Nonproliferation and the North Korean Nuclear Weapons Program:

Impotence Meets Ambition

Benjamin Habib
BA (Hons)

School of International Studies
Faculty of Social and Behavioural Sciences
Flinders University

Submission Date: Wednesday 5th January, 2011
# Table of Contents

**1. INTRODUCTION** ........................................................................................................................................... 3

- Literature Review ........................................................................................................................................... 5
  - Primary Influence on Modern North Korea: Leadership or Economy? .................................................... 5
  - Beyond Economics: A Broader Treatment of North Korean Society ..................................................... 8
  - Comparative Studies: North Korea versus South Korea ....................................................................... 11
  - High Politics: Nonproliferation and North Korean Foreign Policy ....................................................... 12
  - Identifying a Research Niche .................................................................................................................. 17
- Research Questions ........................................................................................................................................ 18

**2. NORTH KOREA’S NUCLEAR PROGRAM: STRATEGIC RATIONALE AND TECHNICAL CAPABILITIES .......... 31**

- Strategic Aspects: North Korea’s Motivations for Nuclear Proliferation .................................................. 32
  - Nuclear Weapons for National Security ................................................................................................. 34
  - Nuclear Weapons for International Diplomacy ...................................................................................... 42
  - Nuclear Weapons for Domestic Politics ................................................................................................. 45

- Technical Aspects: North Korea’s Nuclear Fuel Cycle .............................................................................. 48
  - Uranium Mining and Milling .................................................................................................................... 49
  - Uranium Conversion and Enrichment ...................................................................................................... 51
  - Fuel Fabrication ..................................................................................................................................... 57
  - The Reactors ........................................................................................................................................... 58
  - Spent Fuel Storage and Reprocessing ..................................................................................................... 61
  - Weaponisation .......................................................................................................................................... 65

**3. CONCEPTUALISING NORTH KOREA’S DECLINE ...................................................................................... 72**

- Longevity of the Kim Regime: An Overview ............................................................................................... 73
- Escaping One-Dimensional Analysis of Regime Longevity ..................................................................... 77
Macro Level: Carrying Capacity and the Physical Base of the State .......................................................... 78
Intermediate Level: Organisational Complexity ....................................................................................... 83
Micro Level: The Soviet Collapse & Aberrant Natural Disasters .............................................................. 98
CONCLUSION............................................................................................................................................. 105

4. THE POST-FAMINE NORTH KOREAN ECONOMIES .............................................................................. 108
REDUCED ORGANISATIONAL COMPLEXITY: PARALLEL ECONOMIES ....................................................... 109
The Official Economy.................................................................................................................................. 110
The Military Economy.............................................................................................................................. 112
The Illicit Economy.................................................................................................................................... 115
The Court Economy................................................................................................................................... 120
The Entrepreneurial Economy .................................................................................................................. 121
MAKING SENSE OF THE POST-FAMINE ECONOMIES .............................................................................. 123
Energy Dependence................................................................................................................................... 123
Isolation from the International Economy................................................................................................ 125
Foreign Trade.............................................................................................................................................. 128
Special Economic Zones .......................................................................................................................... 130
Agriculture.................................................................................................................................................. 135
REFORM, AID AND FUTURE ECONOMIC STABILITY .............................................................................. 137
Economic Reforms.................................................................................................................................... 137
Foreign Aid: Propping Up the System ...................................................................................................... 145
CONCLUSION: STABILITY OF PARALLEL ECONOMIES .......................................................................... 153

5. NORTH KOREA PRE-FAMINE: A TOTALITARIAN SYSTEM .................................................................... 155
THE TOTALITARIAN MODEL: A DEFINITION ............................................................................................ 156
Addressing Criticisms of the Totalitarian Model....................................................................................... 159
DEVELOPMENT OF TOTALITARIANISM IN NORTH KOREA ....................................................................... 162
The Anti-Japanese Guerrilla Movement .................................................................................................... 163
THE PRE-FAMINE TOTALITARIAN SYSTEM ............................................................................................. 165
The Absolute Dictator and the Mass Party.................................................................................................. 165
Utopian Transformational Ideology: Juche and Kimism ........................................................................ 166
Maintaining All-Pervasive Terror: Social Control and Coercion.............................................................. 172
Communications Monopoly and Official Propaganda .............................................................................. 181
CONCLUSION.............................................................................................................................................. 185

6. NORTH KOREA POST-FAMINE: DECAY OF THE TOTALITARIAN SYSTEM ............................................. 187
POST-TOTALITARIANISM ........................................................................................................................... 188
Dictator, Party and Military: A New Relationship ..................................................................................... 190
Songun Politics............................................................................................................................................ 191
Kim Jong-il’s Command and Control over the Military .......................................................................... 196
DECLINE OF PERVERSIVE TERROR: WEAKENING SOCIAL CONTROLS ................................................. 197
Public Discontent, Corruption & Legitimacy ........................................................................................... 201
BROKEN COMMUNICATIONS MONOPOLY AND CRUMBLING IDEOLOGY .............................................. 205
The Last Legitimising Paradigm: Anti-Imperialism .................................................................................. 209
SYSTEMIC REGENERATION OR FURTHER DECAY? .................................................................................. 212
Chollima Revived and 2012 .................................................................................................................... 212
CONCLUSION.............................................................................................................................................. 214

PART III: NORTHEAST ASIA—COOPERATION, COMPETITION & CONFLICT ......................................... 216

7. NORTHEAST ASIAN SECURITY ENVIRONMENT ................................................................................. 217
INTERNATIONAL RELATIONS THEORY: AN OVERVIEW ........................................................................... 218
Realism ....................................................................................................................................................... 219
Liberalism .................................................................................................................................................. 223
Constructivism ........................................................................................................................................... 228
From Theory to Practice: Cooperation, Competition and Conflict ........................................................ 230
BIPOLAR SYSTEM: THE US ALLIANCE NETWORK ................................................................................... 236
## Table of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Structure of thesis methodology</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>Location of facilities related to the nuclear program in North Korea</td>
<td>49</td>
</tr>
<tr>
<td>3</td>
<td>Looking across the DMZ at the denuded landscape surrounding the Kuong-dong peace village in North Korea, as seen from the Dorasan Observatory, July 2008 (taken by the author)</td>
<td>95</td>
</tr>
<tr>
<td>4</td>
<td>Construction of an extension to the Kaesong industrial zone, July 2008 (taken by the author)</td>
<td>133</td>
</tr>
<tr>
<td>5</td>
<td>Cooperation, competition &amp; conflict explanatory framework, adapted and expanded from that offered by Muthiah Alagappa</td>
<td>235</td>
</tr>
</tbody>
</table>
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMM</td>
<td>ASEAN Defence Ministers Meeting</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of South East Asian Nations</td>
</tr>
<tr>
<td>DMZ</td>
<td>Demilitarised Zone</td>
</tr>
<tr>
<td>DPRK</td>
<td>Democratic People’s Republic of Korea</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organisation</td>
</tr>
<tr>
<td>FDRC</td>
<td>Flood Damage Rehabilitation Committee</td>
</tr>
<tr>
<td>GFC</td>
<td>Global Financial Crisis</td>
</tr>
<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
</tr>
<tr>
<td>IBRD</td>
<td>International Bank for Reconstruction and Development</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>JIG</td>
<td>Joint Civilian-Military Investigation Group</td>
</tr>
<tr>
<td>KCNA</td>
<td>Korean Central News Agency</td>
</tr>
<tr>
<td>KJNWFZ</td>
<td>Korea-Japan Nuclear Weapon Free Zone</td>
</tr>
<tr>
<td>KPA</td>
<td>Korean People’s Army</td>
</tr>
<tr>
<td>KWP</td>
<td>Korean Workers’ Party</td>
</tr>
<tr>
<td>NDC</td>
<td>National Defence Commission</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Government Organisation</td>
</tr>
<tr>
<td>NLL</td>
<td>Northern Limit Line</td>
</tr>
<tr>
<td>NPT</td>
<td>Nuclear Nonproliferation Treaty</td>
</tr>
<tr>
<td>PNT</td>
<td>People’s Neighbourhood Teams</td>
</tr>
<tr>
<td>ROK</td>
<td>Republic of Korea</td>
</tr>
<tr>
<td>SEATO</td>
<td>Southeast Asian Treaty Organisation</td>
</tr>
<tr>
<td>SLOCs</td>
<td>Sea Lines of Communication</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>USA</td>
<td>United States</td>
</tr>
<tr>
<td>WFP</td>
<td>World Food Programme</td>
</tr>
<tr>
<td>WMD</td>
<td>Weapons of Mass Destruction</td>
</tr>
</tbody>
</table>
North Korea is unlikely to willingly relinquish its nuclear program because of its importance to the political economy of the DPRK state and the perpetuation of the Kim Jong-il regime. It is clear that the nuclear program has great intrinsic value to Pyongyang, its role as a defensive deterrent and important element in Pyongyang’s offensive asymmetric war strategy. The nuclear program functions as a bargaining chip in international diplomacy to extract economic inputs for its moribund economy, in domestic politics as vehicle for bureaucratic interests, and as a rallying symbol of the country’s hyper-nationalist ideology. At the same time, regional states lack a credible strategy for coaxing North Korea into nuclear relinquishment due to their lack of leverage over the Kim regime, the absence of unity in addressing the nuclear issue and the incongruence of their wider strategic goals vis-à-vis North Korea. Given this state of affairs, regional countries will have no choice but to accept North Korea as a nuclear power and manage regional relations through deterrence. To increase the stability of this environment, regional states may consider unconditional normalisation of political and economic relations with North Korea.
I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed: ________________________________________________
Analysis of a country like North Korea that imposes such severe restrictions on the flow of information across its borders is complicated by impediments to the development of a chain of evidence. It is important at this juncture to acknowledge the limitations of the data sample used in this thesis and account for any potential bias that may lie herein. There is not the wealth of primary data available that one could expect to access if studying another country. Much of this information is available in South Korea, in Korean, which is an obstacle for a researcher based in Adelaide, Australia, with minimal understanding of hangul. Where possible and/or practical, this thesis has drawn on primary data, including government documents and official statistics obtained online and through direct observation on two trips to the region: a July 2008 research trip to South Korea, and a three-month stay in Dandong, China, during 2004, on the west bank of the Yalu River facing North Korea. Where access to primary data is limited, the thesis draws heavily on secondary sources written in English. Peer reviewed books and articles are the most prized secondary sources, followed by non-government organisation (NGO) reports and expert commentaries. Where appropriate, attempts have been made to corroborate primary data and secondary written sources with interview testimony from academics, journalists and think-tank policy analysts, gathered during the aforementioned trip to South Korea in 2008. Where interview testimony has been used, a description of the interviewee is provided in the footnotes to establish their credibility as a source of information.

The reliance on English language sources may bias data collection toward predominantly American and Australian perspectives on the nuclear issue. Every effort has been made to
access work by South Korean, Chinese and Japanese scholars, however it is acknowledged that a larger and more extensive literature on this subject exists in the native languages of those countries. In relation to the use of Korean words and names, the thesis uses the McCune-Reischauer system of transliteration (without breves).

It is for these reasons that the scope of the thesis is limited to providing a fresh interpretation of the existing academic literature in order to address its research hypothesis, rather than a more ambitious project requiring sustained access to large amounts of primary data. Despite these limitations, the thesis provides a comprehensive analysis of the North Korean nuclear issue and reaches conclusions that provide a substantive addition to the scholarly debate on this topic.

Many people have contributed to the production of this thesis. First, I would like to express my heartfelt gratitude to my wife Helen for supporting me through my candidature, as well as my son Kobe and my parents Peter and Olga. The support of my family has been integral to the completion of this project. I would also like to thank my supervisors, Prof Andrew O’Neil and Dr Maryanne Kelton for their guidance and mentoring throughout my candidature. I greatly appreciate the contribution of Higher Degree Administration and Scholarships Office and the Faculty of Social Sciences at Flinders University for awarding me a scholarship to undertake PhD studies, and for providing financial grants to undertake field research in South Korea. My gratitude also goes out to Dr James Manicom, Dr Terry O’Callaghan, Dr Deanne Gannaway, Dr Martin Burke (DSTO), Dr Holli Evans, Dr Salah Kuteileh, Dr Vlado Vivoda, Dr Peter Burns, Dr Pamela Wallace, Assoc Prof Nick Bisley, Robert Godfrey (ANSTO), Julie Rayner, Cathy Moloney, Mary Lyons, Colum Graham, Rob Manwaring, Julie Tonkin, Sonja Yates, Trisha Farmilo for their assistance throughout my
PhD journey. I give thanks to the academics, journalists and policy analysts in South Korea, who kindly gave their time for interviews during my trip to South Korea in July 2008, as well as Kim Sa-ra and Hwang Seong-woo, who assisted with logistics during my stay. Finally, I would like to thank the academic staff of the School of Politics and International Relations at Flinders University, whose collective wisdom helped enormously in the formative stages of this research project.