>601</sup> In his speech at the Naval officers’ school (July, 1954), he also stressed that “we needed to increase the coast-battery firepower as a first stage of the North Korean Navy establishment”. The NKPA showed their coastal defence capability in the bombardment of *Yeonpyeong* Island by the NKPA coast-battery on the 23<sup>rd</sup> of November, 2010. Therefore, the efficiency of amphibious operations is not as great as the *Inchon* landing operation and the US-ROK alliance would not avoid action in the central highlands where the cease-fire line is located. North Korea had already fortified their frontal defence line heavily during the Korean War, and after the War they have heavily fortified the entire territory.<sup>602</sup> Moreover, because of the Korean War experience, they know how to use the defence position in the mountainous topography and the skilful NKPA would guarantee the maximum use of defence potential of the central highlands.

The NKPA defence line and strategy contains a fatal weakness: its depth. Because, their force structure and strategy is based on offensive strategies, they have not been keen on the defence depth. Further, once the central highland positions are conquered, there will be no more

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<sup>600</sup> Global Security; *OPLAN 5027*

<sup>601</sup> Sahoiguahakryeoksayeonguso, *JoSeonJeonSa26*, Pyongyang, Gwahakbaekgwagajeonjonghabchulpansa, 1982, p.342-345

<sup>602</sup> The history and extent of North Korean territorial fortification will be examined below.

severe natural barriers on the way to *Pyongyang* on the western front and *Wonsan* on the east.<sup>603</sup> Therefore, considering the North Korean defence posture and geography, one can realize that the US-ROK alliance penetration of the central highlands frontal defence line would be strategically important when it comes to the offensive operation against the North. So, to topple the North Korean regime without much cost, the US-ROK alliance has to possess the capability to neutralize the NKPA main asymmetric warfare asset in long-range artillery in the front and heavily-fortified frontal defence positions. In addition, the capability to eliminate the North Korean centre of gravity aims at paralyzing the proper command and communication. WMDs assets (missile sites and bio-chemical weapons production units and reserves) in the rear are also required for effective operation. In conclusion, strategically important North Korean targets are usually HDBTs using the mountainous topography and overcoming those HDBTs would be the key to the military success in the offensive.

As was the case in the trench warfare during the Korean War stalemate, a direct approach using the firepower advantage against heavily fortified central highland trenches would demand huge casualties and costs, which is a the desirable scenario for the US-ROK alliance. The US-ROK alliance has tried to overcome this dilemma through upgrading military technology by target acquisition, stand-off precision, and earth-penetrating technology. As analysed above in the Korean War and *Imjin* Wars cases, the skilful defence strategy using the geographic characteristics of the Korean peninsula blunted the sharpness of technology and acted as the key element of war.<sup>604</sup>

In the Korean peninsula, the geographic dimension of war has been a significant element of war. But, one can question whether these newly developed military technologies, developed

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<sup>603</sup> During the Korean War, the impressive UN forces' 'Marching North' operation speed was partly because the NKPA did not have a reserve to defend the central highlands.

<sup>604</sup> Unlike the first invasion, during the Japanese second invasion the *Joseon* forces' castle on the hill defence strategy using the steep mountains of the Korean peninsula weakened the firepower of Japanese Harquebus. The reason that the *Imjin* Wars case study did not have detailed research on the technology was because both Japan and *Joseon* did not have a significant level of difference in military technology, while the geography acted as the significant element. For example, the Japanese possessed an accurate direct-firing Harquebus while *Joseon* and *Ming* possessed a long-range high-angle cannon which was decisive in the *Joseon* Navy's successes and *Ming* army's success in the Battle of *Pyongyang*.

to destabilise the NKPA defence strategy by maximizing their edge in geography, are as effective as the US-ROK alliance expects. If these new technologies are working effectively, the US-ROK alliance could easily penetrate the heavily fortified central highlands frontal defence line and advance to *Pyongyang* and *Wonsan*. Meanwhile, these technologies would enable the US-ROK alliance to neutralize the heavily fortified North Korean WMDs and centre of gravity targets in the rear which prevent unrest in the ROK rear, guaranteeing a better supply from the US mainland, and paralyzing the NKPA command.

The NKPA defence strategy using the geographic edge and the US-ROK technology-centred offensive strategy have both merits and demerits. The NKPA defence strategy would have better survivability against the massive and accurate US-ROK firepower. However, because of the lack of sustainability of war and technology, once the US-ROK alliance is capable of overcoming the North Korean defence strategy maximizing the geographic edge, North Korea would be in danger of complete melt down. The US-ROK alliance has tried to develop the technology-centred offensive strategy to demolish the NKPA defensive strategy with less casualties and costs. If that was successful, they would have a relatively comfortable war against the North as was the case in the First and Second Gulf War. However, that was fought in the open desert with poorly organized, commanded, and trained troops. Therefore, there could be a doubt about the advanced military technology's efficiency against the geographically advantageous and highly skilled NKPA. If the US-ROK alliance decides to wage a technology-centred war but contemporary US military technology does not have the expected efficiency against the NKPA defence strategy, the result will be unpredictable. As in case in the Battle of Bloody Ridge Line, if the offender's technology fails to destabilise the geographically advantaged and highly skilled defender's position, the offender's options will be limited and the direct offensive approach would bring massive casualties and costs.

The section above revealed that, since North Korea adopted the asymmetric warfare strategy using WMDs, the US-ROK alliance had to develop the offensive strategy. In this situation, to enforce the North Korean deterrence, the US-ROK alliance would need an offensive strategy using conventional powers with the objective of the North Korean regime's collapse. The section also examined that to succeed in the offensive strategy, the US-ROK alliance will have to overcome the fortified NKPA defence trenches and long-range artilleries in the front.

Also it will have to overcome the centre of gravity and WMDs targets in the rear which are heavily fortified with geographic merit.

The following sub-chapter will examine the effectiveness of the technology-centred contemporary US pre-emptive strike strategy and the offensive operation scenario in the Korean peninsula through the virtual application of US stand-off precision earth-penetrating weapons to the North Korean underground facility. By doing so, it can examine the claim that technology alone would not guarantee ultimate military success against North Korea, which has fortified their territory using the geographic edge.

## 6-3 The US-ROK Stand-Off Precision Earth-penetrating Weapons and North Korean HDBTs

### HDBTs and US national security

The NKPA WMDs and the production units or reserves are mostly hidden in the mountainous area's underground tunnels, which were severely fortified after the Korean War. Those HDBTs<sup>605</sup> maximize the advantage of the Korean Peninsula's mountainous topography. Furthermore, through intensive research on the Vietnam War, NATO's engagement in Kosovo, and the First and Second Gulf War, North Korea has learned the importance of fully using deception in their defences which makes it even more complicated for the US-ROK alliance to neutralize those targets.

Militarily, if the NKPA's strategically important targets (WMD, modern air defences, most sophisticated C4I system, national leadership in wartime, and a variety of tactical arms) were to be increasingly concealed and protected by networks of hard and deeply buried facilities and sophisticated deception skill, those targets would become much more difficult to neutralize.<sup>606</sup> However the effect of underground facility construction and deception is not

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<sup>605</sup> According to the definition of "*Report to Congress on the defeat of Hard and Deeply Buried Targets*", July, 2001, HDBTs refer to an adversary's threatening and well protected assets in structures ranging from hardened surface bunker complexes to deep tunnels.

<sup>606</sup> Report to Congress on the defeat of Hard and Deeply Buried Targets, p.3

restricted to the efficiency of the military mission. Once those targets become operative without much hindrance and the WMD technology and arsenal has proliferated, it would affect the national security of the US and ROK, but more importantly it would harm the credibility of deterrence against other potential adversaries. To overcome this security dilemma, the US military authorities have begun to research a military option for the HDBTs of potential adversaries. This is for the absolute deterrence against potential adversaries.<sup>607</sup> The military counter-measure contemplated is to develop a technological capability to neutralize HDBTs.<sup>608</sup>

The US DOD in conjunction with the Department of Energy (DOE) published the “Report to Congress on the Defeat of Hard and Deeply Buried Targets” in July, 2001.<sup>609</sup> In there, they vowed to develop the military technology to neutralize the HDBTs of possible adversaries. In addition, through the NPR that was submitted to Congress on the 31 December 2001,<sup>610</sup> the US declared that “the Cold War’s strategic nuclear triad consisted of manned bombers, land based ICBMs, and SLBMs which assured the mutual destruction (balance of terror), all designed and acquired with explicit reference to the Soviet threat would be still maintained

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<sup>607</sup> As analysed above, to enforce the deterrence, the US-ROK alliance must have the capability to neutralize the North Korean HDBTs which are strategically so important (for the effective US-ROK offensive) and directly related to the regime survival.

<sup>608</sup> For example, during the First North Korean nuclear crisis, the US did not carry out a pre-emptive strike. The reasons behind this decision were not only because of the ROK and Japan’s reluctance to the all-out war as a result of surgical air-strikes, but also the US apprehension of the North Korean counter-attack. More precisely, since the US was not equipped with the technology to neutralize the North Korean HDBTs at that point especially the North Korean frontal long-range artillery which would be the greatest threat to the US-ROK alliance once war broke out, they were not able to stop North Korea from bombarding the *Seoul* metropolitan area and the US 2<sup>nd</sup> Infantry division. Their inability to cope with the NKPA HDBTs gave the US military authorities a great motive to develop more innovative military technology.

<sup>609</sup> It is from the Nuke Watch website;

[http://www.nukewatch.org/facts/nwd/HiRes\\_Report\\_to\\_Congress\\_on\\_the\\_Defeat.pdf](http://www.nukewatch.org/facts/nwd/HiRes_Report_to_Congress_on_the_Defeat.pdf) (Accessed on the 12th of January, 2010)

<sup>610</sup> Global security website; *Nuclear Posture Review excerpt*,

<http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm> (Accessed on the 12th of January, 2010)

for the continuity of traditional deterrence should relations with Russia, or perhaps China, sour”.<sup>611</sup> However, it also mentioned that, because of the changed security environment of the post-Cold War era, the emphasis on nuclear deterrence had been shifted. Those changes include: “the end of the Soviet threat; the rise of new, different challengers using Asymmetric means; and the proliferation of WMDs and other lethal military technologies.”<sup>612</sup> The NPR 2001 emphasized that, in the post-Cold War security environment, the balance of nuclear terror is not an adequate basis for strategic policy and the uncertainties surrounding deterrence undermine its predictable functions. The US recognized that the balance of terror would not work against the potential adversaries<sup>613</sup> (the rogue states) that possessed WMDs, having proliferated technology and arsenal in the post-Cold War era became the motive to transform to a capability-based nuclear deterrence strategy.<sup>614</sup>

In the NPR 2001, in order to dissuade potential adversaries from threatening US interests, deter adversary use of WMDs, and, should deterrence fail, defeat those adversaries decisively, the NPR envisioned a ‘New Triad’ with three redefined legs;

1. Strategic offensive forces, nuclear and conventional;
2. Defensive forces (Meshed missile defences)
3. A Responsive Military Infrastructure.<sup>615</sup>

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<sup>611</sup> National Instituted For Public Policy, *Strategic Offensive Forces and the Nuclear Posture Review’s “New Triad”*, March, 2003, p.2

<sup>612</sup> Ibid., p.2

<sup>613</sup> Reasons that the US thought that the balance of terror would not work against the potential foes in the post-Cold War era are below;

- 1) Irrationality of their decision making
- 2)The potential foes do not have a rational cost-benefit calculation (usually, at any cost, they want to save their regimes)
- 3)The US cannot recognize values which they can threaten
- 4)The potential foes will not become cautious in the face of nuclear threat
- 5) The potential foes are not well-informed of real impact of nuclear weapons
- 6) Both the US and potential adversaries do not share the mutual familiarity, understanding, reliable channels of communication.

<sup>614</sup> K.B. Payne, The Nuclear Posture Review; Setting the Record Straight, *The Washington Quarterly*, Summer, 2005, p.138

<sup>615</sup> The National Instituted For Public Policy, op.cit., p.11

This 'New Triad' also shows the US strategic forces planning transformed from the traditional threat based approaches to capabilities based approaches. The notable point for the Korean Peninsula security was that the US was targeting to possess a strategic offensive capability to neutralize the enemy centre of gravity, WMDs launching facility, production units, and arsenal for the reliable deterrence against irrational rogue state regimes such as North Korea.<sup>616</sup> For its strategic offensive, the US aimed to develop a precise low-yield Nuclear Earth Penetrator (NEP) along with other conventional means. The details of NEP are shrouded in secrecy. According to the CRS Report for Congress "Bunker Busters": Sources of Confusion in the Robust Nuclear Penetrator Debate, 10<sup>th</sup> of January, 2005: "(1) The Administration sought, successfully, in the FY2004 budget cycle to have Congress lift the ban concerning R&D on low-yield (Sub-5kiloton) nuclear weapons. (2) Nuclear earth penetrators could be used to destroy some hardened and deeply buried targets. (3) Some in the DOD and DOE have suggested using nuclear weapons to destroy chemical and biological agents. (4) It is desirable to minimize collateral damage and, for attacking HDBTs, a low-yield earth penetrator will produce less fallout than a surface-burst weapon of yield high enough to have equivalent effectiveness." In conclusion, because of the changed security circumstances in recent years, and for the effective deterrence against the potential adversary whose WMDs and centre of gravity became gradually fortified and HDBTs, the US has

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<sup>616</sup> The US Strategic Command and the nuclear laboratories maintain the stance that the use of nuclear weapons would be considered as a last resort, and only be targeting the national level leadership. Excerpted from- J. Fleck, Nukes Could Hit Enemy Bunkers, the *Albuquerque Journal*, 18<sup>th</sup> of December, 2001. However, it is very hard to believe this stance. Most of all, under the current security circumstances, because of the dramatically increased strategic significance, the potential adversary's WMDs target became as significant as their national leadership target. For example, during the First North Korean Nuclear crisis, the US planned to bombard the suspicious nuclear target in *Yongbyon* rather than *Pyongyang* where the North Korean national leadership target is located. In addition, according to the US DOD and CIA classified document in 1998 regarding the nuclear bombardment simulation in the Korean Peninsula obtained by the Natural Resource Defence Council (NRDC), they finished the simulation both national leadership target and WMD targets. Excerpted from- J.M. Kang and I.L. Hwang, MiNRDCEuiHanBanDoHaekPokGyeokSimulation, *Shindonga*, Seoul, 543, December, 2004

conceptualized the pre-emptive strike strategy and developed the capability, conventional and nuclear, using their technological superiority to neutralize those targets.<sup>617</sup>

Furthermore, in the Korean Peninsula security, the US military authorities also drafted the operation plan to neutralize the North Korean WMD HDBTs which adopts the pre-emptive strike, and conventional and strategic nuclear weapons. In the Korean peninsula, the US already prepared the pre-emptive surgical air-strike operation plan (OPLAN 5026) against the suspicious North Korean WMD targets during the First North Korean Nuclear crisis. At that point, even though the US used the nuclear umbrella for credible deterrence against North Korea, it was highly improbable that the US would draft a scenario to use tactical nuclear weapons in order to neutralize those targets. However, the necessity of adopting tactical nuclear weapons arose since they needed the enormous striking power following the intensified fortification of North Korean WMD targets, and to burn out the chemical and biological agents.<sup>618</sup> Therefore, they started to prepare the application of tactical nuclear weapons against the North Korean HDBTs. The nuclear bombardment simulation in the Korean Peninsula in 1998 was also part of it. Eventually, as an offensive wing of the new nuclear triad in the NPR 2001, the application of tactical nuclear weapons along with conventional means against the North Korean HDBTs became an official policy.

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<sup>617</sup> If the US-ROK alliance possesses the technological capability to neutralize the North Korean HDBTs, they would be able to reduce the strategic impact of North Korean WMDs and contribute to deny the North Korean intention of communized reunification. Therefore, one can say it would be the deterrence by denial. However, the excessive reliance on the HDBTs using their geographic edge could be a fatal weakness. If the US-ROK alliance has the technological ability to neutralize those, it can also threaten the North Korean prime value (regime survival). Therefore, it can be viewed as deterrence by punishment.

<sup>618</sup> According to the testimony of Ashton Carter (Professor of Harvard University), in June, 1994, as the assistant deputy minister of defence, when the tension between the US and North Korea reached its peak, he prepared the real surgical air-strike operation against the North Korean nuclear target without radiation pollution. Excerpted from- *Yonhap News (Seoul)*, 3<sup>rd</sup> of March, 2005. According to this testimony, the US administration thought reducing a nuclear fall-out once the strike is committed was the key element of their surgical air-strike success. One of the main reasons of adopting low-yield tactical nuclear weapons is that those weapons possessed the excellent combustion capability which could burn out nuclear or bio-chemical agent.

The US Strategic Command also drafted Concept Plan (CONPLAN) 8022-02 to deal primarily with WMD threats posed by Iran and North Korea.<sup>619</sup> Given the US Strategic Command's mission to integrate possible conventional and nuclear strike options according to Bush's classified directive for the US Strategic Command to develop the capacity to deliver long-range 'kinetic' (nuclear and conventional) and 'non-kinetic' (information operation) strikes, CONPLAN8022 includes an option to employ a NEP to deal with HDBTs.<sup>620</sup>

One critical question which emerges is whether the key elements of contemporary US military strategy – utilizing their technological dominance (conventional and nuclear means) to neutralize the possible adversaries' WMDs and centre of gravity (many of them are HDBTs at the point) for the utmost deterrence – actually works against possible adversaries such as North Korea, who hold a fortified territory and a capability to use their edge in defence.

To answer the question, we must first examine the obvious US-ROK alliance target of North Korean WMDs and centre of gravity facilities' exact count and defensive preparation of those targets against the US stand-off precision technology. Afterwards, we will also assess how US technology would work against North Korean targets.

## The US DoD Nuclear Posture Review Report 2010

The US DoD published the Nuclear Posture Review Report 2010 in April. Like the previous report, it also mentioned "In pursuit of their nuclear ambitions, North Korea and Iran have violated non-proliferation obligations, defied directives of the United Nations Security Council, pursued missile deliver capabilities, and resisted international efforts to resolve through diplomatic means."<sup>621</sup> It also stipulated, "It is essential that we better align our nuclear policies and posture to our most urgent priorities – preventing nuclear terrorism and

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<sup>619</sup> The CONPLAN 8022 posits swift and decisive precision attacks (conventional and cyber) complemented by Special Forces on the ground to locate targets and secure them, if needed.

<sup>620</sup> The International Institute for Strategic Studies, *US Military Options Against Emerging Nuclear Threats*, Strategic Comments, 12(3): April, 2006, p.1-2

<sup>621</sup> The US DOD, Nuclear Posture Review Report, April, 2010, p.3

nuclear proliferation”.<sup>622</sup> It clearly published the US government view that North Korea is still a direct and indirect security threat and that nuclear capabilities would be developed to deter them.

In addition, according to the report, even though the US determined to reduce the role of nuclear weaponry, they still did not give up on nuclear deterrence. According to their security threat perception in the post-Cold war era, they will not deny any nuclear applications to North Korea. Finally, it mentions how the US would invest its efforts on the conventional means to not only reduce the role of nuclear weapons but to also deter nuclear weapon or WMD proliferating countries or terrorist organizations such as Iran and North Korea. Therefore, in terms of Korean Peninsula security, comparing the new NPR to the old NPR and the report on WMD and HDBTs, the only the significant difference is that the US has decided it would rely more on conventional means than they used to.

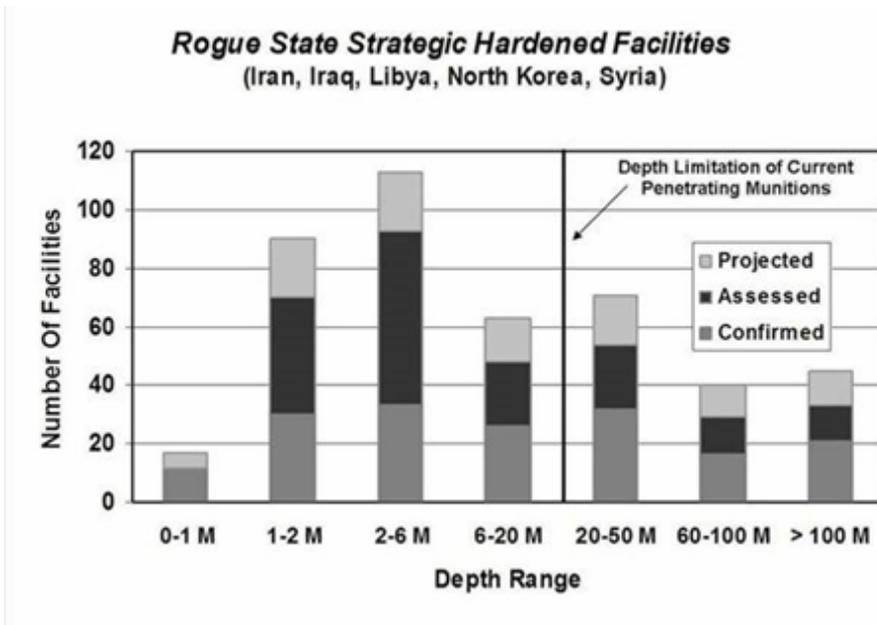
## The North Korean HDBTs

The US believed that the potential adversaries’ HDBTs would threaten their security but they reckoned that the number of HDBTs of potential adversaries did not number highly. According to the “Report to the Congress on the Defeat of Hard and Deeply Buried Targets”, they suspected that the number of HDBTs was well over 10,000 and their numbers would only be increased in the next 10 years. This number included the HDBTs of Cold war foes – Russia, China, and the former Warsaw Pact Countries.<sup>623</sup> According to “Rumsfield’s War: The Untold Story of America’s Anti-Terrorist Commander”, they suspected the number of HDBTs in rogue states including North Korea would not be able to number more than 1000.

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<sup>622</sup> Ibid., p.6

<sup>623</sup> Report to Congress on the defeat of Hard and Deeply Buried Targets, p.8



Index 6-1 The Number and Thickness of HDBTs in the Rogue States (The US intelligence)<sup>624</sup>

The ROK Intelligence Agency and the Department of National Defence suspected the number of North Korean HDBTs to be more than 8,200 (about 1,600 in the frontal area) and would continue to increase.<sup>625</sup> Another significant element when it comes to judge the threat of HDBTs is their thickness (depth). As analysed, the US reckoned that few are over 50m

<sup>624</sup> DIA Report on a Primer on the Future Threat—The Decades Ahead;1999-2020, p.139 in R. Scarborough, *Rumsfeld’s War: The Untold Story of America’s Anti-Terrorist Commander*, Regnery Publishing, 2004

<sup>625</sup>The ROK government has not officialised the number of North Korean HDBTs. Their new Military White Paper 2008 mentioned that North Korea has tried to strengthen the survivability in the rear area. Therefore, they have built a lot of underground tunnel in the front and rear under the slogan of “fortifying the entire territory” and developed the deception skill. Excerpted from— ROK National Defence White Paper 2008, p.25. However, the ROK military authorities position on this matter could be inferred from the KIDA, affiliated with the Department of National Defence, analysis “K.W. Shim, *21SeGiChoHanGukHangGongRyeokEuiBalJeonBangHyang*, International Airpower strategy symposium for the celebration of the 50<sup>th</sup> Anniversary of ROK Air Force foundation, September, 1999 and several news articles which cited the ROK intelligence authorities comment (*Yonhap News (Seoul)*, 16<sup>th</sup> of September, 1999 and 5<sup>th</sup> of January, 2005, and *JoSeon Ilbo (Seoul)*, 16<sup>th</sup> of September).

depth. The ROK military authorities believe that the average depth of the North Korean HDBTs is around 80m.<sup>626</sup>

According to several testimonies, some strategically significant targets such as the North Korean Commanding Centre in *Pyongyang* and other nuclear facilities are over 300m depth. According to the testimony of *Hwang Jangyeop* (The North Korean defector to ROK and ex-Chairmen of the North Korean Parliament) to the “Free North Korea”,<sup>627</sup> there is a secret underground facility believed to be the North Korean military headquarters at the depth of 300m in *Pyongyang* which is underneath the *Pyongyang* metro<sup>628</sup> and linked to strategically significant cities of North Korea such as *Nampo* (Where the Headquarters of the West Coast Fleet is located), *Sunchon*, and *Yongwon*.

In addition, according to a secret document titled, “*GaengDoJeonRryak, JeonSiSaEopSeChik* (The Underground Tunnel Strategy Part in the Detailed Rule of Wartime Operation)” published on the 7<sup>th</sup> of April, 2004, they stipulated that the leading department of cabinet, *InMinMuRyokBu* (Ministry of People’s Armed Forces), *InMinBoAnSong* (People’s Safety Agency) and the leading headquarter of *Do* (Province), *Si* (City) and *Gun* (County) had to be built in the underground tunnel in case of war occurring.<sup>629</sup> According to a North Korean defector’s (formerly an underground tunnel superintendent) testimony on *Bukhan*, July, 2005<sup>630</sup> and another defector’s (formerly an underground tunnel construction worker) testimony,<sup>631</sup> the underground tunnel site for the commanding centre in *Si* and *Gun* is mostly

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<sup>626</sup> Based on the estimate of K.W. Shim, *21SeGiChoHanGukHangGongRyeokEuiBalJeonBangHyang* and news article (*Yonhap News (Seoul)*, 5<sup>th</sup> of January, 2005) which cited the ROK intelligence authorities comment.

<sup>627</sup> Cited on the *New Daily (Seoul)*, 8<sup>th</sup> of December, 2009

<sup>628</sup> Averaged 120m, the *Pyongyang* Metro was designed as part of a broader military system of tunnels and underground installations. The stations are situated very deep underground and are fitted with multiple heavy blast doors, indirect linking tunnels, and other features that imply military purposes or service as emergency shelters. Excerpted from- The *Pyongyang* Metro; <http://www.pyongyang-metro.com>, (Accessed on the 12<sup>th</sup> of February, 2010)

<sup>629</sup> *Yonhap News (Seoul)*, 5<sup>th</sup> of January, 2005

<sup>630</sup> *DailyNK(Seoul)*, 7<sup>th</sup> of July, 2005

<sup>631</sup> *Joseon Ilbo(Seoul)*, 18<sup>th</sup> of October, 2001

located in the rigid rock bed. They also used the best material they could muster for the construction of the underground tunnel.

In addition, to help raise the morale of the construction workers, the North Korean government gave various incentives such as priority rations and the opportunity to join the communist party. They also attested that the underground tunnel for *Si* and *Gun* possessed the capability to control the district assigned to them, and of protecting them from possible nuclear bombardment. It was also revealed in these testimonies that to escape from the US military satellite trace on underground tunnels, North Korea asked Russia to give military satellite images of North Korean underground tunnels to them which was later agreed. After analysing images of the Russian satellite, they ordered underground tunnels spotted by the Russian satellite to paint electromagnetic wave absorbing material.

In conclusion, the US and ROK military authorities have a different opinion on the number, depth, defensive and commanding capability of the North Korean HDBTs. North Korea has fortified their territory to a standard where they will be protected from any possible US nuclear bombardment. From the North Korean strategic point of view, to wage the asymmetric war using their WMDs, fortification and deception skill are the prerequisites. In addition, the North Korean fortification and deception efforts gathered pace after the First Gulf War when they analysed that proper fortification and deception are vital to protecting them from the US stand-off precision technology. Therefore, the optimistic US judgement on the North Korean HDBTs is highly risky and the careful analysis of the ROK who would receive a fatal North Korean WMD attack in the first place would be closer to reality.

## The US Conventional Military Technology for HDBTs and its Efficiency Against the North Korean HDBTs

In the section above, the numbers and preparation of North Korean HDBTs were analysed. How good, then, is the technical readiness of the US-ROK alliance against the North Korean HDBTs? According to the “Report to Congress on the Defeat of HDBTs”, the US DoD and DoE planned to develop and deploy non-nuclear kinetic (conventional) weapons and nuclear weapons for HDBTs defeat. In the non-nuclear kinetic sector, they planned to employ the Guided Bomb Unit (GBU-24 and 28), the Conventional Air Launched Missile (CALCM)

Block II penetrator, the Joint Air-to-Surface Stand-off Missile (JASSM), TACMS (Tactical Missile System) Penetrator and the Joint Standoff Weapon (JSOW).<sup>632</sup> With the reasonable penetrating capability and striking power, those weapons were designed to possess a stand-off precision capability. Obviously, the stand-off capability is required to protect the missile launching friendly air-fighter or warship from the hostile anti-air or ship defence.

In addition, precision technology even under the conditions of the tough topography, horrible weather condition, and enemy jamming is required for the operation's efficiency. Even if the technologically advanced offender managed to detect HDBTs, launch the missiles or bombs at a long distance, and reach the HDBTs under these severe conditions, if the missile or bomb did not have enough penetrating capability (depth) and striking power the stand-off precision technologies would not become any real threat.

Therefore, with the reasonable striking power to demolish the HDBTs upon reaching enemy HDBTs, the efficiency of those US weapons against the North Korean HDBTs is dependent upon the penetration depth. As analysed above, setting aside the staggering numbers of North Korean HDBTs (around 8,200), the North Korean HDBTs were usually constructed on the solid point of the mountain at an average of 80m depth. The underground tunnel depth features strategically important facilities such as the significant command centres of the

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<sup>632</sup> Reports to Congress on the defeat of Hard and Deeply Buried Targets, p.16-18

For the general information on conventional bunker buster- Committee on the effects of Nuclear Earth-Penetrator and Other Weapons, National Research Council, *Effects of Nuclear Earth Penetrator and Other Weapons*, Washington, D.C, The National Academies Press, 2005, p.99-102

For the general information of GBU-24, and 28,

Carlo Kopp, The GBU-28 Bunker Buster, Technical Report APA-TR-2005-0501, accessed from the Airpower Australia, <http://www.ausairpower.net/GBU-28.html>, (Accessed on the 20<sup>th</sup> of February, 2010)

Global Security website; *GBU-28*, <http://www.globalsecurity.org/military/systems/munitions/gbu-28.htm> and *GBU-24*, <http://www.globalsecurity.org/military/systems/munitions/gbu-24.htm>, (Accessed on the 20<sup>th</sup> of February, 2010)

Designation-systems website; <http://www.designation-systems.net/dusrm/app5/paveway-3.html>, (Accessed on the 20<sup>th</sup> of February, 2010)

The FAS websites; *GBU-28*, <http://www.fas.org/man/dod-101/sys/smart/gbu-28.htm>, (Accessed on the 20<sup>th</sup> of February, 2010)

National and local government are believed to number approximately 300m. Furthermore, since the North Korean HDBTs are usually located in rock bed, the solidity of HDBTs is comparable to that of reinforced concrete.

For the penetration and demolition of these targets, the US currently possesses and deploys a variety of penetrating warheads titled the BLU-109 penetrator, BLU-116 Advanced Unitary Penetrator (AUP), BLU-118/B Thermobaric Warhead and BLU-113 Super Penetrator. BLU-109 can be loaded on to the GBU-10, GBU-15, GBU-24, GBU-27, AGM-130, and possesses a penetration depth of maximum 1.8m against reinforced concrete.<sup>633</sup> BLU-116 AUP can be attached to the GBU-15, GBU-24, GBU-27, AGM-130, and possesses the capability to penetrate at a depth of maximum 3.6m against reinforced concrete.<sup>634</sup> The BLU-118/B is a penetrating warhead filled with an advanced thermobaric explosive that, when detonated, generates higher sustained blast pressures in confined spaces such as tunnels and underground facilities. The BLU-118/B Thermobaric Warhead used the same penetrator as the BLU-116. Therefore, the penetrating depth of BLU-118/B Thermobaric Warhead against reinforced concrete is the same as BLU-116 but can only be used for the GBU-15, GBU-24, and AGM-130.<sup>635</sup> Finally the most advanced BLU-113 can be loaded on to the GBU-28 and GBU-37 and it has a penetration depth around 7m against reinforced concrete and around 30 meters against earth.<sup>636</sup>

In short, current conventional technology would only penetrate up to 7m against reinforced concrete which is not adequate to penetrate and destroy the North Korean HDBTs. At the developing and near deployment stage, there is the GBU-39 Small-Diameter Bomb (SDB) and GBU-57A/B (also called the Massive Ordnance Penetrator or MOP). The GBU-39B

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<sup>633</sup> Excerpted from the Global security website; *BLU109*, <http://www.globalsecurity.org/military/systems/munitions/blu-109-specs.htm>, (Accessed on the 20<sup>th</sup> February, 2010)

<sup>634</sup> Excerpted from the Global Security website; *BLU116*, <http://www.globalsecurity.org/military/systems/munitions/blu-116-specs.htm>, (Accessed on the 20<sup>th</sup> of February, 2010)

<sup>635</sup> Excerpted from the Global Security website; *BLU118*, <http://www.globalsecurity.org/military/systems/munitions/blu-118.htm>, (Accessed on the 20<sup>th</sup> of February, 2010)

<sup>636</sup> The FAS; *GBU-28*

SDB was designed as a stand-off precision small-sized bomb<sup>637</sup> with a reasonable price, penetration depth and striking power, which is required in urban warfare where reducing collateral damage is one of the most important concerns.<sup>638</sup> The US Air Force (USAF) agreed to low rate initial production with the Boeing / Lockheed Martin at the end of 2006, first used during combat in Iraq, October, 2006.<sup>639</sup> Reportedly, the Israeli Air Force (ISAF) used this against the Hamas underground facilities on the Gaza Strip to reduce collateral damage and achieve their military goal of demolishing Hamas underground facilities.<sup>640</sup> The GBU-39 SDB carries approximately 38lb (17kg) of AFX-757 of high explosive (warhead), yet because of its design it has the same penetration capabilities as the 2000lb BLU-109<sup>641</sup> (Maximum penetration capability about 1.8m against reinforced concrete). Therefore, the GBU-39 would also not be able to reach the required depth to neutralize most of the North Korean HDBTs.

In the near to deployment stage, there is also the GBU-57, also called the Massive Ordnance Penetrator (MOP) because it has an improved penetration depth, enormous size (only be adapted to B-52 and B-2A stealth bomber), striking power and ability to absorb nuclear and bio-chemicals.<sup>642</sup> The background behind the adoption of the GBU-57 MOP was that the US

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<sup>637</sup> Since it is a small size bomb, the air fighter can carry more bombs.

<sup>638</sup> Although it is reasonable to classify the GBU-39 in the deployment stage because it has been deployed in Iraq and Israel, there has been no sign of deployment in the Korean peninsula at the moment. Therefore it is classified as close to the deployment stage. Presumably, although the urban warfare or any conflict which might be required to reduce the collateral damage is the scenario that the US-ROK alliance has to prepare, they are not keen on deploying GBU-39 in the Korean peninsula because most of the North Korea HDBTs are located in the rigid rock bed which requires penetration and striking power rather than consideration of collateral damage.

<sup>639</sup> The USAF press release from the Deagel website; [http://www.deagel.com/news/GBU-39B-Makes-Combat-Debut-in-Iraq\\_n000001005.aspx](http://www.deagel.com/news/GBU-39B-Makes-Combat-Debut-in-Iraq_n000001005.aspx), (Accessed on the 21<sup>st</sup> of February, 2010)

<sup>640</sup> Excerpted from— *The Jerusalem Post (Jerusalem)*; "ISAF uses new US-supplied smart bomb" <http://www.jpost.com/Israel/Article.aspx?id=126662>, (Accessed on 21<sup>st</sup> of February, 2010)

<sup>641</sup> Wikipedia website- [http://en.wikipedia.org/wiki/Small\\_Diameter\\_Bomb](http://en.wikipedia.org/wiki/Small_Diameter_Bomb), (Accessed on the 21<sup>st</sup> of February, 2010)

<sup>642</sup> For the general information on GBU-57 MOP is below

wanted to be equipped with conventional weapons possessing enough striking power, penetration depth, and reasonable burning-out capabilities of nuclear and bio-chemical agents. These would replace the tactical nuclear bomb (NEP), which suffered from severe collateral damage problem.<sup>643</sup> Complete information on this bomb has not yet been revealed. Even though most military analysts agreed that striking power and size had been immensely improved from the GBU-28 (BLU-113 warhead), the debate concerning the actual penetration depth is still being discussed.<sup>644</sup> US military authorities confirmed that they would deploy around 20 GBU-57 MOPs until 2012. The penetration depth is widely known as 60 metres against the reinforced concrete, 40 metres against moderately hard rock, and 8 metres against 10,000 psi still-rod reinforced concrete.<sup>645</sup> Therefore, the GBU-57 could demolish a few North Korean HDBTs but, the number of MOP which will be deployed in 2012 is not enough. The most sought after targets, the North Korean Military Headquarters or suspicious nuclear sites, are not going to be neutralized with it.

In conclusion, with the current conventional weapon technology, the US is not able to neutralize the North Korean HDBTs effectively and achieve the original military objective of

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E Black, Iran's Nuke and North Korea's Nuke- Super Bunker-Buster Bombs Fast-Tracked for Possible Use against Iran and North Korea Nuclear Programs, *the Cutting Edge*, 21<sup>st</sup> of September, 2009. <http://www.thecuttingedgenews.com/index.php?article=11609&pageid=&pagename>, (Accessed on the 22<sup>nd</sup> of February, 2010)

S. Trimble, USAF to arm B-2A with massive bunker-buster bomb, *Flight Global*, 6<sup>th</sup> of September, 2009. <http://www.flightglobal.com/articles/2009/06/09/327643/usaf-to-arm-b-2a-with-massive-bunker-buster-bomb.html>, (Accessed on the 22<sup>nd</sup> of February, 2010)

Global Security Website; *GBU-57*,

<http://www.globalsecurity.org/military/systems/munitions/mop.htm>, (Accessed on the 22<sup>nd</sup> of February, 2010)

<sup>643</sup> The 2005 study of the US National Academy of Sciences (Committee on the effects of Nuclear Earth-Penetrator and Other Weapons, National Research Council, *Effects of Nuclear Earth Penetrator and Other Weapons*) concluded that many of the more important strategic HDBTs are beyond the potential reach of current conventional earth penetrating weapons.

<sup>644</sup> Scott. Canon, Bunker buster carries goal of deterring Iran, *The Kansas Star*, 22<sup>nd</sup> of October, 2009

<sup>645</sup> Excerpted from Global Security website; *MOP*,

<http://www.globalsecurity.org/military/systems/munitions/mop.htm>, (Accessed on the 22<sup>nd</sup> of February, 2010)

this weaponry. That objective is to deter potential adversaries through the acquisition of a technical capability to neutralize their WMDs and command centres hidden in the robust underground.

## NEP

US official documents such as the “Report to the congress on the defeat of HDBTs” and NPR 2001 confirmed that the NEP serves as an integral part of the offensive wing for the neutralization of potential adversaries’ HDBTs. The US Congress lifted the ban on R&D on low-yield (Sub-5kiloton) nuclear weapons. The NEP could offer the decisive explosive power and bio-chemical agents burning-out capability compared to the conventional earth penetrating weapons. According to the Report of National Academy of Sciences (NAS), with the 3 metres penetration, the NEP (10kt, 10 Circular Error Probable (CEP)) can capture most of the advantages (100m in a hard rock (granite) bed site) associated with the coupling of ground shock.

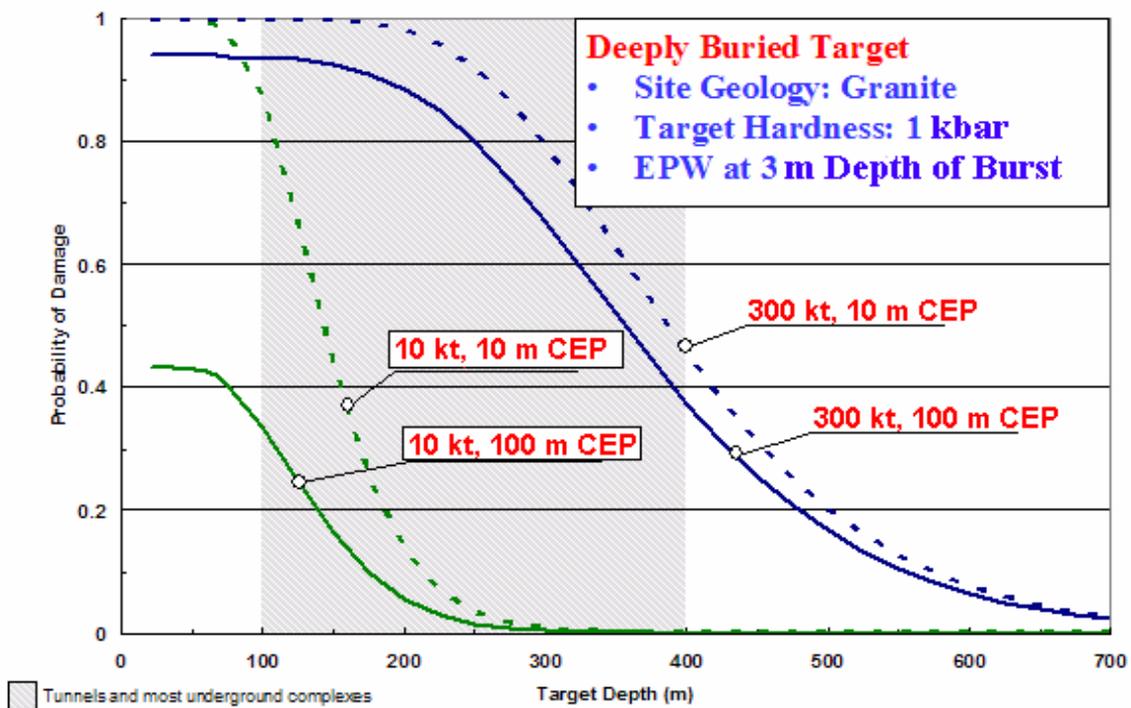


Figure 6-1 Earth-penetrator weapon (EPW) needs to be of a sufficient yield to be effective against specified targets of interest.<sup>646</sup> Note: CEP = circular error probable (i.e., accuracy).

<sup>646</sup> Excerpted from the Committee on the effects of Nuclear Earth-Penetrator and Other Weapons, op.cit., p.40

The NEP application to the North Korean HDBTs contains many severe problems. First, there is the problem of finding (identifying the target) and survival (reaching the target). Even though the offender uses low-yield nuclear bombs, the explosion of nuclear weaponry causes severe air blasts and fall-out. Therefore, before the application of NEP, the US military must have perfect information regarding the target. The NKPA has masterfully developed deceptive skills to confuse them, such as painting targets with special paint that may absorb parts of the spectrum of electromagnetic waves. Therefore, it is not always possible to obtain perfectly clear information. Survival is also a matter of severe concern. Since the NKPA analysed that their operation capability under the US air supremacy was their main weakness during the Korean War, they have invested immensely in their anti-air defence. There is also a huge dilemma in the matter of survival and reducing that fall-out. According to the NAS report, the additional depth of penetration increases the ground-shock coupling with fewer fall-outs; it also increases the uncertainty of the NEP survival. Therefore, the matter of the NEP's survival is not the easiest concern for US military authorities.

It also follows the severe collateral damage problems not only from the blast but also from the radioactive fall-out. Therefore, the US congress only lifted the ban on R&D that applied to low-yield (Sub-5kiloton) nuclear weapons. To reduce collateral damage, most of all, it has to be capable of reaching a considerable penetration depth. According to the NAS report, once the bomb is the same yield and blasted in the same weather condition, the number of casualties from nuclear earth penetrating weapons detonated at a few metres depth is equal to that from a surface burst. As the bomb penetrates through the soil, the air blast and radioactive fall-out reduces.<sup>647</sup> However, as mentioned earlier, the increase in penetration depth decreases the survival of NEP. Furthermore, with the current experience and empirical prediction indicate that the NEP cannot penetrate to the depths required for total containment of the effects of a nuclear explosion.<sup>648</sup> Even a 1kt nuclear warhead (less than 1/10 as powerful as the *Hiroshima* bomb) must be buried at least 60-90 meters to contain its radioactive fall-out. However, the strongest casing will crush itself by the time it penetrates 3-

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<sup>647</sup> Since it would be able to reach the target, it also increased the success ratio of neutralizing deeply buried underground targets.

<sup>648</sup> *Ibid.*, p.110

9 meters into rock or concrete.<sup>649</sup> Therefore, reducing collateral damage through deep penetration is almost impossible.

Another advantage lies in that the NEP could burn out the bio-chemical agent. An attack by a nuclear weapon would be effective in destroying the agent only if detonated in the chamber where agents are stored.<sup>650</sup> However, because the US is unlikely to identify the precise location, size and geometry of underground facilities, a nuclear attack on a storage bunker containing chemical or biological agents would more likely spread those agents into the environment, along with the radioactive fallout.<sup>651</sup> Therefore, at this stage of technology, it is almost impossible to burn out a bio-chemical agent with the NEP blast.

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<sup>649</sup>R.W. Nelson, Low-Yield Earth-Penetrating Nuclear Weapons, *Science and Global Security*, 10(1), 2002, p.5-9 cited in Union of Concerned Scientist, *fact sheet The Robust Nuclear Earth Penetrator*, July, 2005, p.1

<sup>650</sup> Committee on the effects of Nuclear Earth-Penetrator and Other Weapons, *op.cit.*, p.110

<sup>651</sup>R.W. Wilson, Nuclear “Bunker Buster” would more likely disperse than destroy buried stockpiles of Biological and Chemical Agents, *Science and Global Security*, 12(1), 2004, p.69-89, and M.M.Z. Haldeman, Effectiveness of Nuclear Weapons Against Buried Biological Agents, *Science and Global Security*, 12(1), 2004, p.91-114 cited in Union of Concerned Scientist, *fact sheet The Robust Nuclear Earth Penetrator*, July, 2005, p.2

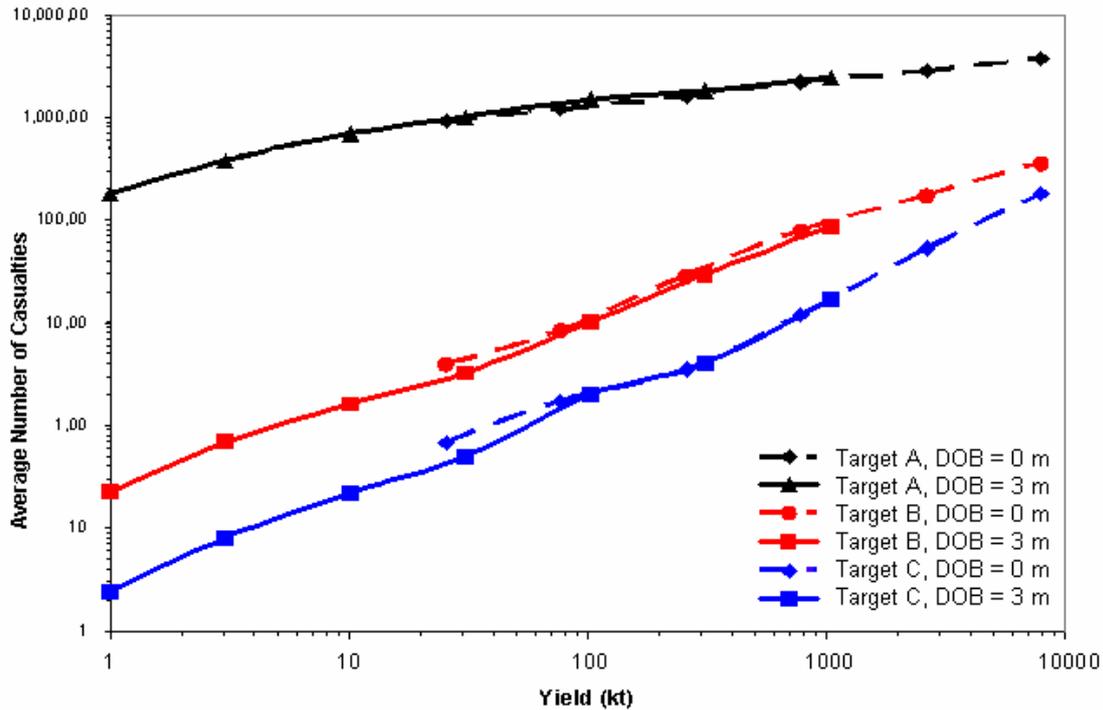
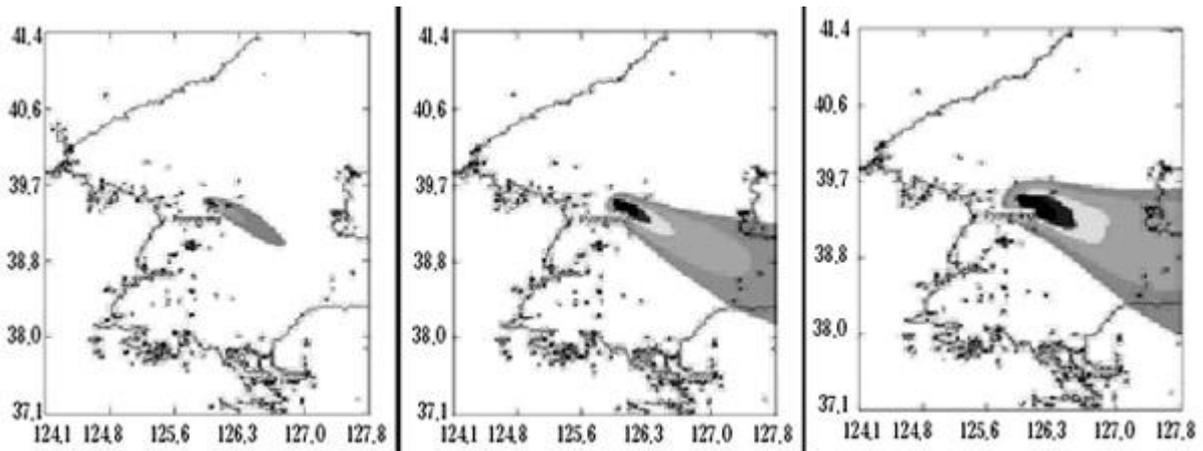


FIGURE 6-2 Estimated mean number of casualties (deaths and serious injuries) from attacks on notional targets A, B, and C using earth-penetrator weapons at 3 meters or greater depth of burst and surface bursts, assuming a static population in the open. SOURCE: Estimates prepared for the committee by the Defence Threat Reduction Agency.<sup>652</sup>

When it comes to the Korean peninsula, because of the location of North Korea and their HDBTs, the NEP collateral damage problem would be much more severe. First, geographically, North Korea shares borders with China, Russia, and ROK, and is located closely to Japan. Therefore, aside from the North Korean humanitarian concern when a nuclear bomb is exploded, there is the risk that collateral damage would not be restricted to North Korea.

<sup>652</sup> Excerpted from- the Committee on the effects of Nuclear Earth-Penetrator and Other Weapons, op.cit., p.80-81

- *Target A*: An underground command-and-control facility in a densely populated area 3 kilometres from the centre of a city with a population of about 3 million;
- *Target B*: An underground chemical warfare facility 60 kilometres from the nearest city and 13 kilometres from a small town;
- *Target C*: A large, underground nuclear weapons storage facility 20 kilometres from a small town.



Map 6-1 In case of NEP (5kt) application to the North Korean *Bukchang* Airbase<sup>653</sup> and its fallout, The estimated death toll within 48hours is 6,000

Map 6-2 NEP 100kt and its fallout, Estimated death toll (100,000)

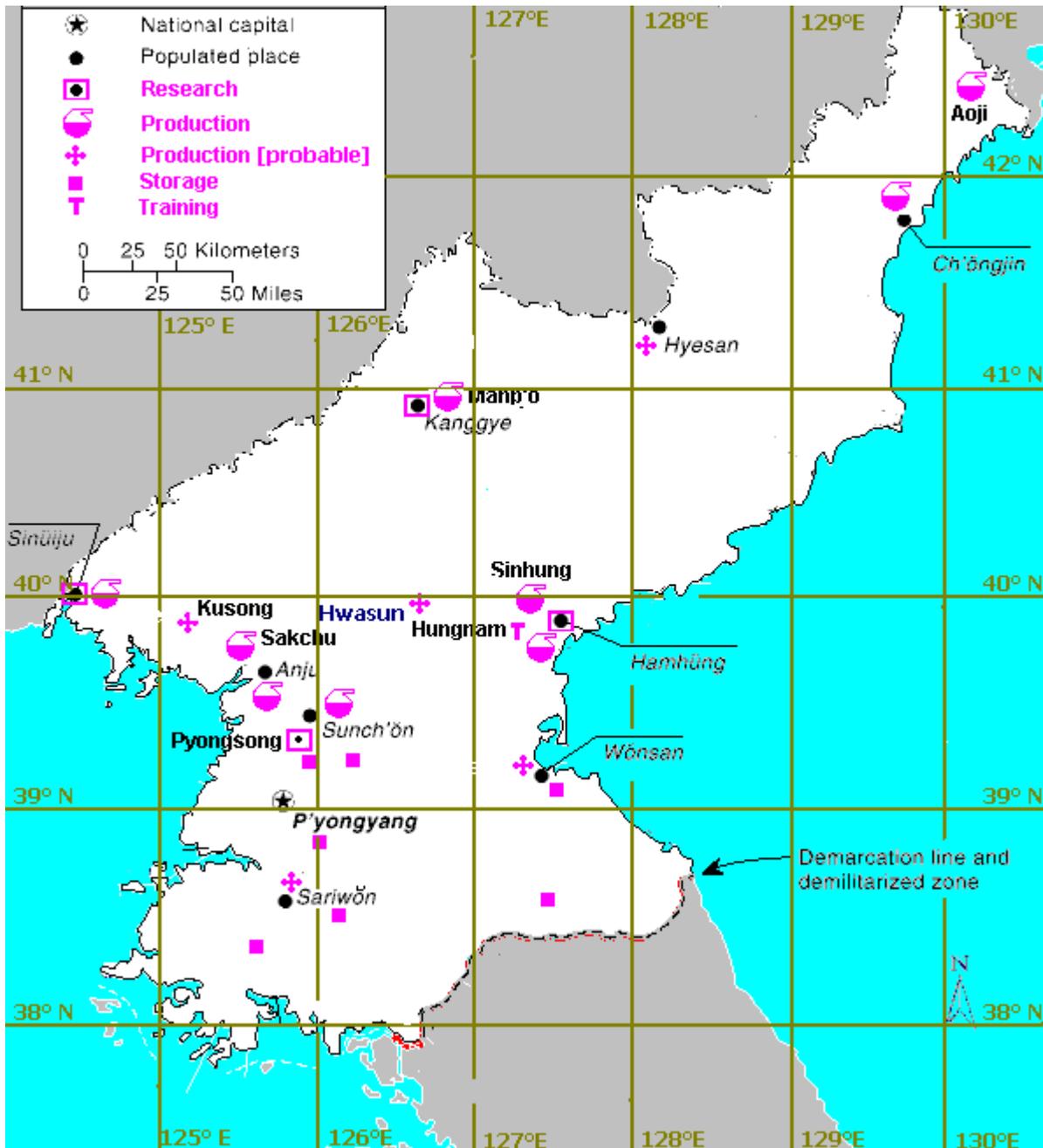
Map 6-3 NEP 400kt and its fallout, Estimated death toll (400,000)<sup>654</sup>

The North Korean capital (*Pyongyang*) is only 261Km away from *Seoul*, and about 250 Km away from the Chinese border. The population of *Pyongyang* is around 3.25 million and about 40% of the North Korean population is densely crowded in *Pyongyang* or its suburbs.<sup>655</sup> In addition, most of the WMD production units and storage facilities are located in the mountainous area near the Russian and Chinese border. The site location provides proper protection from the US-ROK alliance artillery and short to mid-range missiles because of the distance. This will cause diplomatic friction between the US and China or Russia once the US attacks those sites, their choice of location is natural. However, if the US offensive means are nuclear, the neighbouring countries' reaction and protest would not be bearable by the US. Thus, under the specific Korean peninsula situation where North Korea is a neighbour of China, Russia, and the ROK, and their WMDs are produced and stored near the border; the collateral damage problem would be greater than any other potential adversaries.

<sup>653</sup> *Bukchang* airbase is 80km northwest from *Pyongyang*, the key defence element of *Pyongyang* and located nearby the nuclear research or production facilities.

<sup>654</sup> Excerpted from, J.M. Kang and I.L. Hwang, op.cit., Their map was based on the NRDC's analysis on CIA secret report "Nuclear Use Scenarios on the Korean Peninsula"

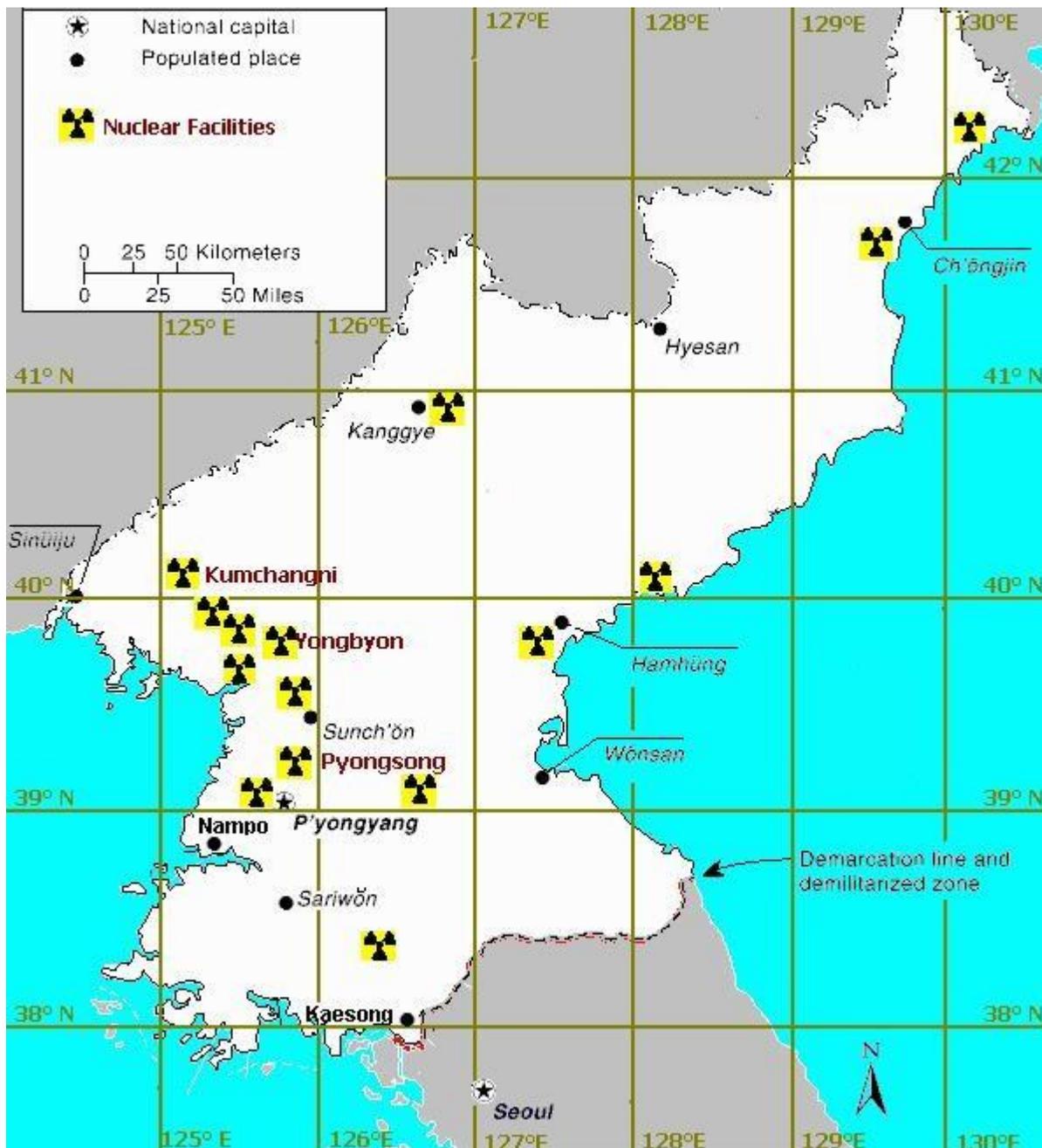
<sup>655</sup> *JoSeon Ilbo* (*Seoul*), 14<sup>th</sup> of February, 2009.



Map 6-4 North Korean Chemical Weapon Production Units and Reserves<sup>656</sup>

<sup>656</sup> Excerpted From– The FAS website

<http://www.fas.org/nuke/guide/dprk/facility/cw.htm>, (Accessed on the 22<sup>nd</sup> of February, 2010)



Map 6-5 North Korean nuclear facilities<sup>657</sup>

As of this writing, the US has about 50 NEPs (B61-11: the B61 (tactical nuclear bomb) modification 11) which are designed to be dropped from aircraft. The yield of these warheads is reported to be between 0.3 kilotons and 340 kilotons.<sup>658</sup> According to the USAF comment

<sup>657</sup> Excerpted From– The FAS website

[http://www.fas.org/nuke/guide/dprk/facility/other\\_nuke.htm](http://www.fas.org/nuke/guide/dprk/facility/other_nuke.htm), (Accessed on the 22<sup>nd</sup> of February, 2010)

<sup>658</sup> V.W. Sidel, H. J. Geiger, H. L. Abrams, R.W. Nelson, and J. Loretz, *The Threat of Low-Yield Earth-Penetrating Nuclear Weapons to Civilian Populations: Nuclear “Bunker Busters” and Their*

on frozen soil drop tests conducted in Alaska in March, 1998, only B61-11 proved capable of penetrating some 2-3 metres into frozen soil.<sup>659</sup>

Theoretically, this is enough penetration depth to neutralize HDBTs with a concrete structure less than 100m because of the ground shock. However, this penetration depth is not sufficient to prohibit the subsequent collateral damage (air blast and radioactive fallout) and burn out the bio-chemical agent. Since the conversion of low-yield tactical nuclear bomb to the NEP exposed so many problems and met with heavy criticism, the Bush administration finally withdrew its request for funding of the continued research of NEP in October 2005. The US senator Domenici indicated that the Senate agreed to drop the \$4.0 million it provided in its bill for the DOE national laboratories, including Sandia National Laboratories, to continue conducting NEP research. The House bill for FY2006 had no funding for the NEP which meant the official end of NEP's further development.<sup>660</sup>

There is still a suspicion that, even though the US officially gave up on the further development of the NEP, they are still researching it.<sup>661</sup> The significant point in this matter is that the US has a capability (B61-11), operation plan in Concept Format (CONPLAN 8022) and most of all, they are not ruling out the nuclear pre-emptive attack on North Korean HDBTs. Therefore, the NEP is also included in the US remedies on the North Korean HDBTs. Unfortunately for the US, both the conventional and nuclear bunker blaster technology is not effective enough to destroy the North Korean HDBTs which is the important element of the deterrence against the North Korean.

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*Medical Consequences*, International Physicians for the Prevention of Nuclear War, posted 25<sup>th</sup> of March, 2003, p.2. Accessed from- International Physicians for the Prevention of Nuclear War (IPPNW) website on the 22<sup>nd</sup> of February, 2010 - <http://www.ippnw.org/NukeEPWsFull.html>

<sup>659</sup> H.M. Kristen (FAS), the Birth of a Nuclear Bomb: B61-11, nukestrat.com, 27<sup>th</sup> of April, 2005 <http://www.nukestrat.com/us/afn/B61-11.htm>, (Accessed on the 23<sup>rd</sup> of February, 2010)

<sup>660</sup> Excerpted from the Global Security website; *Robust Nuclear Earth Penetrator*, <http://www.globalsecurity.org/wmd/systems/rnep.htm>, (Accessed on the 22<sup>nd</sup> of February, 2010)

<sup>661</sup> In 2007, the U.S. Defence Threat Reduction Agency (DTRA) conducted a very large explosive test. (Divine Strake) However, although, the US government insisted that it was the conventional bunker blaster test. There was a suspicion that it was related to the NEP test.

## Conclusion

The US recognized that the technological capability to neutralize possible adversaries' hard and deeply buried underground commanding headquarters and WMDs production units and reserves is the prerequisite of deterrence against them and have since been developing it. These investments have begun to bring some success. For example, during the recent Israeli offensive in Gaza, the ISAF succeeded in neutralizing a Hamas underground tunnel. However, the excessive emphasis on these technologies would be very dangerous because, as the offensive technology develops new weapons, the defenders would also start to develop a response to the new threat. Usually this response costs less than developing the new technology.<sup>662</sup>

As examined, during the time that the US was investing heavily in advanced US military technology, the NKPA was also developing masterful deception skills, and used their mountainous topography and experience during the Korean War to dig and create the underground tunnels. For example, the NKPA prepared the underground tunnel defence during the Korean War to protect themselves from the massive US fire and airpower. When the US openly deployed nuclear weapons in the ROK at the end of the 1950s, they also started to accelerate the construction of the underground defence facility in the rear area from the end of 1950s to render themselves immune to any US nuclear threat.<sup>663</sup> They further strengthened their underground facilities and deceptive skills after appreciating the modern military technologies' application during the First Gulf War, NATO's Kosovo campaign, and the Second Gulf War. Obviously the cost that North Korea poured into their defensive preparation against the US is not greater than the US cost, and as one can see from their relative stability in recent years, compared with other communist countries, this cost has not become a great financial burden to them, unlike the former Soviet Union in 1980s.

On the effectiveness side of US technology against the North Korean HDBTs, even though the US has a strong intention of neutralizing the North Korean HDBTs with their advanced military technology, the US has failed to count the exact number of North Korean HDBTs,

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<sup>662</sup> The mountainous geography of Korean peninsula would also further benefit the defender.

<sup>663</sup> Under this security dilemma, they pursued the fortifying entire territory doctrine.

and develop the technological ability to neutralize the spotted targets. Accordingly, some Korean peninsula security analysts insist that the Korean peninsula is a mutual deterrence state where the US–ROK alliance possesses an advantage in the persistence and conducting capabilities of war. The NKPA hold an advantage in the asymmetric warfare capabilities using WMDs which means that, at least, both sides hold the capability to make a victory in war meaningless because of the severe costs that would be inflicted upon both sides. This recognition of deterrence was reflected in the ROK military authorities' active pursuit of independent anti-firepower capability in recent years upon the imminent takeover of wartime command in 2015.<sup>664</sup>

Considering the current Korean peninsula security situation, the US-ROK alliance plan of securing deterrence against North Korea with their technological superiority is not working effectively yet. It is hard to imagine that this prospect will soon turn in their favour when one considers the serious efforts by the North Korean government to build low cost but highly effective underground tunnel construction while simultaneously using their mountainous geography and skills of deception.

In the history of Korean Peninsula conflicts, once the defender has prepared to use their geographic edge and then possesses the capability to use it, it becomes difficult for the offender to conquer the target with only the technological advantage. During the battle of Heartbreak Ridge during the Korean War, the US 2<sup>nd</sup> Infantry Division Commander's proper command and tactical preparation, as well as the morale and training of the troops contributed their success in that battle. That success could be attributed to a combination of military technology and human elements of war, these being: training, morale, command, tactical preparation, and overall preponderance. Therefore, under the current security

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<sup>664</sup> Anti-firepower mission is neutralizing or paralyzing the enemy firepower, usually artillery and ballistic missile. Anti-firepower mission was officially taken over to the ROK in October, 2005. Since the anti-firepower mission was in their hands and the ROK military authorities believed that the North Korean long-range artillery posed the most dominant threat in the front and *Seoul* metropolitan area, they would have vehemently invested into the mission. The amended draft of “*GukBangGaeHyok2020*” (Military Reform 2020) fully reflected their new military strategy orientation. Accordingly, they will invest further on their anti-firepower capabilities against the North Korean long-range artillery. The analysis based on *Yonhap News (Seoul)*, 22<sup>nd</sup> of June, 2009 and *Seoul Shinmun Nownews (Seoul)*, 27<sup>th</sup> of November, 2009.

circumstances, if the technologically advanced ROK-US alliance plans to neutralize the North Korean HDBTs with only their stand-off precision technology for the guaranteed deterrence, it would be almost impossible for them to achieve this due in part to the limit of current military technology and North Korean preparation based on the past conflict experience of Korean Peninsula.

## Chapter 7 Conclusion

In military history, there have been some revolutionary military technologies, such as the long bow and gun powder that have transformed warfare drastically. In contemporary military society, there is a dominant opinion that modern military technology, especially information technology, has revolutionized warfare. However, in the Korean peninsula, the US-ROK alliance has already experienced on numerous occasions during the Korean War that technology alone could not bring ultimate military success. Therefore, one can question whether these new emerging technologies could solve the strategic dilemma of the US-ROK alliance.

The security circumstance of the Korean peninsula is unique. The Korean peninsula has seen diverse and escalated levels of conflict. It can experience limited warfare (small war) such as the recent *Cheonan* warship sinking and the bombardment of *Yeonpyong* Island, the surgical operation against the dubious North Korean WMDs targets, as well as the escalated all-out war. However, in any conflict scenario, the most important strategic consideration has to be given to how one can weaken the enemy's strength and complement their weakness.

There is an opinion that, because of North Korea's current economic crisis and the fact that their all-out invasion will meet strong and effective resistance from the US-ROK alliance,<sup>665</sup> their threat is virtually non-existent. But, since the nature of warfare in the Korean peninsula has transformed to an asymmetric one, any conflict will be disastrous to the US-ROK alliance and if the cost is too heavy, military success will be tarnished. Therefore, the US-ROK alliance has to consider how to reduce their weakness and cost, and debilitate the enemy strength. The weakness of US-ROK alliance is that, once the military tension erupts, the

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<sup>665</sup> Along with the problem of war sustainability and technological disparity which would be the case in any kind of conflicts, if North Korea invaded the South, they will suffer further following problems;

- 1) The US-ROK position has been heavily fortified and they have studied the NKPA strategy and tactics, and prepared adequate responses.
- 2) The NKPA mechanized troops' advance route is narrow because of the mountainous topography and they would become an easy prey in the open and narrow road.
- 3) Unlike the Korean War, it is very hard for them to expect massive Chinese and Russian engagement.

North Korean WMDs would be launched to land on the *Seoul* metropolitan area and possibly also, the US homeland. In addition, the proliferation of WMDs would become a great security threat to US homeland security.

However, North Korea will not be deterred by the Cold War type threat-based approach (the USFK nuclear weapons and massive engagement threat).<sup>666</sup> They are incredible and incalculable because their prime interest is regime survival. They are not afraid of adopting any means to achieve their objective, and they lack communication with the US, unlike the former Soviet Union. North Korea will not be deterred by a Cold War-type indirect threat but only by a direct threat of their prime value (regime survival). Therefore, the US-ROK alliance has developed the capability to threaten precious assets for the regime survival as deterrence (capability-based deterrence and deterrence by punishment approach).<sup>667</sup>

Can the US-ROK military technology and capability paralyze the North Korean strength and bring ultimate military success and deterrence against North Korea? The combat performance of modern military technology has not been consistent. On the one hand, as one can see from the First Gulf War and the early phases of the Afghan campaign, modern military technology and its application was the major reason for western victory. On the other hand, as one can see from the later phase of the Afghan campaign, the contribution of military technology is

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<sup>666</sup> As it was shown in OPLAN 5027-74 (a reunification of the Korean peninsula by the military operation was not considered), Cold War era deterrence was based on the denial of North Korean intention of communized reunification by the massive US engagement and nuclear weapons threat which was the deterrence by denial.

<sup>667</sup> Contemporarily the biggest asset for North Korea is WMDs which could be used for diplomatic and military purposes. There are two ways to neutralize the threat of WMDs. First, they can be intercepted once launched; however, the reliability of technology is not great. This would lead to tension between the ROK and China since it can be categorized as an MD, and the main WMD threat to the ROK is long-range artillery unlike the SSM to the US and Japan. Therefore, it is not a preferred option for the ROK and their effort is concentrated on the anti-firepower mission. Secondly, they can be pre-empted before launched. However, the North Korean WMDs are usually HDBTs using the geographic merit. In addition, the North Korean central highlands defence positions are also heavily fortified using the mountainous topography which is strategically significant targets in regards to the offensive operation. Therefore, the capability of neutralizing the HDBTs would be important for the North Korean deterrence.

not as great as might have been expected. Therefore, there is a need to examine whether the technology-centred US-ROK alliance would actually demolish the stubborn North Koreans, who have a geographic edge and the capability to use this edge through fortification and tactical preparation.

The primary claim of this research was that even though advanced military technology became an important element of war in the contemporary world, technology alone would not bring success against the foe (North Korea) that has geographic edge and capability. The claim of this research is well-connected with Biddle's argument on skill and technology. Biddle claims that modern military technology would punish heavily a combatant who is not skilled, for example, the First Gulf War and the early phase of the Afghan Campaign. It would also not be enough to bring about an absolute and less costly success against a foe who has the skill to use their defensive edge. The offender's skills such as manoeuvres, are required to grind out the result that they aspire to as has been seen in the example of the later phase of Afghan campaign.

To examine its claim and Biddle's argument, this research first demonstrated that in the contemporary security circumstances of the Korean Peninsula, the potential conflict between the US-ROK alliance and North Korea would be the duel of a technologically-advanced force against a geographically-advantaged and skilled force. For that purpose, in Chapter 2, it was shown that the US-ROK alliance had transformed to technology-centred forces to meet a newly emerged threat (North Korean WMDs) and contemporary trends of military transformation especially after 9/11.

Chapter 3 first examined the traditional military strategy using the geographic edge. The strategic importance of the geographic dimension in the Korean peninsula's security was envisaged. After that, it researched the NKPA military strategy development after the Korean War to show that North Korea had not only developed the offensive strategy of the former Soviet influenced Two-Front War but also had pursued the asymmetric warfare using WMDs and its geographic edge. Since North Korea was no longer able to compete in the arms race with the South after the Cold War ended, they adopted asymmetric warfare strategy using WMDs which maximize their advantages – strong local war industries and geography – and harasses the enemy disadvantage. The *Seoul* metropolitan area is 40km away from DMZ and hidden and fortified WMD targets would be difficult to neutralize with contemporary military

technology. In addition, as part of asymmetric warfare strategy, to raise the survivability of WMDs and weaken the efficiency of US-ROK military technology, North Korea has fortified its territory heavily and raised their capability to use their geographic edge. Therefore, after the first part of research, it was demonstrated that the US-ROK alliance has transformed to a technology-centred one, and North Korea has a geographic edge and tactical preparedness to use the edge. It was also inferred that, like Biddle's analysis of the later phase of the Afghan Campaign, the technological advantage of the US-ROK alliance alone could not guarantee ultimate military success against the North Koreans. This was examined through three case studies.

This thesis has set four objectives to examine: 1) The geographic dimension and tactical preparation of war is an important element of war in the Korean peninsula; 2) Biddle's claim of modern technology and skill is valid in the Korean peninsula; 3) The North Koreans are highly skilled and motivated to take advantage of their defensive geographic edge; 4) Finally, military technology is an important element of war, but technology alone cannot guarantee military success against a foe (North Korea) that possesses the geographic edge and the skill to maximize its worth. This thesis argues that technological advantage will not necessarily bring the eventual and effective (reasonable cost and casualties) success against the North Koreans and in contemporary warfare, and that, as Biddle argues, technology alone may not bring down the skilled and geographically advantageous force.

The first case study of the *Imjin Wars* showed that the Korean traditional defence strategy of maximizing their geographic edge (castle on the hill and defence in depth, cooperative defensive network, and Scorched Earth tactics) based on past war experiences is strategically important, and that the geographic dimension is important in the Korean peninsula security. In this case study, by examining the gradual transformation of the *Joseon* defence strategy (the initial military fiasco, *Cholla* province defence campaign, and the Japanese second invasion), the geographic consideration and tactical preparation accordingly is an important dimension of war in the Korean peninsula.

Period	<i>Joseon</i> Force's strategy, tactics and preparation	Japanese Preparation	Outcome
Before <i>Imjin</i> Wars	<p>Army dominating <i>Jeseunbangryak</i> Defence strategy and system: provincial defence and the concentrated use of force</p> <p>Battle formation warfare (Tactics): It was developed to deal with the fluid cavalry forces of <i>Jurchens</i> in the open space.</p> <p><i>Gunjeoksupo</i>: The lack of numbers of troops</p> <p>Long Peace: the Castle on the hill was not repaired and the military culture was condemned.</p>	<p>An intensive surprise offensive strategy: To occupy <i>Seoul</i> as soon as possible to prepare the further operation in the Chinese main land and reduce the burden of logistics and Chinese engagement.</p> <p>The Close order infantry tactics: The tactics has been changed from the dual of a limited numbers of warrior's cavalry warfare to the massive numbers of <i>Ashigaru</i> (Light infantry) combat.</p> <p>Long and Hard civil wars: a full of well-trained, motivated, and relatively well commanded force.</p>	<p>Failed to stall the Japanese advance with the defensive geographic edge and committed the open space set piece battle with the Japanese.</p> <p><i>Seoul</i> was quickly fallen to the Japanese and <i>Joseon</i> government fled to the North.</p>
<i>Cholla</i> Province Defence Campaign	<p>Started to defend the Japanese using natural barriers between <i>Cholla</i> and <i>Gyeongsang</i> Province, and use the cooperative defensive system and guerrilla warfare using the Korean peninsula geography.</p> <p>The morale and training factor of the <i>Joseon</i> forces has been raised because of the heavy fight with the Japanese</p> <p>The preponderance factor started to overcome following the massive organization of local militia.</p>	<p>Started to suffer the logistic problem because of the <i>Joseon</i> militia and Navy's effort.</p>	<p><i>Joseon</i> was successfully managed to defend <i>Cholla</i> province with the coordinated defence strategy using the geographic edge.</p>
The Japanese Second Invasion	<p>Returned to the old traditional defence strategy using the geographic edge: Castle on the hill coordinative defence strategy combining Scorched Earth tactics</p> <p>The introduction of <i>Zhejiang</i> tactics to deal with the Japanese close order infantry tactics</p> <p>The level of training and moral had risen during the inter war crisis.</p>	<p>They planned to occupy <i>Cholla</i> province first and break down the <i>Joseon</i> navy so as not to suffer the logistic problem.</p> <p>They almost annihilated the <i>Joseon</i> Navy in <i>Chilchollyang</i> and occupied the <i>Namwon</i> which are strategically important place to occupy <i>Cholla</i> province.</p>	<p>The Japanese army could not pacify <i>Cholla</i> province, nor could they advance North to occupy <i>Seoul</i> because of the mainly logistics problem caused by the rejuvenated <i>Joseon</i> Navy and <i>Joseon</i>'s castle on the hill coordinative defence strategy.</p>

Index 7-1 *Joseon*'s military transformation and its effect during the *Imjin* Wars

By examining the second case study of the Korean War, it was proved that: 1) Even though technological dominance became the major dimension of modern warfare, the defence strategy using the Korean peninsula geography was still important in the Korean peninsula; 2) The efficiency of modern technology in the Korean Peninsula would depend on the defender's capability to use their geographic edge; 3) Once the capable defender holds on to the fortified position, military technology alone could not break down the defender's line or would cost them too dearly.

The battle of *Chuncheon* and the communist trench warfare during the stalemate showed that once the defender is skilled and motivated enough to use their geographic edge, technological dominance alone would not break down the stubborn enemy resistance. However, as one can see from the NKPA Western Front campaign in the initial phase of war, the *Naktong* River line defence campaign, and the UN forces' 'Marching North' campaign, even under the geographic restraints, the efficiency and decisiveness of modern technology against the foe that is less skilled, motivated, and poorly commanded<sup>668</sup> was very impressive; as indicated in Biddle's analysis of the first Gulf War and the later period of the Afghan Campaign. In addition, throughout case studies of the trench warfare, it was also shown that to overcome the resolute and skilled defender who holds the defensive line using the geographic edge, the offender would need more than a technological dominance. This was the ultimate claim of Biddle: that even in future warfare, skill will be as important as technology.<sup>669</sup>

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<sup>668</sup> During the North Korean campaign in the initial period of war, the ROK armed forces was relatively less skilled in the all-out war since they had to serve the anti-guerrilla missions in rear, and poorly commanded by headquarters who were relatively less experienced and politically appointed by the president.

During the *Naktong* River line defence campaign, the NKPA had lost many highly experienced and trained troops following the consecutive battles and UN air raid to reach the line and were less motivated because of the poor supply and influx of locally conscripted soldiers. *Kim Il-sung* was also too anxious to finish war as early as possible and thus made several mistakes in this front.

During the Marching North operation, because of the shock of the *Inchon* Landing Operation and combat weariness after several months of hard fighting, the NKPA fled to the North without good order and the UN force heavily punished the NKPA with their firepower.

<sup>669</sup> During the battle of Heartbreak ridge, the better motivated (lure of joining communist party on military merit), trained, and commanded (the influx of re-educated officers) managed to prepare the stubborn defensive line using steep mountainous topography and foil the UN forces' attempt to

	Type of Warfare	Outcome and Strategic analysis
The Battle of <i>Chunchon</i> and Communist Trench warfare during the stalemate	Technologically advantageous offender vs geographically advantageous and capable (skilled and motivated) defender	The success of stalling warfare (the battle of <i>Chunchon</i> ) caused massive damage to the offender. For the impregnable position that has been fortified using the geographic edge and defended by the capable force, the offender requires more than a technology to overcome it.
The NKPA western front campaign in the initial phase of war, UN force's Marching North campaign.	Technologically advantageous and capable offender vs geographically advantageous but not highly skilled and badly commanded defender	The technological advantage of offender maximized and the defender was easily crumbled.
The PVA 1-3 <sup>rd</sup> offensive	Highly skilled and strategically and tactically well-prepared offender vs defenders who are technologically advantageous but are ignorant and looking down on the opponents	The skill, and tactical and strategic preparation brought the massive and instant success to the offender
The PVA 4-6 <sup>th</sup> offensive in the UN forces front	Highly skilled and strategically and tactically well-prepared offender vs technologically advantageous and skilful defenders who have good understanding of the offender's strategy and tactics.	The skill would not be an answer to the well-prepared technologically advanced defender. It led to the Chinese decision to enhance the fire and airpower before they launched another offensive and prepare the cease-fire talk to earn a time.

Index 7-2 The Korean War and the relevance of geography, skill, and technology

In the final chapter, by comparing the contemporary US military technology and North Korean fortification using geography and their skill to maximize its worth, it was shown that contemporary military technology alone would not guarantee ultimate military success against the North Koreans who have a geographic edge and tactical preparedness to use the edge. This chapter also confirms Biddle's argument that once the resolute defender is skilled enough to use their edge (geography for the *Al-Qaeda* in the later stage of Afghan Campaign and North Korean in the possible conflict with the US-ROK alliance), contemporary military

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occupy the ridge. However, once the UN forces planned the offensive much consideration of skill and command factors (night assault training and tank battalion manoeuvre, credible combat preparation and command) the impregnable trenches eventually collapsed with relatively less cost.

technology alone would not secure the ultimate military success which includes the acceptable cost and casualties.

	Advantage	Disadvantage	The application to the Korean Peninsula
NEPs	Enough power to penetrate and blast HDBTs The ability to absorb the bio-chemical and nuclear agents	Collateral Damage The suspicion on the absorbing capability on the bio-chemical and nuclear agents.	Collateral damage and uncertainty of burning out capability would deter the US from applying these to the North Koreans
The Conventional Bunker Blaster	Less collateral damage	Not enough penetrating power against the North Korean HDBTs Doubt on the absorbing capability on the bio-chemical and nuclear agents.	The most up to date technology's penetration depth is certainly not enough to reach and destroy the most strategically important North Korean targets.

Index 7-3 The contemporary military technology and North Korean HDBTs

Human beings have developed military technology to save costs and casualties as well as to improve combat performance. Once the US started to comfortably lead this technology race with their technological and economical superiority, other countries and organizations started to look into different areas to enhance their combat potential. In this era, where the US dominance in technology and sustainability of war is obvious, the other countries and organization have not dared to confront them in a set piece battle or commit all-out war. Instead they have developed heterogeneous but effective ways of warfare to cope with the US dominance. North Korea has also pondered how to survive and raise their war potential. After North Korea realized that they were no longer able to compete with the US-ROK alliance in the arms race, they had no option but to develop new ways of warfare such as asymmetric warfare using WMDs and fortifications using the geographic edge to raise survivability. In other words, the US-ROK alliance has a task to overcome the North Korean defence strategy using their geographic edge.

In the Korean peninsula military history, the offender has challenged the defender's defence strategy using the Korean peninsula's geographic merit. During the *Imjin* Wars, the Japanese could obtain an easy sweeping victory against the *Joseon* force that did not fully use the traditional defence strategy in the initial period of war. However, once *Joseon* was ready to commit the traditional defence strategy in the second invasion, the Japanese tried to occupy *Seoul* via *Cholla* province which was relatively ill-prepared (manoeuvre). In the Korean War, the PVA tried to offset the defender's edge in geography by the concentration of force and outflanking movement (manoeuvre) while the US troops tried to overcome the communist defence position with massive firepower (technology). Even in the contemporary Korean peninsula, the NKPA plans to overcome the ROK defence line by the infiltration of special forces and concentrated use of WMDs, while the US-ROK alliance is adopting a technology-centred military strategy.<sup>670</sup> This thesis, based on three case studies, suggests that it is a very dangerous idea for the US-ROK alliance to try to overcome the North Korean military strength and strategy using their geographic edge and the tactical preparedness with a technological edge alone. Therefore, this thesis can also support Biddle's argument concerning skill and technology that, even in future wars, skill will be as important as military technology. Hence, to overcome stubborn and skilled opponents, the US and its western allies will require more than a technological advantage.

Even though the US-ROK alliance strategy has been transformed to a technology-centred strategy, they have learned the importance of manoeuvre during the Korean War and past wars in the Korean peninsula. They have tried to improve manoeuvre warfare capability especially by improving the landing operation capability.<sup>671</sup> But, there are risks of adopting

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<sup>670</sup> During the Korean War, the US-ROK alliance already learnt that the monotonous direct approach (technology centred) to the heavily fortified enemy defence position using the mountainous topography would bring either military disaster or costly success which is not desirable for them as well. Therefore, the US-ROK alliance has pursued advanced technology as the key element in breaking down the defence line.

<sup>671</sup> The UN *Inchon* landing operation and the PVA 1<sup>st</sup>-2<sup>nd</sup> offensives which adopted the mountainous manoeuvre using the crevice between the UN western Easter fronts completely turned the tide of war. Because the US-ROK alliance has a capability to land massive troops and ordinance and support the landed troops with their advantage in firepower, the landing operation is the preferred manoeuvre option for them.

manoeuvre warfare in the Korean peninsula. First, to implement manoeuvre warfare properly in a tough mountainous topography like the Korean peninsula, technological capability is very important. The troops need mobility and firepower to break through, and adequate supplies to keep their momentum. This was proven in the PVA offensives during the Korean War where the PVA failed to maximize their early breakthrough because of the supply problem. It will not be a great concern as the US-ROK alliance possesses the edge in technology. Secondly, even though the troops are well-equipped, the proper command, training, and high morale are also required to achieve the military objective through the manoeuvre warfare. The early success of NKPA manoeuvre warfare in the western front during the Korean War was achieved not only by their merit in technology but also by their high morale and combat skill. However, their early success was not fully exploited because of the poor command from headquarter (the decision to take the symbolic targets in *Seoul* rather than pursuing and annihilating the ROK main forces). Finally, North Korea already noticed the US-ROK alliance's intention of manoeuvre warfare to reduce cost and finish the war quickly, and has prepared tactics and strategies against the possible US-ROK alliance manoeuvre operation. The NKPA has raised the coastal defence warfare capability, as they also experienced the military debacle after the UN *Inchon* landing operation and the fortification of the frontal defence line. In a situation where the US-ROK alliance does not have a technological capability to neutralize strategically-important North Korean targets and cannot easily break down the NKPA with manoeuvre warfare, what would be the best approach to overcome the tough North Korean geography-centred defence? The answer can be found in previous wars. As one can see from the battle of Heartbreak, the US-ROK alliance must approach this matter comprehensively, as technology alone cannot break down the enemy without great cost.<sup>672</sup>

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<sup>672</sup> Technological dominance would bring the advantage in mobile and firepower and eventually enable the offender to wage manoeuvre warfare (tank troops' manoeuvre in the Battle of Heart-break). Adequate command would solve the offender's dilemma in the position warfare in the Korean peninsula which is that the offender's manoeuvring space is quite limited; therefore the defender could concentrate their firepower (night assault and tank troops' manoeuvre plan in the Battle of Heartbreak).

Sound training and morale would maximize the advantage in technology and command (night assault and tank troops' manoeuvre was possible because of the engineering troops endeavour to refurbish the road for the tank use and 2<sup>nd</sup> battalion of 23<sup>rd</sup> regiment's hard night combat training.

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