

PROSPECT THEORY AND THE FAILURE OF AMERICAN COERCIVE DIPLOMACY ON NORTH KOREA

by

Thang Huynh
Bachelor of Arts, University of British Columbia 2004

PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

In the
School for International Studies

© Thang Huynh 2010
SIMON FRASER UNIVERSITY
Summer 2010

All rights reserved. However, in accordance with the *Copyright Act of Canada*, this work may be reproduced, without authorization, under the conditions for *Fair Dealing*. Therefore, limited reproduction of this work for the purposes of private study, research, criticism, review and news reporting is likely to be in accordance with the law, particularly if cited appropriately.

APPROVAL

Name: Thang Huynh
Degree: Master of Arts in International Studies
Title of Thesis: Prospect Theory and the Failure of American Coercive Diplomacy on North Korea

Examining Committee:

Chair: Dr. John Harriss
Professor of International Studies

Nicole Jackson
Senior Supervisor
Associate Professor of International Studies

Andrew Mack
Supervisor
Limited Term Professor, Adjunct Faculty Member, in
International Studies

Date Approved: August 21, 2010



SIMON FRASER UNIVERSITY
LIBRARY

Declaration of Partial Copyright Licence

The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the right to lend this thesis, project or extended essay to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users.

The author has further granted permission to Simon Fraser University to keep or make a digital copy for use in its circulating collection (currently available to the public at the "Institutional Repository" link of the SFU Library website <www.lib.sfu.ca> at: <<http://ir.lib.sfu.ca/handle/1892/112>>) and, without changing the content, to translate the thesis/project or extended essays, if technically possible, to any medium or format for the purpose of preservation of the digital work.

The author has further agreed that permission for multiple copying of this work for scholarly purposes may be granted by either the author or the Dean of Graduate Studies.

It is understood that copying or publication of this work for financial gain shall not be allowed without the author's written permission.

Permission for public performance, or limited permission for private scholarly use, of any multimedia materials forming part of this work, may have been granted by the author. This information may be found on the separately catalogued multimedia material and in the signed Partial Copyright Licence.

While licensing SFU to permit the above uses, the author retains copyright in the thesis, project or extended essays, including the right to change the work for subsequent purposes, including editing and publishing the work in whole or in part, and licensing other parties, as the author may desire.

The original Partial Copyright Licence attesting to these terms, and signed by this author, may be found in the original bound copy of this work, retained in the Simon Fraser University Archive.

Simon Fraser University Library
Burnaby, BC, Canada

ABSTRACT

This project examines how prospect theory explains North Korea's actions during the 2002-3 nuclear crisis and the resulting failure of American coercive diplomacy. It seeks to examine how prospect theory can be employed to understand the success or failure of coercive diplomacy strategies. Prospect theory's concepts of *reference dependence* and *loss aversion* are combined with Peter Viggo Jakobsen's coercive diplomacy framework to analyze the US coercive diplomacy policy and North Korea's response. This research concludes that North Korea's bias toward the pre-crisis status quo and desire to salvage perceived losses propelled it to engage in provocative and risky actions, which represented the failure of American coercive diplomacy. This project deduces that, first, in order to coerce the adversary away from its preferred status quo, the inducements must be larger than the punishments. And, second, coercive diplomacy must be framed in such a way that it is not viewed as an overall loss by the coerced state.

Keywords: Coercive diplomacy; prospect theory; North Korea; nuclear proliferation. North Korean second nuclear crisis

ACKNOWLEDGEMENTS

This project marks the culmination of a stimulating year at the School for International Studies. For its successful completion, I have benefited tremendously from the help and guidance of many individuals. My greatest debt is owed to my supervisor: Dr. Nicole Jackson, who no doubt has had to endure my muddled thoughts and undeveloped ideas. Yet she still gracefully waded through many poorly written drafts and offered constructive criticism that helped me clarify my arguments and improve the project. I have become a much better student and writer as a result. And for that I am immensely grateful.

I would also like to thank Dr. Andrew Mack reading and approving this project. Many thanks are also due to Dr. Jeff Checkel and my classmates of IS800 for all the suggestions and help with the early stages of this project. Furthermore, many thanks belong to Renee McCallum; I thank her for the patient and warm support throughout the writing process.

This past year has been a terrific intellectually journey and I am indebted to many people at the School for International Studies for that enriching experience. I would like to use this opportunity to express my gratitude to Dr. John Harriss, Dr. Alvaro Perreira, Dr. Steve Easton, Dr. Jon Scott, Jan Smith and Ellen Yap.

TABLE OF CONTENTS

Approval	ii
Abstract	iii
Acknowledgements	iv
Table of Contents	v
List of Figures	vii
List of Tables	viii
Abbreviations	ix
1. Introduction	1
1.1 Research Question and Argument.....	2
1.2 The Contribution of This Research	3
1.3 Research Method, Theory and Data.....	4
1.4 Challenges	7
1.5 Structure of Project.....	10
2. Coercive Diplomacy and Prospect Theory	12
2.1 Coercive Diplomacy	12
2.2 Prospect Theory	18
2.3 The Applicability of Prospect Theory to Coercive Diplomacy	20
3. Prospect Theory and North Korean Loss Aversion	22
3.1 The Road to the 2002-3 Nuclear Crisis.....	22
3.2 North Korea's Reference Point	26
3.3 North Korean Loss Aversion.....	29
3.4 Prospect Theory and North Korea's Actions	31
4. Prospect Theory and the Failure of Coercive Diplomacy	36
4.1 The Failure of US Coercive Diplomacy on North Korea	36
4.2 Credible Threats and Attractive Inducements	39
4.3 Insights from Prospect Theory for Coercive Diplomacy	42
5. Conclusion	45
Appendices	50
Appendix A: Timeline	50
Appendix B: 1994 Agreed Framework	52

Reference List	57
.....	65

LIST OF FIGURES

Figure 4.1: Loss and Gain Utility Function	41
--	----

LIST OF TABLES

Table 1.1: Strategies of Coercion	13
Table 1.2: Schelling's <i>Compellence</i> Variables	15
Table 1.3: George's Coercive Diplomacy Variables	16
Table 1.4: Jakobsen's Coercive Diplomacy Variables	17
Table 4.1: US Coercive Diplomacy on North Korea	37

ABBREVIATIONS

AF	1994 Agreed Framework
CD	Coercive diplomacy
DPRK	Democratic People's Republic of Korea (North Korea)
EUT	Expected utility theory
HEU	Highly-enriched uranium
IAEA	International Atomic Energy Agency
KEDO	Korean Peninsula Energy Development Organization
LWR	Light-water reactor
NPT	Nuclear Non-Proliferation Treaty
PT	Prospect theory
US	United States of America

1. Introduction

Nuclear proliferation and its control remains one of the most pressing issues of international relations and plays a dominant role in the security issues of Northeast Asia, centering on North Korea.¹ Since the late 1950s, North Korea has engaged in nuclear research, which added to the heightened tension of the dormant conflict on the Korean Peninsula. Due to its commitment to South Korea and other interests in the region, the United States (US) has been actively involved in the efforts to curb North Korea's nuclear weapons ambition.

The first North Korean nuclear crisis broke out in March 1993 when North Korea announced its intention to withdraw from the nuclear Non-Proliferation Treaty (NPT). The crisis escalated rapidly with the US and North Korea heading toward an armed confrontation, which was averted with the visit to Pyongyang by former President Jimmy Carter. The ensuing diplomatic negotiations produced the 1994 Agreed Framework (AF), which delineated the terms and responsibilities for both the US and North Korea to work toward resolving the issue. The AF collapsed in October 2002 when it was revealed that North Korea had been violating the terms of the Agreement by secretly enriching uranium. The Bush administration resorted to coercion aiming to halt the development of the uranium program but failed when North Korea defied US pressure and resumed its nuclear activities in February 2003.

One of the key American strategies to address the North Korean nuclear ambition has been coercive diplomacy (CD). However, major attempts by the US

¹ The names North Korea and the Democratic People's Republic of Korea (DPRK) are used interchangeably in this project.

to use coercive diplomacy to influence the behaviour of North Korea from the fall 2002 to early 2003 did not succeed. The reasons for that coercive diplomacy failure can be explained by employing prospect theory (PT) to analyze North Korea's actions in response to US coercive diplomacy.

1.1 Research Question and Argument

This project is guided by the following research question: *How does prospect theory explain North Korea's actions during the 2002-3 nuclear crisis, and the resulting failure of American coercive diplomacy?*

This research seeks to understand why the DPRK did not respond to US CD efforts by halting its nuclear program. The focus of this project is on explaining North Korea's actions between October 2002, when the second nuclear crisis commenced, and February 2003, when North Korea restarted its nuclear facilities. The Bush administration threatened sanctions and suspended the supply of heavy fuel oil to North Korea throughout this period to pressure Pyongyang to halt its nuclear activities and open up its hidden, highly enriched uranium program for inspection². Instead of complying with the US demands, the DPRK resorted to various provocative actions, including restarting its nuclear program. Since the US was attempting to prevent further nuclear development on the Korean Peninsula, those North Korean actions represented the failure of American coercive diplomacy.

² The highly enriched uranium program was revealed at a meeting between American and North Korean diplomats in October 2002 (see Cha & Kang, 2003, pp. 30-2).

This project argues that prospect theory offers a satisfactory and credible explanation of North Korea's 2002-3 actions and the failure of American coercive diplomacy.³ In using PT to examine the American CD policy and understand the North Korean actions, this project shows that the perception of loss can significantly influence leaders' decision making. It also argues that the pre-crisis status quo was preferable to North Korea and became the "anchor point" to which its leadership compared the unenviable situation during the period of October 2002 to February 2003. The perception of the 2002-3 crisis placed North Korea into a "losses frame", which propelled it to engage in risk-accepting behaviour instead of complying with US CD.

1.2 The Contribution of This Research

This project aims to examine how prospect theory can be used to critique and help us better understand coercive diplomacy policies. In the field of CD, there are a number of papers analyzing past CD cases, but most focus on the coercer's side (see case studies in George & Simons, 1994; Art & Cronin, 2003). They examine the actions taken by the coercer state and whether its efforts met the conditions for maximizing the chances of success. In the field of prospect theory, there are also many studies using PT to analyze past political events, such as the Soviet Union's support of Syria in the 1967 war against Israel or Jimmy Carter's failed rescue attempt during the Iranian hostage crisis (see

³ Contrary to some who consider the North Korean leadership to be irrational (see, for example, Lee, 2005), this research is premised on the assumption that the North Korean leadership is made up of rational actors. Based on close analyses of North Korean calculations and behaviour (see Cumings, 2009; Snyder, 1999), it is logical to consider the DPRK leadership as rational actors.

Berejikian, 2004; Farnham, 1992; McDermott, 1992; McInerney, 1992). However, there is no study examining how PT can contribute to understanding the success or failure of CD. This project aims to contribute to filling that gap, by using PT to understand the coerced state's actions – in this case, North Korea – and how these actions in turn affect the outcome of coercive diplomacy.⁴

1.3 Research Method, Theory and Data

This project begins by examining the main coercive diplomacy concepts to establish the framework that guides our analysis of the American CD strategy toward North Korea. Prospect theory is then used to understand the North Korean decisions and to analyze the US policy of CD.

The main part of this research employs PT's concepts of *reference dependence*⁵ and *loss aversion*⁶ to see if the options presented to North Korea and its subsequent actions reflected prospect theory's predictions, and to explore how PT can be used to explain the failure of American coercive diplomacy on North Korea in 2002-3. PT posits that decision makers evaluate choices against a "reference point" and experience a greater subjective effect from a loss than from an equivalent gain. Facing a loss, actors would become risk-acceptant and behave in ways that could bring further losses (Berejikian, 2004). In this sense,

⁴ A recent work by Forrest Morgan (2003) stresses the importance of taking the adversary's culture into account when constructing a CD strategy. He examines how Japan's "strategic culture" led it to behave in ways that significantly affected the American CD efforts. This is one example that highlights the necessity and importance of analyzing factors other than those created by the coercing state, in particular the target state's perception of CD.

⁵ *Reference dependence* refers to the fact that people are more sensitive to gains and losses evaluated from a reference point rather than to net asset levels (Levy, 1997b).

⁶ *Loss aversion* refers to the asymmetrical effect of gains and losses – that is, the pain of a loss is greater than the joy of an equivalent gain. Decision makers thus become risk-acceptant when confronted with losses in the attempt to avoid them (Berejikian, 2004; Levy, 1997b)

prospect theory is the appropriate vehicle to analyze the North Korean actions and US coercive diplomacy policy because it allows us to explore how the perception of loss interferes with leaders' evaluation of a crisis and their subsequent actions. PT also enriches our understanding of CD failure by providing a window into how the coerced state responds to external threats and inducements.

In order to use prospect theory to examine the North Korea actions and to critique the American CD policy, the following points are examined from the data and literature. First, data from primary and secondary sources are used to determine North Korea's reference point. This project analyzes whether North Korea used the new status quo of the fall 2002 or the old status quo that existed prior to the fall of 2002 as the reference point. PT research has proven that most individuals consistently accommodate to gains more quickly than to losses. In other words, people are more willing to accept a new status quo after a positive change rather than a negative one. Since the conditions pre-2002-3 benefited North Korea in many ways, it is reasonable to expect that during the crisis the old status quo had become the reference point from which the North's leaders measured their subsequent gains/losses.

Second, using a coercive diplomacy framework, this project assesses the construction of the American CD policy and its effect on the DPRK leaders' evaluation of the crisis. It is argued that at least three CD actions placed North Korea into a losses frame: the suspension of heavy fuel oil supply, the impending denial of promised light water reactors, and the exposure of, and failure to use,

the hidden highly enriched uranium program as a bargaining tool. This sense of loss pushed North Korea into a risk-acceptant mode to challenge the American coercive diplomacy efforts and then to engage in provocative actions to try and influence the status quo.

In terms of data, this research relies on both primary and secondary sources. Primary sources are comprised of US and North Korean government statements and reports. US government documents, such as the National Strategy to Combat Weapons of Mass Destruction, and communiqués from the Korean Peninsula Energy Development Organization (KEDO) are examined to understand the Bush administration's position regarding North Korea. Furthermore, the Korean Central News Agency (KCNA) is extensively consulted as it is a major source for understanding the North Korean position. The KCNA provides official statements in English and is the media tool used by North Korea to address the outside world.

Secondary sources, such as academic works and analyses on the rationale of the North Korean nuclear program and the DPRK leaders' calculations are also examined. Some notable ones include Wit et al (2000), which offers first-hand accounts by US officials involved in negotiations with Pyongyang during the first nuclear crisis in 1993-4. Another is Funabashi (2007), which provides a detailed analysis of the second nuclear crisis. This book, by a North Korean expert, offers a sharp dissection of the crisis and is supported by extensive interviews with a wide-range group of academics, journalists and US government officials. Additionally, Drennan (2003) is a close examination of the

North Korean leadership's behaviour and calculations. Together these materials allow for a comprehensive analysis of the US CD policy and North Korean decision making in 2002-3 through prospect theory.

1.4 Challenges

Scholars have relied on many different theories, such as realism, liberalism, constructivism and feminism, to analyze state behaviour and decision making in foreign policy. Experts also rely on decision making theories, such as prospect theory, expected utility theory and cognitive theory, that focus more narrowly on the factors influencing the decision making process and its outcomes, to study state behaviour. In terms of employing prospect theory to study international relations and foreign policy choices, a significant challenge comes from expected utility theory (EUT).

EUT is arguably the main theory within the rational choice paradigm⁷ and was first advanced by von Neumann and Morgenstern (1944). EUT posits that decision-makers, when faced with choices, appraise the desirability of outcomes against their net asset position, think about the chances of those outcomes occurring, and then choose the one that offers the best potential (see Geva & Mintz, 1997; Coleman & Fararo, 1992; Hastie & Dawes, 2001).⁸ Applied to this project, expected utility theory would argue that the DPRK has a history of relying

⁷ Rational choice subsumes a group of theories that include expected utility, game choice, and bargaining, thus it is argued that rational choice is not so much a theory as a paradigm (Berejikian, 2004).

⁸ Tversky & Kahneman (2000) argues that EUT and the rational choice paradigm can be described as "a normative model of an idealized decision-maker, not as a description of the behaviour of real people" (p. 209).

on crisis diplomacy and brinkmanship⁹ to leverage its position vis-à-vis the US. Thus, when its highly enriched uranium program was exposed in October 2002, North Korea naturally chose crisis diplomacy and brinkmanship – the strategies that have served it well in the past – in order to create new favourable negotiation terms.

The North Korean leaders failed, however, to appraise the likelihood of being able to get similar results in 2002-3 as they did in 1993-4; they failed to take into account the fact that they were facing a much tougher and less compromising American administration. In using prospect theory, this project offers an explanation for such behaviour and will argue that Kim Jong Il's regime took risky and provocative actions in 2002-3 (despite the diminishing utility of the same tactics) because it found itself increasingly in a losses domain and thus tried to recover its losses.

It is important to note that while we will show that prospect theory offers a credible and satisfactory explanation of North Korea's actions and the ensuing failure of American coercive diplomacy, this does not negate the existence of a competing explanation by expected utility theory. In fact, a PT explanation does not necessarily contradict that of EUT because "for many – perhaps most – choices people face, the expected-utility-maximizing choice would also be preferred by someone who is risk-averse in the domain of gains and risk-

⁹ Crisis diplomacy and brinkmanship can be defined as the use of tactics such as crisis-inducing, threatening, stalling, and even walking out of negotiations in order to achieve better concessions and leverage one's bargaining position (Snyder, 1999, pp. 65-96).

acceptant in the domain of losses”, just as PT would predict (Stein & Welch, 1992, pp. 75-6).¹⁰

Even though the same state behaviour can be explained by both EUT and PT, in certain cases, the difference between the two can be expressed as one between prediction and understanding. Jeffrey Berejikian argues that:

Simply stated, prediction and understanding are not the same. An imaginary farmer in pre-Copernican times could do quite well in predicting the timing of the sunrise and sunset...all from a view of the solar system that had the sun revolving around the earth. The farmer’s model of the solar system would be predictive, but it would also be incorrect...[Thus] we should ask ourselves if it still makes sense to continue with models that often contain known and mistaken representations about real-world actors (2004, pp. 5-6).

This, however, should not be taken as a trivialization of EUT. It is true that EUT’s predictive power remains strong, but there are cases where employing PT may provide us with a complementary and comprehensive explanation of state behaviour. This project argues that relying on PT to analyze North Korea’s actions during the 2002-3 crisis is one such case, as PT allows us to understand how the perception of loss affects decision making and prevents leaders from maximizing utility. With the existence of ample empirical evidence (as will be discussed in chapter 2) that supports the credibility of PT, it is important that we further explore how prospect theory can be used to better understand state behaviour. One of the goals of this project is to contribute to that exploration.

Another challenge to PT is that it is a theory of individual decision making, which is inapplicable to understanding decision making at the state level as that

¹⁰ For an interesting study that relies on an EUT model but that can almost be identically carried out under a PT model, see Dacey, 1998.

requires the inclusion of collective decision making and how domestic players influence outcomes (see Morrow, 1997). This challenge ignores the many studies of state behaviour that focus on individual decision making (see Arnold, 1996; Barr, 2000; Hanhimäki, 2005; Jackson, 2007). For many reasons, PT does offer analytical value in studying North Korea. The totalitarian nature of the North Korean state means that decision making is concentrated in the hands of Kim Jong Il and a very few¹¹ who can reasonably be expected to share the same understanding of threats (unlike the divergent interests of domestic actors in a democratic state). The North Korean leadership can thus be studied as a unitary unit and its decision making process that of an individual entity.¹²

1.5 Structure of Project

This project is divided into four subsequent chapters. Chapter two develops a theoretical framework while establishing the context and showing how the argument fits into the larger theoretical debate. This chapter argues for the contributions of prospect theory to the understanding of coercive diplomacy's successes and failures.

Chapter three begins with a brief historical context of North Korea's nuclear program and the 2002-3 nuclear crisis. This chapter is the first part of the main analysis in which North Korea's decisions are analyzed through prospect theory. This chapter argues that the crisis created a perception of loss for the

¹¹ Bremmer (2010) suggests that it is likely that Kim Jong Il has absolute control and the last say on all important matters.

¹² For a more detailed discussion on the applicability of prospect theory to the study of international relations, see Berejikian, 2004, pp. 15-22.

leaders in Pyongyang and propelled them to resist American CD and resort to provocative actions to try and avoid the losses.

Chapter four continues the analysis and analyzes the failure of the American CD policy through conclusions drawn from PT's explanation of North Korean actions. It argues that the imbalance between threats and inducements in the US CD strategy intensified North Korea's sense of loss. This perception was further exacerbated by the Bush administration's mixed messages of its goal of policy or regime change. The chapter ends by showing how the DPRK's sense of loss influenced the outcome of the US coercive diplomacy efforts.

Chapter five concludes that using PT to analyze the coerced state's evaluation of CD threats and inducements is a valuable way to understand the effectiveness of a coercive diplomacy strategy. This chapter also discusses the imperative need for statesmen to construct a CD strategy balanced between credible threats and enticing inducements without ignoring the importance of diplomacy.

2. Coercive Diplomacy and Prospect Theory

This chapter provides the theoretical foundation of this project by presenting the literature on coercive diplomacy and prospect theory and by discussing the benefits and challenges of using PT to study the effectiveness of US CD efforts on North Korea. It begins with an examination of CD and proposes the theoretical framework that is used in the project. This is followed by a discussion of PT and the concepts of *reference dependence* and *loss aversion* that are used to understand North Korean actions in response to US CD. The chapter ends by making an argument for the valuable contributions of PT to understanding CD outcomes.

2.1 Coercive Diplomacy

In international politics, while “threats remain the common currency...and the proper deployment of threats lies at the core of effective statecraft”, the options available to leaders to resolve inter-state conflicts remain limited (Berejikian, 2004, p. 42). Short of full-scale war, countries are left with the choices of deterrence, diplomacy, and coercive diplomacy (see Table 1.1).

Table 1.1: Strategies of Coercion

Type of coercion	Scale of coercion	Goal
Deterrence	Passive	Use of military capability to prevent the opponent from doing something – for example, invading one’s allied country.
Diplomacy	Active	Use negotiations to influence the opponent’s behaviour in one’s favour.
Coercive diplomacy	Active aggressive	Use threats and/or limited force to coerce the opponent to stop doing something or undo what has been done.
War	Aggressive	Use brute force to alter status quo.

Deterrence was the strategy of choice during the Cold War when the biggest threat to the United States and its allies was the Soviet Union, whose equally strong nuclear capability restrained both sides from direct military confrontations (see Cimbala, 1998; Mastny et al, 2006; Payne, 1982). Despite remaining an important tool in international relations, the focus on deterrence, however, has become significantly less intensive since the end of the Cold War due to the collapse of the Soviet Union and the changing nature of threats to Western interests.

Traditional diplomacy continues to be an option in international relations but its ability to resolve inter-state conflicts has not always been robust. In situations where deterrence and diplomatic negotiations fail, and where war would result in unthinkable destruction, coercive diplomacy may be an attractive option. The use of CD is intended to send the message that the situation is taken by the coercer to be grave but that there might still be room to avoid an outbreak of full-scale war.

After the Cold War, it has been argued that the biggest threat to the US and its interests comes from so-called “rogue states” (see Lake, 1994). However, not all rogue states are identical nor are they dealt with in the same manner. The US has engaged in some forms of diplomatic dialogues with certain rogue states while choosing containment and isolation as the strategies to deal with others. In the case of North Korea, the American policy has been a mixture of both diplomatic engagement and coercive diplomacy. During the 2002-3 crisis, the Bush administration relied exclusively on CD in the attempt to prevent Kim Jong Il’s regime from recommencing its nuclear development. CD is the central American policy in this case and thus warrants a closer and detailed discussion.

Coercive diplomacy is the threat of force and/or punishment or the limited use of force to coerce a state to stop what it is doing or undo what it has done. It is a similar strategy to the use of an ultimatum among European powers in the 19th century (George & Simons, 1994). CD is, however, a difficult strategy to employ to influence state behaviour because to succeed it has to frighten and reassure the adversary at the same time (Jakobsen, 2007; see also, Art & Cronin, 2003, pp. 361-70).

The use of threats to influence the behaviour of another state has been part of statecraft for centuries. As in everyday human interactions, coercion is frequently used in international relations. It was Thomas Schelling who, in his classic *Arms and Influence* (1966), organized the practice of coercion into a foreign policy framework. He called it *compellence*, or the diplomacy of violence, in which countries use their capacity to inflict pain and bring destruction on the

opponent as a bargaining chip.¹³ Schelling’s work on *compellence*, however, was purely at the theorizing stage, where historical examples were used but “as illustration, not evidence” (p. vii). Nonetheless, he identified five necessary conditions for the success of *compellence* (summarized in Jakobsen, 1998; see Table 1.2).

Table 1.2: Schelling’s *Compellence* Variables

1	Conveyed threat must be sufficiently potent
2	Threat must be perceived as credible
3	The adversary must be given time to comply
4	The coercer must assure that compliance will not lead to more demands
5	Each side must be persuaded that it can gain more by bargaining

Shortly after Schelling presented his concept of *compellence*, Alexander George developed it further in *The Limits of Coercive Diplomacy* (1971), a book he co-edited with David K. Hall and William E. Simons¹⁴. George popularized the phrase *coercive diplomacy* and distinguished it from Schelling’s *compellence* for two reasons. First, while *compellence* includes coercive diplomacy, blackmail and sometimes deterrence as well, George’s concept focuses exclusively on coercive diplomacy – defined as coercive threats employed to persuade an opponent to stop or reverse an action (George et al, 1971). Second, George endeavoured to turn the abstract framework into a concept that can be operationalized – that is, with mechanisms to measure and assess the variables

¹³ In the book, Schelling does not discuss exclusively about *compellence*; he examines the wider subject of military power and inter-state relations, including deterrence.

¹⁴ This was updated in 1994 by George and Simons. This second edition offers a re-evaluation of the theory and more case studies.

and conditions for success¹⁵. He expanded the variables and identified five contextual factors and nine conditions necessary for success, and four variants of CD (See Table 1.3) (George et al, 1971). Supported by many case studies (see George et al, 1971; George & Simons, 1994) highlighting the successes and failures of CD, George concludes that CD is a difficult strategy to implement because of the numerous factors that can affect its success, many of which are out of the control of the coercer state.

Table 1.3: George’s Coercive Diplomacy Variables

5 Contextual Variables	9 Success-Conducive Conditions
Global strategic environment	Clarity of objective
Type of provocation	Strength of motivation
Image of war	Asymmetry of motivation
Unilateral or coalitional coercive diplomacy	Sense of urgency
The isolation of the Adversary	Strong leadership
4 Coercive Diplomacy Variants	Domestic support
Classic ultimatum	International support
Tacit ultimatum	The opponent’s fear of unacceptable escalation
Try-and-see approach	
Gradual-turning-of-the-screw approach	Clarity in terms of settlement

The literature on coercive diplomacy has not been as well developed as that of deterrence. The works of Schelling and George remain the pivotal ones. However, they lack a significant variable that contributes to the success of CD strategies, the offer of inducements. Filling that gap, Peter Viggo Jakobsen

¹⁵ It should be noted that George is particularly concerned with closing the gap between theory and practice, and devising theories that are useful to policy makers. See, for example, George, 1993.

(1998) refined the concept of CD by combining various elements of Schelling’s *compellence* and George’s work on CD into a more concise *ideal policy* comprised of four elements (see Table 1.4), which are used in this project to examine the US CD policy toward North Korea. Jakobsen argues that Schelling’s variables are too parsimonious and those of George are too broad and that both concepts focus too heavily on the deployment of threats and not enough on positive incentives. It can be said that Jakobsen calls for a balance between the two factors of CD, coercion and diplomacy.

Table 1.4: Jakobsen’s Coercive Diplomacy Variables

1	A threat of force backed by the necessary military capability
2	A deadline for compliance
3	An assurance against future demands by the coercer
4	An offer of inducements

There are two caveats to the use of Jakobsen’s *ideal policy* that should be mentioned. First, Jakobsen does note that meeting the requirements of the *ideal policy* only maximizes chances for success and is not a guarantee for the successful application of a CD policy¹⁶. Second, his *ideal policy* is meant to be applied to armed aggression only.

Jakobsen’s framework is chosen because it represents a more concise measure of the success and failure of CD. However, since the dispute between the US and the DPRK was not about armed aggression (i.e. the threat of North

¹⁶ On this point, Jakobsen’s qualification echoes that of George’s; it is to recognize the fact that no one can really claim to devise a fail-proof coercive diplomacy strategy.

Korea invading South Korea) but about nuclear weapons acquisition, the first factor of the *ideal policy* is broadened to include not just a threat of force but also the use of punishment. While a threat of force may be necessary and remains a powerful signal to the adversary, the inclusion of various punitive options, such as economic sanction or the withholding of aid, allows the coercer to be more effective in delicate nuclear crises.

As noted above, the inclusion of Jakobsen's four variables does not mean that a CD strategy will be successful, because the variables only look at factors from the coercer's side. To understand why CD succeeds or fails, one must also analyze the adversary's reaction to CD. It is argued in this project that prospect theory complements Jakobsen's *ideal policy* to provide a more complete understanding of North Korea's reaction to US coercive diplomacy.

2.2 Prospect Theory

Prospect theory was developed by Kahneman and Tversky (1979) to address the fact that empirical studies consistently found behaviour deviating from that predicted by EUT.¹⁷ PT finds that decision makers do not always maximize outcomes. This deviation is the result of two main elements that set PT apart from EUT.

The first difference between PT and EUT is *reference dependence*. PT posits that individuals will evaluate possible gains or losses against a reference

¹⁷ Studies by Kahneman and Tversky (1979, 1982) show that individuals would forgo the option that offers the highest utility depending on whether they find themselves in a loss or gain domain. For example, in a gain domain, an individual would prefer a sure gain of \$80 to an 85 percent chance to win \$100. In the loss domain, the same individual would prefer to gamble for an 85 percent chance of losing \$100 to a certain loss of \$80 (cited in Berejikian, 2004, p. 9).

point, which usually (but not always) is the status quo. People often view the costs of moving away from the status quo as losses, and the benefits of moving away from the status quo as gains. And since “a loss has a greater subjective affect than an equivalent gain” (Kahneman & Tversky, 1982, p. 166), people overweight the former (losses) over the latter (gains) and would choose to stay at the status quo more frequently than EUT predicts (Levy, 1997b).

The second difference is *loss aversion*. PT argues that people tend to value what they have more than comparable things that they do not have. Therefore the disutility of relinquishing a good is greater than the utility of acquiring it; this is referred to as the *endowment effect* (Levy, 1997b). As such, individuals consistently overweight losses relative to gains and are risk-averse when confronted with gains while risk-acceptant when confronted with losses (Berejikian, 2004). The importance of *loss aversion* is that “the spectre of losses activates, energizes, and drives actors, producing great (and often misguided) efforts that risk – and frequently lead to – greater losses” (Jervis, 1992, p. 187). Applied to the international level, this means that states and leaders would engage in risk-taking behaviour when operating in a losses frame and when the outcome presents the possibility to recover a loss, and engage in risk-averse behaviour when operating in a gains frame and when the outcome presents the possibility to receive a gain. Examples of this risk-taking behaviour can be seen in Soviet risk-accepting policy in 1966-7 to avoid the loss of their client Syrian regime (McInerney, 1992); in how Franklin Roosevelt dealt with the 1938 Munich Crisis (Farnham, 1992); and in the Carter Administration’s failed rescue attempt

during the Iranian hostage crisis (McDermott, 1992). One reason for this risk-taking behaviour is that after a gain people tend to view any subsequent setback as a loss (rather than as a foregone gain), overweight it, and engage in risk-acceptant behaviour to recover the perceived loss (Levy, 1997b).

While PT's concepts of *reference dependence* and *loss aversion* set it apart from EUT, PT shares with expected utility theory the basic premise of a rational actor. However, while rational people do what they believe is in their best interest, they may *not* maximize utility due to the reasons outlined above (see also Kahneman, Knetsch & Thaler, 1991).

My research argues that, together with Jakobsen's *ideal policy*, PT provides a more complete and clearer picture of why North Korea behaved as it did from fall 2002 to early 2003. By understanding whether American CD put the DPRK leaders into a gains or losses frame and how it affected their reference point, this project explains how and why Kim Jong Il's regime reacted to American CD demands the way it did.

2.3 The Applicability of Prospect Theory to Coercive Diplomacy

Examined through PT, coercive diplomacy is a difficult strategy to implement successfully for two reasons. First, CD aims to force a state to change its behaviour which would mean moving away from the status quo. Since states would prefer to stay at the status quo more often than not, the efforts of a state to coerce another to move away from the status quo would be met with great resistance. This is possibly why deterrence has a greater probability of success

than CD, because “coercion can more easily maintain the status quo than alter it” (Jervis, 1992, p. 192).

Second, CD uses both threats and inducements to influence a state’s behaviour. To the coerced state, threats will naturally be viewed as losses and inducements as gains. As discussed above, individuals tend to be more occupied with losses compared to gains, therefore the adversary can be expected to focus more on the threats issued rather than the inducements promised. Consequently, in order for CD to have a high chance of success, it must avoid putting the coerced state into a losses frame, meaning that the inducements must be greater than the threats.

By using PT to understand North Korea’s decisions in the 2002-3 nuclear crisis, this research examines the failure of American CD by analyzing what role the above two factors – status quo bias and loss aversion - played in the US-North Korea coercive diplomacy interactions. The policy implication of this research lies in its ability to illuminate how and why coerced states react to external threats of force or international sanctions.

3. Prospect Theory and North Korean Loss Aversion

To understand how the second North Korean nuclear crisis started, it is necessary to put it into historical perspective. For that purpose, this section begins by discussing the historical context of the DPRK's nuclear ambition with particular attention paid to the 1993-4 nuclear crisis as this crisis laid the foundation for the crisis of 2002-3. This chapter, then, proceeds to lay out the details of the second nuclear crisis, after which PT is used to explain how the North Korean leaders evaluated the crisis and how they reacted to the American coercive diplomacy demands.

3.1 The Road to the 2002-3 Nuclear Crisis

North Korea began its nuclear research in the late 1950s with assistance from the Soviet Union. Over the next few decades, several small nuclear facilities were constructed at various locations throughout the country, including two graphite reactors at Yongbyon (see Joosten Jr., 2000; Heo, 2008; Mansourov, 1995). After the fall of the Soviet Union, North Korea turned to other states such as Pakistan for nuclear technology (Sanger, 2002; Funabashi, 2007). Throughout this period, North Korean leaders steadfastly denied the existence of any nuclear weapons program, insisting that their nuclear ambition remained for the peaceful purpose of generating power. With pressure from the Soviet Union, they even joined the NPT in 1985, committing North Korea to international control and transparency standards (Reiss, 1995). And on January 30, 1992, the DPRK signed a nuclear safeguards agreement with the IAEA, as it had pledged when

joining the NPT (“DPRK nuclear weapons”, 2003; “North Korea profile”, 2003). This agreement bound North Korea to IAEA inspections.

There are three types of IAEA inspections – routine, ad-hoc, and special inspections.¹⁸ Between May 1992 and February 1993, IAEA inspection teams visited North Korea six times and were allowed to tour various nuclear facilities under routine and ad-hoc inspections. The North even declared and opened up sites that were unknown to the IAEA up until that time (Drennan, 2003). Its cooperative behaviour was a result of the collapse of the Soviet Union and more engaging US policies. Relations between the DPRK and the US slowly became less tense in the initial years of the 1990s due to the engagement policy of the administrations of Ronald Reagan and George H. W. Bush (Wit, 2001; Bush & Scowcroft, 1998). When Bill Clinton took office as President in January 1993, he continued the engagement policy and even cancelled a scheduled Team Spirit¹⁹ joint military exercise with South Korea as a gesture of goodwill to the North (Wit et al, 2004; Wit, 2000; “US-North Korea agreed framework”, 2003). Bilateral relations seemed to be slowly improving, until February 1993.

In February 1993, the IAEA requested access to two suspected nuclear waste sites and gave North Korea ten days to comply (Drennan, 2003; Oberdorfer, 1997). The DPRK rejected that request and announced that any retaliatory sanctions from the US could precipitate “a holocaust of war” (Mack, 1993, p. 339). It also threatened to withdraw from the nuclear Non-Proliferation

¹⁸Ad-hoc inspections are to verify a state’s initial nuclear material; routine inspections, most frequently used, are carried out according to a defined schedule; special inspections are used in special circumstances (See IAEA, n.d.).

¹⁹ Team Spirit exercises were enacted in the mid-1970s after the US withdrew from Vietnam to signal American’s continued commitment to defend South Korea (Wit et al, 2004).

Treaty (KCBN, 1993; KCNA, 1993). In this heated atmosphere of the first North Korean nuclear crisis, the North continued to refuse further IAEA inspections while the US demanded that resumed inspections be the pre-conditions for further negotiations. Both countries were on the road to a full military confrontation and the crisis was only averted when former president Jimmy Carter made an unofficial visit to Pyongyang. It is widely believed that Carter's visit provided the North Korean leaders a means to save face and give into US demands in order to resume negotiations (Gordon, 1994; Drennan, 2003). The result of the renewed talks was the 1994 Agreed Framework.

Signed on October 21, 1994, the AF outlined the responsibilities of the US and the DPRK in regard to ending the nuclear crisis on the Korean Peninsula. In broad terms, both sides agreed to work together to move toward the normalization of relations, a nuclear free Peninsula, and a strengthened international nuclear non-proliferation regime (See Cossa, 1999; Appendix B). North Korea was to freeze all nuclear activities and submit to all IAEA inspection requests. The US was to provide North Korea with two light water reactors (LWRs) that could produce enough electricity to offset the North's loss of electricity generation due to the abandonment of its nuclear program.²⁰ Until the LWRs were constructed and fully commissioned, the US was to provide, through the establishment of the Korea Energy Development Organization (KEDO), an annual amount of 500,000 tons of heavy fuel oil to North Korea.

²⁰ LWRs were chosen because they were deemed more "proliferation resistant", producing less nuclear waste and a type of plutonium that is difficult to reprocess into weapons-grade material (Roehrig, 2003).

This arrangement was in place for eight years and, despite some setbacks, can be credited for the freezing of North Korean nuclear facilities and creating a less hostile environment on the Peninsula. The Agreed Framework broke down when it was revealed in October 2002 that the DPRK had been secretly enriching uranium, which was a blatant violation of the AF. In the summer of 2002, US intelligence began to obtain information of what appeared to be a North Korean program of highly enriched uranium (HEU) (Kelly, 2005).²¹ The US decision to confront the DPRK with this new revelation sparked off the second North Korean nuclear crisis.

When, in the fall 2002, James Kelly, the US envoy to North Korea, questioned his negotiation counterpart, Kang Sok-Ju, the first deputy minister of foreign affairs, about the HEU program, the latter admitted that North Korea was in possession of HEU and insisted that it had the right to such a capability in order to defend itself against American threats and hostility (Funabashi, 2007). It has been argued that North Korea intended to use the HEU revelation as a leverage to obtain better concessions from the US (Pritchard, 2003). The US, on the other hand, refused any further talk. The Bush administration demanded the abolition of the HEU program and that North Korea maintain the plutonium freeze under the AF (Kelly, 2002).

Facing US coercive diplomacy, the DPRK reacted strongly to the American demands and reverted to brinkmanship. Among other actions, the North Korean leadership denied the existence of any HEU program three weeks

²¹ Earlier evidence convinced US intelligence of a connection between the DPRK and Pakistan, which had provided North Korea with the technical knowledge to enrich uranium (see Funabashi, 2007, pp. 119-23).

after the exposure, removed all IAEA inspection cameras installed in its nuclear facilities in December 2002, announced its withdrawal from the NPT in January 2003, and reactivated its nuclear facilities in February 2003.

American coercive diplomacy was implemented to stop North Korea from further developing its nuclear weapons capability. Thus, when, in February 2003, the DPRK resumed its nuclear activities the US CD had failed. Why did North Korea engage in such risky and provocative actions? Prospect theory, to which we now turn, offers a credible explanation both of how North Korean leaders viewed the coercive diplomacy efforts and their subsequent actions during the 2002-3 crisis.

3.2 North Korea's Reference Point

One of two main explanatory factors affecting decision making, according to PT, is how individuals evaluate their position in relation to a reference point. That reference point becomes the anchor from which subsequent choices are weighted. In order to understand North Korea's reaction to American CD, it is necessary to determine the reference point against which the North's leaders evaluated CD demands.

It has been found that people consistently accommodate to gains more quickly than to losses, due to what is called the *endowment effect* (Levy, 1997b, 1992a). This means that after gains, people will be more ready to accept the new status quo to include those gains; after losses, people are reluctant to accept the losses and the new status quo. In other words, "people will normalize (i.e. adjust

their reference points) more quickly for gains than for losses” (Stein & Welch, 1997, p. 63).

When the crisis began in the fall 2002, North Korea was presented with two status quos: the old one (the situation prior to the crisis) and the new one (the new crisis situation). Due to the endowment effect, it is reasonable to expect that the DPRK leaders chose the old status quo over the new one.

Before the crisis, the terms and conditions of the 1994 Agreed Framework offered North Korea many benefits. One of the main concessions that the Clinton administration agreed to under the AF was to provide North Korea with two light-water reactors (LWRs) that would be capable of generating 1000 megawatts of electricity each. Even though the construction of the reactors was delayed due to various incidents²², it was already under way by the fall 2002 and was scheduled to be completed by 2008. The LWRs were substantial gains for the North as they would be able to generate more electricity than the existing North Korean facilities were capable of (Roehrig, 2003; “DPRK nuclear weapons”, 2003).

Until the construction of the LWRs was completed, the US agreed to provide North Korea with 500,000 tons of heavy fuel oil per year. The amount was calculated to be able to offset the latter’s loss of energy due to the freezing of its nuclear facilities. The US, along with South Korea and Japan, established the Korean Peninsula Energy Development Organization to manage the supply of heavy fuel oil, a task that KEDO consistently carried out until November 2002.

²² Major incidents included the hunt in 1996 for North Korean spies who had infiltrated South Korea via submarine, the launch of a Taepodong ballistic missile over Japan in August 1998, and deadly clashes between North and South Korean naval units in the Yellow Sea in 1999 and 2002 (Drennan, 2003).

The supply of heavy fuel oil was a clear benefit to North Korea because as its leaders continued to complain about the delay of the LWRs construction, no discontent was expressed regarding the heavy fuel oil that was received.

The AF created a relatively stable environment on the Korean Peninsula for continued engagement and dialogue between the DPRK and the US. It also improved North Korea's bilateral relations with South Korea and Japan.²³ Additionally, the Framework provided North Korea with a cover to secretly enrich uranium. It was able to receive concessions from the US in exchange for the freezing (not dismantlement) of its nuclear facilities while actively improving its negotiating power. This certainly was a significant gain from the North's perspective.

Compared with the AF status quo, the crisis of 2002-3 offered North Korea nothing but losses – immediate and potential. Starting from October 2002, Kim's regime was confronted with the exposure of its hidden HEU program and was subjected to coercive diplomacy demands from the US. The DPRK's attempt to use the HEU program as a bargaining chip failed to lead to any concession from the Bush administration, which insisted on North Korean compliance to US demands as a pre-condition for further negotiations (Funabashi, 2007).

Presented with only losses during the 2002-3 crisis, it is logical that North Korean leaders refused to accept the new situation as the reference point. Thus, by the fall 2002, the conditions prior to the crisis had become the preferred status

²³ Talks between Japan and North Korea took place throughout 2001-2 on the issues of normalization of bilateral relations and Japanese citizens abducted by North Korea. Those negotiations culminated in the Pyongyang Declaration signed on September 17, 2002.

quo and reference point from which North Korea measured its subsequent gains/losses.

3.3 North Korean Loss Aversion

Even though the 2002-3 nuclear crisis started in October 2002, it had already begun to take shape several months earlier. The early months of 2002 saw a rapid deterioration in US-DPRK relations, thus it is useful here to reflect on events that contributed to North Korea's sense of loss.

In his January 2002 State of the Union address, US President George W. Bush labelled North Korea as one of the countries of the "axis of evil" ("Address before a joint session", 2002). And it was revealed one month later in the US Nuclear Posture Review that North Korea belonged to a list of countries that could be targeted with a possible American nuclear attack (Gordon, 2002; Ferguson, 2002). These two incidents had begun to place North Korea into a losses domain even before the exposure of the HEU program and the ensuing US coercive diplomacy demands. North Korean officials decried what they referred to as "persistent hostile American policy". In his speech to the UN General Assembly on November 11, 2002, the DPRK's ambassador dwelled on the fact that the US government named North Korea as part of the "axis of evil" and a target for a possible pre-emptive nuclear strike (Pak, 2003).

The event that sparked the 2002-3 nuclear crisis was the exposure of North Korea's hidden program of HEU. When confronted at a meeting with US officials on October 3, 2002 in Pyongyang, North Korean representatives

admitted to having HEU, maintained that North Korea had the right to possess such a program, and signalled their intention to use the HEU as a bargaining chip (Funabashi, 2007). The reaction they received from US officials at the meeting made it clear that the US was not interested in further negotiations. Realizing the failure to use the HEU as a leverage, North Korea denied the possession of any HEU two weeks after signalling that it had uranium (KCNA, 2002 October 25). In the ensuing war of words, it was disputed whether the North Korean officials had explicitly admitted to having enriched uranium, or whether they only mentioned that such a possession was within the DPRK's right as a sovereign state (Funabashi, 2007). It is possible that the North's leaders consciously utilized ambiguity as a tactic to gauge US receptiveness for further negotiations (Funabashi, 2007; see also Litwak, 2000). Thus, I would argue that North Korea may not have explicitly declared nor denied the existence of HEU in order to create the perception that it was in possession of enriched uranium while at the same time leaving room for future denial should that become necessary.

The attempt of the DPRK to use the HEU as a bargaining chip backfired, however, when the US refused to give ground. The Bush administration immediately ceased all engagements and negotiations. They also demanded the DPRK's compliance with IAEA inspection requests and the immediate ceasing and opening up of the North Korean uranium program as pre-conditions for further negotiations and normalization of bilateral relations.

The US stepped up its pressure and announced in November 2002, through KEDO, that all future deliveries of heavy fuel oil were suspended (KEDO,

2002). Furthermore, even though the construction of the LWRs was not instantaneously put on hold, it was made clear to North Korea that none of the essential nuclear components would be delivered until the crisis was resolved (Roehrig, 2003).²⁴ To the US government this was inevitable given what seemed to be North Korean intransigent behaviour and blatant violation of the 1994 Agreed Framework. To the DPRK leaders, however, this only confirmed the suspicion that the US never intended to provide them with functioning LWRs in the first place.

The combination of the failed attempt to use the HEU as a bargaining chip and the imposed punishment, along with the American uncompromising position, pushed North Korea deeper into a losses frame and propelled it to engage in provocative actions.

3.4 Prospect Theory and North Korea's Actions

Prospect theory research shows that losses and gains are not evaluated with the same utility, but rather losses are overweighted and gains underweighted.²⁵ Thus, at the international level, it is argued that states are willing to do more to avoid or recover losses than to obtain a new gain. Consequently, once states find themselves facing losses, they are more willing to take risky actions in order to avoid them. From the previous sections, it is evident that the North Korean

²⁴ The LWRs project was eventually cancelled in May 2006 when no progress was made after successive Six-Party Talks that took place from 2003 onward.

²⁵ Jervis (1992) argues that PT "may also help account for the belief in domino effects because it indicates that people will focus more on losses than on gains," by pointing out that "in the late 1970s the United States was deeply concerned that the loss of influence in Ethiopia would have widespread repercussions but paid little attention to the simultaneous gain of influence in Somalia" (p. 189).

leaders found themselves in a deep sense of loss during the 2002-3 crisis. That condition pushed them to engage in risk-accepting behaviour in the hope of influencing the status quo in their favour.

North Korea faced the choice of either compliance with the US demands or non-compliance. The former would entail a high chance of partially returning to the old status quo (resumption of heavy fuel oil supply and so forth) but would have a sure probability of some losses (HEU program). Non-compliance would provide an opportunity to recover all losses (the return to the old status quo) but also “has a low chance of success, with failure bringing greater loss” (Berejikian, 2004, p. 22). Its leaders chose non-compliance to gamble on a low chance to overturn the new status quo, at considerable risk of losing even more. This risk-taking attitude was evident in its many provocative actions.

After realizing the disutility of using the HEU program as a bargaining chip, North Korea denied the program’s existence while at the same time indicated that it was “entitled to possess not only nuclear weapon but any type of weapon more powerful than that so as to defend its sovereignty” (KCNA, 2002 October 25). The DPRK denied the possession of any enriched uranium even though it was highly improbable that the Bush administration would have believed such a claim, especially not after North Korean diplomats having expressed intention to use the HEU program as leverage to negotiate better terms (Funabashi, 2007). This futile denial was undertaken because Kim Jong Il’s regime found itself in a losses domain and became desperate. This is consistent with research showing that states, when faced with severe losses, “feel strong motivated biases to

believe that the policy that offers a way out can in fact succeed”, which is not always the case (Jervis, 1992, p. 192).

When the denial of enriched uranium failed to produce a result, North Korea went further and declared the AF nullified. In December 2002, the DPRK government intensified its brinkmanship tactics by removing all IAEA-installed cameras at its nuclear facilities and expelling IAEA inspectors from the country (Kelly, 2005). At the same time, North Korean statements began to point to the US as uncompromising and bent on destroying North Korea and denying it the right to exist as a sovereign state (see KCNA, 2002 November 1). The DPRK government insisted that it would not “put down arms to receive sugar” and that as long as the US continued to pose a nuclear threat, it had no choice but to take a “corresponding measure” (KCNA, 2002 November 4).

North Korea took another provocative step in January 2003 and withdrew from the NPT (see KCNA, 2003 January 11). This was a considerable risk-taking action on the North Korean part because unlike its threat to withdraw from the NPT in 1993, it actually withdrew from the international treaty during the second nuclear crisis. Since the NPT’s purpose is to allow countries to generate nuclear power without developing nuclear weapons, by withdrawing, North Korea was no longer subjected to the limits of the Treaty. The withdrawal threatened not only the US desire for nuclear control on the Korean Peninsula but also the credibility of the NPT as a mechanism to curb nuclear proliferation.

In the light of the 1993-4 crisis, the threat to withdraw from the NPT in 1993 did not actually lead to the establishment of the AF and the associated

benefits for North Korea. Rather the threat to withdraw from the NPT (along with other factors) pushed the DPRK and the US to the brink of war. Only the unforeseen intervention of former President Jimmy Carter halted the belligerent rhetoric on both sides and the slide toward armed confrontation (Drennan, 2003). Thus, taking into account the past record of the threat to withdraw from the NPT and the resolute position of the Bush administration in 2002-3, the North's regime resort to the same tactic can be satisfactorily explained as a provocative and risky action that had germinated from its sense of loss.

North Korea took the final step in disregard to any pretension about nuclear cooperation in February 2003 by restarting its nuclear facilities. This was the ultimate risk-accepting behaviour in terms of provoking an American reaction. Previous tactics (the denial of the HEU program, the expelling of IAEA inspectors and the withdrawal from the NPT) were used to deepen the crisis but, at the same time, leave some room for potential and further US engagement because they fell short of having the North explicitly restart its nuclear facilities. But that had changed in February 2003, when the DPRK government resorted to its trump card, by unfreezing and restarting its facilities, in the hope to cajole the US to compromise and resume the supply of heavy fuel oil and the construction of the light-water reactors.

When a state is driven by losses, it can be expected that "threats and coercion are likely to backfire, producing a spiral of greater hostility" (Jervis, 1992, pp. 192-3). Consequently, US coercive diplomacy propelled Kim Jong Il's regime to engage in provocative actions in the hope of changing the 2002-3

status quo in its favour. As the American goal was to prevent North Korea from re-embarking on the nuclear path, when the latter refused to submit to US CD demands and restarted its nuclear facilities in February 2003, the US CD efforts had failed.

4. Prospect Theory and the Failure of Coercive Diplomacy

As chapter three showed, North Korea's loss aversion and its desire to return to the old status quo before the crisis pushed it to engage in risk-taking actions. This chapter presents an analysis of how the DPRK's reference point and loss aversion affected the implementation of US CD, in order to highlight the applicability of prospect theory to the study of coercive diplomacy.

4.1 The Failure of US Coercive Diplomacy on North Korea

The US approach to North Korea in the crisis of 2002-3 was more focused on punishments than on inducements (see Table 4.1 for this imbalance). The Bush administration reversed its predecessor's policy of dialogues with North Korea and returned to the traditional American strategy toward rogue states, by eschewing policy inducements and becoming overwhelmingly, if not exclusively, punitive (Litwak, 2000). This reversal of policy was the result of two factors. First, the Bush administration, with its more conservative outlook, was prepared to implement tougher policies toward Kim's regime. Second, the exposure of the highly-enriched uranium program, believed to have been started around 1998, convinced the US that any compromise before concrete North Korean compliance would be tantamount to rewarding North Korean brinkmanship and crisis diplomacy tactics. Thus, in the interactions during the 2002-3 crisis, the US government steadfastly insisted on the DPRK's change of behaviour as proof of goodwill before any resumption of talks and normalization of relations could take place (Cha & Kang, 2006; Funabashi, 2007). Though the US maintained that it

only asked for a policy change on the nuclear issue, it failed to make a convincing case of its non-intention to pursue a North Korean regime change.

Table 4.1: US Coercive Diplomacy on North Korea

Threats and punishments	Threat of economic sanctions (and, unofficially, regime change?) Suspension of heavy fuel oil supply Withholding of all essential components for the LWRs
Demands and deadline	Immediate compliance with IAEA inspections Immediate ceasing of all nuclear activities
Assurance against future demands	Limited aim of policy change announced, but failed to convince North Korea due to US mixed messages, rhetoric and behaviour
Inducements	Resumption of talks and progress toward normalization

From North Korea’s point of view, American threats did not just begin in fall 2002. The DPRK became concerned with the Bush administration’s penchant to push for regime change in rogue states when it was named as part of the “axis of evil” in the State of the Union address in January 2002 and as one of the countries that could be targeted with a nuclear attack in the Nuclear Posture Review in March 2002. Even though the Bush administration commented that it had no plan to attack North Korea (Bumiller, 2002), the existence of its previous hostile messages did not help to allay North Korean fear. Robert Litwak (2000) argues that “once a state has been relegated to the ‘rogue state’ category, it is politically difficult to pursue any policy other than containment and isolation” (p.

9).²⁶ In the same sense, by naming the DPRK as part of the “axis of evil”, the Bush administration sent the message that normal diplomatic engagement would be improbable and created the perception that North Korea was not immune to the US’ desire to “reform” rogue states through regime change.

Along with its hostile rhetoric and subsequent preparatory actions against Iraq, the Bush administration maintained in its National Security Strategy of September 2002 that,

North Korea has become the world’s principal purveyor of ballistic missiles, and has tested increasingly capable missiles while developing its own [weapons of mass destruction] arsenal...We must be prepared to stop rogue states and their terrorist clients before they are able to threaten or use weapons of mass destruction against the United States and our allies (Funabashi, 2007, p. 111).

Thus, while the official US demand was for a policy change in regard to the North Korean nuclear program, its posturing and attitude had created the impression that further demands, i.e. regime change, was not an improbable future course of action.

It became apparent that North Korea’s greatest concern was for the security of its regime and its principal goal during the 2002-3 crisis was to seek from the US a declaration of non-hostility. Thus, its inclusion in the “axis of evil” along with Iraq, a country that the US was preparing to invade at the time, only “reinforced the spectre of regime change” (Jentleson & Whytock, 2006, p. 83).

²⁶ See Doty, 1993 and Autesserre, 2009 for insightful arguments on how framing certain groups in particular ways can affect policies adopted and the way states behave toward those groups.

It has been argued that North Korea's nuclear ambition was to ensure the survival of its totalitarian regime.²⁷ Nuclear weapons are not an ends but rather a means for security (Roehrig, 2003; see also Sagan, 1996/7); The highly-enriched uranium program contributed directly to that aim by developing nuclear deterrence. James Kelly, the chief US envoy to Pyongyang in October 2002, concluded that "North Korea wanted to enrich uranium in order to win the United States' respect and wanted to develop a retaliatory capability that could not easily be interfered with" (Funabashi, 2007, p. 127). The North Korean sense of insecurity increased with the taking office of President George W. Bush,²⁸ whose perceived preoccupation with regime change and the spreading of democracy only impressed upon the DPRK an acute sense of urgency and threat.

4.2 Credible Threats and Attractive Inducements

In the coercive diplomacy literature, it is argued that a successful CD strategy must display a balance between threats and inducements. The possession of overwhelming military capability does not guarantee success. If that was the case, the US would have been able to coerce adversaries such as Nicaragua in the 1980s (Jentleson, 1994), Iraq in the 1990s (Hermann, 1994), and North Korea in 2002-3. To enhance the chance of success, equally attractive inducements must accompany the credible threats.

²⁷ This concern about survival was repeatedly made by North Korea (see Pak, 2003). Mack (1993) notes the precarious situation that North Korea finds itself vis-a-vis the close relationship between its principal adversaries – the US and South Korea – and its understandable preoccupation with regime survival.

²⁸ In March 2002, for the first time since the implementation of the Agreed Framework, the US refused to certify that North Korea was complying with its commitment under the AF (Miller & Sanger, 2002).

In their study of American coercive diplomacy on Libya and the latter's decision in December 2003 to give up its nuclear weapons program, Jentleson and Whytock (2006) found that the US strategy toward Libya failed prior to 2003 only succeeded when there was a balance of proportionality, reciprocity and coercive credibility. Proportionality refers to relationship between the objectives pursued and the punishments imposed. Reciprocity is the *quid pro quo* agreement of inducements offered in exchange for concessions. And coercive credibility entails convincing the coerced state of the consequences involved with noncompliance.

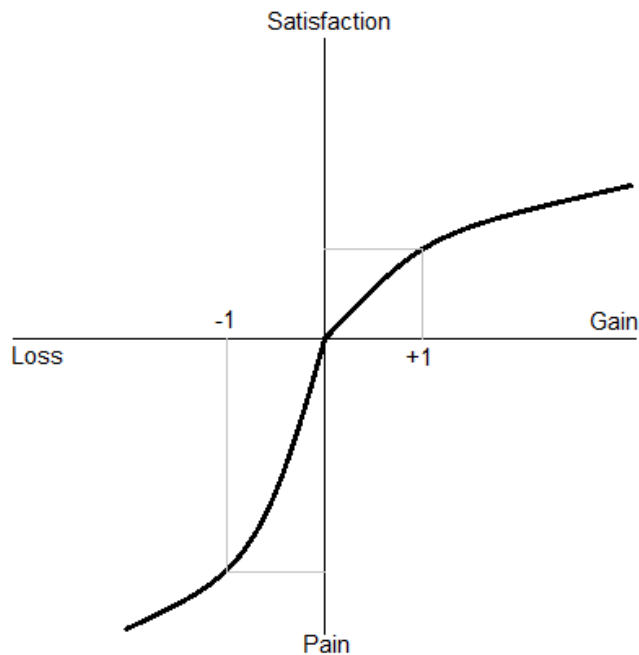
The above variables fulfil Jakobsen's four conditions for CD success (refer to Table 1.4); the first of which stipulates that threats and punishments must be backed by the necessary military capability. This means that while the possession of military might may not automatically entail CD success, the lack thereof would surely spell CD failure; one simply cannot coerce without coercive power. The coercer must also state clearly the proportionality of its demands by giving a deadline for compliance and an assurance against future demands. And most importantly, it must offer inducements in return for compliance from the adversary.

Yet despite the literature's emphasis on a balance between threats and inducements, numerous US CD efforts that displayed such a balance failed to produce the desirable outcome while cases where such a balance was not present succeeded. Prospect theory is valuable in explaining this paradox, through its analysis of the coerced state's perception of the threats and

inducements. Thus, it can be argued that US coercive diplomacy toward North Korea in 2002-3 failed as a result of how those threats and inducements interacted with the DPRK's reference point and loss aversion, pushing it to take risky actions.

As we have seen, the coerced state does not weight threats and inducements with the same value because threats, seen as losses, are overweighted while inducements, seen as gains, underweighted (Figure 4.1 shows a much deeper slope for losses compared to that for gains).

Figure 4.1: Loss and Gain Utility Function



From this asymmetrical function, this project argues that when faced with American CD, North Korea was preoccupied more with the threats than with the inducements. Second, since states accommodate to gains more quickly than to

losses, in order to induce the DPRK to change its reference point and accept a new status quo, US CD demands should not have been seen as an overall loss.

Contrary to the balance and proportionality emphasized in the CD literature, the implication of the above two points is that, from the coerced state's perspective, the satisfaction derived from the inducements must be greater than the cost associated with the punishments and threats. Also, threats and inducements must be presented in a way that draws the adversary's attention to the gains rather than the losses. Such a bias toward the perception of gain is necessary to place the coerced state into the gain domain, under which it would be risk-averse and more inclined to cooperate with the coercer. This perception of gain was not created in the American coercive efforts on North Korea in 2002-3.

4.3 Insights from Prospect Theory for Coercive Diplomacy

From the above analysis, this project maintains that the failure of US CD was the result of two factors. First, the DPRK leadership found themselves in a losses domain and decided to engage in provocative and risky behaviour in a gamble to avoid further losses. Second, the Bush administration's mixed messages (failure to convince the DPRK of America's limited goal of policy change, rather than regime change) and hostile attitude in the months leading up to and during the crisis contributed to preserving North Korea's sense of loss.

As explained earlier, coercive diplomacy has a high rate of failure and is not an easy strategy to implement. It is difficult to coerce an opponent to stop

what it is doing or to undo what it has done. It is even more difficult, if not impossible, to coerce an opponent “through a demand for change in the composition of the adversary’s government or in the nature of the regime” (George & Simons, 1994, p. 8). The US’ failure to convince North Korea of its non-goal of regime change was the underpinning factor that kept the latter in the losses domain. Despite the fact that naming North Korea as part of the “axis of evil” and grouping it into the countries that could be targeted with a nuclear attack may have been simply rhetoric and posturing (see Borger, 2003; Government of the United States, 2002), such behaviour had convinced North Korea that US CD goal was regime change and not policy change. To the North’s leaders, the threat of regime change must have appeared to be acutely realistic in the months of crisis as that was the same period that the Bush administration was making preparation to topple Saddam Hussein’s regime in Iraq, another of the “axis of evil” countries. Consequently, North Korea’s sense of loss was much greater than the sense of potential gain that US CD inducements offered.

Coercive diplomacy theory, like deterrence, operates on the assumption that states behave in a rational way to maximize the expected utility of available choices. It assumes and expects states to evaluate choices against a single utility function and, thus, view both gains and losses with equal utility. CD theory further tells us that threats must be credible and that the potential cost of absorbing a punishment must nullify the benefits of non-compliance in order to coerce another state to change its behaviour (Berejikian, 2004). This research proves otherwise.

In using PT to study the North Korean actions, it is evident that the DPRK's leaders became overwhelmingly occupied with the extant losses. The possibility of future gains was not sufficient to lift them out of the losses domain because they did not evaluate the crisis situation against a single utility function. Rather they employed a steeper function for losses and the perceived threat to their regime survival, and a shallower one for the potential gains. This asymmetrical function explains the DPRK's provocative actions to gamble on a small chance to recover all losses and return to the old status quo.

5. Conclusion

This project was structured to examine *how prospect theory explains North Korea's actions during the 2002-3 nuclear crisis, and the resulting failure of American coercive diplomacy*. The goal was to show how prospect theory can be used to understand and critique coercive diplomacy policies. The research has found that PT, with its focus on reference dependence and loss aversion, offers valuable insights into why North Korea behaved as it did during the 2002-3 crisis, which led to the failure of the US CD strategy.

When the crisis began in October 2002, North Korea was reluctant to move away from the pre-crisis status quo, consistent with what PT predicts. The conditions under the 1994 Agreed Framework offered North Korea many benefits and, thus, the pre-crisis situation became its reference point. From this reference point, North Korean leaders evaluated their position during the crisis and weighted the available options.

American coercive diplomacy, along with the Bush administration's hostile rhetoric and behaviour, placed the DPRK into a losses domain. Facing an uncompromising American administration seemingly occupied with the spread of democracy and the push for regime change in rogue states, North Korea engaged in risk-accepting behaviour to bet on a small chance to recover its losses, despite the fact that failure could escalate the crisis and bring further losses. Consequently, North Korea resorted to various provocative actions, culminating with the restarting of its nuclear facilities in February 2003 – an event

that the US had aimed to prevent – which signalled the failure of the American CD strategy.

In sum, the American CD strategy in the crisis of 2002-3 failed because it did not provide a mechanism for North Korea to escape the losses domain. Thus, this project has deduced two important PT implications for the use of CD. First, in order to coerce the adversary to move away from its preferred status quo, the inducements must be larger than, not just proportionate to, the punishments. From the coerced state's perspective, that is necessary in order to offset the losses versus gains,²⁹ especially when “credible threats...generate a losses frame for the target government, pushing it into a risky behaviour” (Berejikian, 2004, p. 10). When faced with CD, the adversary will be preoccupied more with the threats (seen as losses) than with the inducements (seen as gains). Thus for CD to have a higher chance of success, the inducements must be larger than the threats. But how much larger? At present, PT has no mechanism to precisely measure that. In controlled economic studies, it can be estimated that the ratio needed to equalize gains and losses is a little over 2:1 – that is, a typical decision-maker is about as happy to gain a little over \$200 as he is sad losing \$100 (see Shafir, 1992). There is at present no such simple estimate available for political analyses, thus any research working to close that gap would be highly desirable.

Second, CD must be presented in such a way that it is not viewed as an overall loss. This is important as “the same decision can be framed in several

²⁹ There is an inherent danger in proposing that inducements must be greater than punishments: One has to be careful so that such a strategy does not turn into appeasement.

different ways and different frames lead to different decisions” (Kahneman & Tversky 1982, p. 165). This is illustrated by the following example:

Imagine the outbreak of a disease that, if left untreated, is expected to kill 600 people. Consider two possible abatement strategies.

Strategy 1

Program A: 200 people will be saved.

Program B: 1/3 probability that 600 people will be saved; 2/3 probability that no one will be saved.

Strategy 2

Program C: 400 people will die.

Program D: 1/3 probability that no one will die; 2/3 probability that 600 will die.

The two choice sets are identical...The only difference is that the language in the first set of strategies describes the choices in terms of the number of lives saved, while the second set describes the same choices in terms of the number of lives lost...Results show that the majority of individuals consistently choose Program A in the first problem set, but opt for Program D in the second. (Berejikian, 2004, p. 8)

This suggests that CD strategies should be constructed to create the perception of an overall gain. From examining the failure of American CD on North Korea in 2002-3, it is logical to conclude that while the credibility of coercion must be maintained, the coercing state must actively engage in diplomacy. This project argues that diplomatic engagement does not weaken the coercer’s credibility, rather it is an indispensable component of CD, especially when the adversary is in a losses domain. Hence, in order to enhance the chance of success, the US CD policy should have pursued a much more rigorous diplomacy engagement with North Korea, while strongly reiterating its pressures and demands.

As the term *coercive diplomacy* suggests, it should entail an appropriate mixture of reliance on both coercion and diplomacy. In terms of constructing a successful CD strategy, the question is less whether to ‘embargo’ or to ‘embrace’

(Friedman, 1994). Rather the question to ponder is how much of the former, i.e. threats, and how much of the latter, inducements? Or, in the words of George Kennan, the founding theorist of *containment*, how much negative and positive reinforcement (Gaddis, 1982)? Too much punishment could risk creating a disproportionality of means and ends and over-isolating the adversary forcing it to engage in risk-accepting behaviour, which, in turn, condemns the CD strategy to failure. However, too much engagement could send the wrong message of appeasement and weak resolve on the coercer's side and undermine the credibility of its threats. The dilemma is to find the right balance of 'carrot and stick'. Such a balance can be elusive and has been widely debated. Robert Art, for example, writes that "in coercive diplomatic situations, some might want to argue that offering any inducements, whether before or after threats have been made and resolve communicated, weakens the coercer's resolve in the mind of the target and is therefore counterproductive", a position with which he disagrees (Art & Cronin, 2003, pp. 414-5). Art maintains that "it is not contradictory to take the position that a threat increases the target's cost of resistance to the coercer's demands and an inducement increases the target's benefits in complying with the coercer's demands," but he insists that "logic still favours offering inducements, if they are offered, after threats have been communicated but not before" (Art & Cronin, 2003, 415).

This project suggests that to have a higher chance of success, a CD strategy must not only offer the important elements of punishments and inducements, it must also take into consideration the coerced state's reference

point and tailor the strategy accordingly in order to avoid pushing the adversary into a losses frame. Thus, while a CD strategy can still be constructed in a way that includes all four variables as Jakobsen advocates, whether to focus more on punishments or on rewards depends on whether the adversary is in a gains or losses domain. In the former, states are less likely to take risky actions for potential gains and more likely to fear of potential losses. Therefore a CD strategy that stresses the costs of non-compliance may be more appropriate. However, when the adversary is in the latter frame, it is risk-acceptant and more likely to gamble on chances to recover the losses, even if that could entail more losses in case of failure. In this case, a CD strategy that is presented as an overall gain may have a higher chance of success. These are important points and should be developed further in future research.

In summary, we have explored in this project how PT explains North Korean actions during the 2002-3 nuclear crisis and the subsequent failure of American CD and found that the North's bias toward the pre-crisis status quo and desire to salvage perceived losses propelled it to engage in provocative and risky actions, which represented the failure of American coercive diplomacy. PT offers valuable insights into how the coerced state views CD threats and inducements, which significantly influences the success and failure of CD. This project concludes by maintaining that PT has proven to be an important decision making theory and should be relied upon when appropriate to expand our understanding of decision making under risk.

APPENDICES

Appendix A: Timeline³⁰

December 1985	North Korea signs the Nuclear Non-Proliferation Treaty (NPT).
April 10, 1992	North Korea ratifies International Atomic Energy Agency (IAEA) safeguards agreement.
March 1993	North Korea announces its intention to withdraw from the NPT.
June 16, 1994	Former US President Jimmy Carter visits Pyongyang.
October 21, 1994	The Agreed Framework signed between the US and North Korea.
January 20, 2002	US President George W. Bush names North Korea as part of the “axis of evil”.
March 2002	The US Nuclear Posture Review mentions North Korea as one of the possible targets for a nuclear attack.
April 1, 2002	President Bush refuses to certify North Korea’s compliance with the Agreed Framework but continues to contribute funding to the Korean Peninsula Energy Development Organization (KEDO).

³⁰ Adapted from Funabashi, 2007

- July, 2002 US intelligence sources indicate the possible existence of enriched uranium in North Korea.
- October 3-5, 2002 James Kelly, assistant secretary of state for East Asian and Pacific affairs, led a convoy to Pyongyang.
- October 16, 2002 President Bush signs the Authorization for Use of Military Force against Iraq Resolution of 2002, laying the legal groundwork for an invasion of Iraq.
- November 14, 2002 KEDO announces the suspension of heavy fuel oil deliveries to North Korea.
- December 12, 2002 North Korea unfreezes its operation and construction of nuclear facilities.
- December 21, 2002 North Korea removes all IAEA surveillance cameras and seals at its nuclear facilities.
- December 31, 2002 North Korea expels IAEA inspectors.
- January 10, 2003 North Korea announces its immediate withdrawal from the Nuclear Non-Proliferation Treaty.
- February 5, 2003 North Korea declares it has reactivated its nuclear facilities.

Appendix B: 1994 Agreed Framework

AGREED FRAMEWORK BETWEEN THE UNITED STATES OF AMERICA AND THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

Geneva, October 21, 1994

Delegations of the governments of the United States of America (U.S.) and the Democratic People's Republic of Korea (DPRK) held talks in Geneva from September 23 to October 21, 1994, to negotiate an overall resolution of the nuclear issue on the Korean Peninsula.

Both sides reaffirmed the importance of attaining the objectives contained in the August 12, 1994 Agreed Statement between the U.S. and the DPRK and upholding the principles of the June 11, 1993 Joint Statement of the U.S. and the DPRK to achieve peace and security on a nuclear-free Korean peninsula. The U.S. and the DPRK decided to take the following actions for the resolution of the nuclear issue:

I. Both sides will cooperate to replace the DPRK's graphite-moderated reactors and related facilities with light-water reactor (LWR) power plants.

1) In accordance with the October 20, 1994 letter of assurance from the U.S. President, the U.S. will undertake to make arrangements for the provision to the DPRK of a LWR project with a total generating capacity of approximately 2,000 MW(e) by a target date of 2003.

– The U.S. will organize under its leadership an international consortium to finance and supply the LWR project to be provided to the DPRK. The U.S., representing the international consortium, will serve as the principal point of contact with the DPRK for the LWR project.

- The U.S., representing the consortium, will make best efforts to secure the conclusion of a supply contract with the DPRK within six months of the date of this Document for the provision of the LWR project. Contract talks will begin as soon as possible after the date of this Document.
 - As necessary, the U.S. and the DPRK will conclude a bilateral agreement for cooperation in the field of peaceful uses of nuclear energy.
- 2) In accordance with the October 20, 1994 letter of assurance from the U.S. President, the U.S., representing the consortium, will make arrangements to offset the energy foregone due to the freeze of the DPRK's graphite moderated reactors and related facilities, pending completion of the first LWR unit.
- Alternative energy will be provided in the form of heavy oil for heating and electricity production.
 - Deliveries of heavy oil will begin within three months of the date of this Document and will reach a rate of 500,000 tons annually, in accordance with an agreed schedule of deliveries.
- 3) Upon receipt of U.S. assurances for the provision of LWR's and for arrangements for interim energy alternatives, the DPRK will freeze its graphite-moderated reactors and related facilities and will eventually dismantle these reactors and related facilities.
- The freeze on the DPRK's graphite-moderated reactors and related facilities will be fully implemented within one month of the date of this Document. During this one-month period, and throughout the freeze, the International Atomic Energy Agency (IAEA) will be allowed to monitor this freeze, and the DPRK will provide full cooperation to the IAEA for this purpose.
 - Dismantlement of the DPRK's graphite-moderated reactors and related facilities will be completed when the LWR project is completed.
 - The U.S. and the DPRK will cooperate in finding a method to store safely the spent fuel from the 5 MW(e) experimental reactor during the

construction of the LWR project, and to dispose of the fuel in a safe manner that does not involve reprocessing in the DPRK.

4) As soon as possible after the date of this document U.S. and DPRK experts will hold two sets of experts talks.

– At one set of talks, experts will discuss issues related to alternative energy and the replacement of the graphite-moderated reactor program with the LWR project.

– At the other set of talks, experts will discuss specific arrangements for spent fuel storage and ultimate disposition.

II. The two sides will move toward full normalization of political and economic relations.

1) Within three months of the date of this Document, both sides will reduce barriers to trade and investment, including restrictions on telecommunications services and financial transactions.

2) Each side will open a liaison office in the other's capital following resolution of consular and other technical issues through expert level discussions.

3) As progress is made on issues of concern to each side, the U.S. and the DPRK will upgrade bilateral relations to the Ambassadorial level.

III. Both sides will work together for peace and security on a nuclear free Korean peninsula.

1) The U.S. will provide formal assurances to the DPRK, against the threat or use of nuclear weapons by the U.S.

2) The DPRK will consistently take steps to implement the North-South Joint Declaration on the Denuclearization of the Korean Peninsula.

3) The DPRK will engage in North-South dialogue, as this Agreed Framework will help create an atmosphere that promotes such dialogue.

IV. Both sides will work together to strengthen the international nuclear non proliferation regime.

1) The DPRK will remain a party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and will allow implementation of its safeguards agreement under the Treaty.

2) Upon conclusion of the supply contract for the provision of the LWR project, ad hoc and routine inspections will resume under the DPRK's safeguards agreement with the IAEA with respect to the facilities not subject to the freeze. Pending conclusion of the supply contract, inspections required by the IAEA for the continuity of safeguards will continue at the facilities not subject to the freeze.

3) When a significant portion of the LWR project is completed, but before delivery of key nuclear components, the DPRK will come into full compliance with its safeguards agreement with the IAEA (INFCIRC/403), including taking all steps that may be deemed necessary by the IAEA, following consultations with the Agency with regard to verifying the accuracy and completeness of the DPRK's initial report on all nuclear material in the DPRK.

Robert L. Gallucci
Head of Delegation of the
United States of America,

Ambassador at Large of the
United States of America

Kang Sok Ju
Head of the Delegation of the
Democratic People's Republic of Korea,
First Vice-Minister of Foreign Affairs of
the Democratic People's Republic of Korea

REFERENCE LIST

- Address before a joint session of the congress on the state of the union. (2002, January 29). *Administration of George W. Bush*. Retrieved from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2002_presidential_documents&docid=pd04fe02_txt-11.pdf
- Alvarez, R. (2003). North Korea: No bygones at Yongbyon. *Bulletin of the Atomic Scientists*, 59(4), 38-45.
- Arnold, G. (1996). *The maverick state: Gaddafi and the new world order*. New York: Cassell.
- Art, R. J., & Cronin, P. M. (Eds.). (2003). *The United States and coercive diplomacy*. Washington D.C.: United States Institute of Peace Press.
- Barr, M. D. (2000). *Lee Kuan Yew: The beliefs behind the man*. Richmond, Surrey: Curzon.
- Berejikian, J. D. (1997). The gains debate: Framing state choice. *The American Political Science Review*, 91(4), 789-805.
- Berejikian, J. D. (2004). *International relations under risk: Framing state choice*. New York: State University of New York Press.
- Borger, J. (2003, January 28). How I created the axis of evil. *The Guardian*. Retrieved from <http://www.guardian.co.uk/world/2003/jan/28/usa.iran>
- Bremmer, I. (2010, July 22). Why Kim might actually be in charge. *Foreign Policy*. Retrieved from http://eurasia.foreignpolicy.com/posts/2010/07/22/why_kim_might_actually_be_in_charge.
- Bumiller, E. (2002, February 20). Bush says the U.S. plans no attack on North Korea. *The New York Times*. Retrieved from <http://www.nytimes.com/2002/02/20/world/bush-says-the-us-plans-no-attack-on-north-korea.html>

- Bush, G., & Scowcroft, B. (1998). *A world transformed*. New York: Alfred A. Knopf.
- Cha, V. D., & Kang, D. C. (2003). *Nuclear North Korea: A debate on engagement strategies*. New York: Columbia University Press.
- Chang, G. G. (2006). *Nuclear showdown: North Korea takes on the world*. New York: Random House.
- Cimbala, S. J. (1998). *The past and future of nuclear deterrence*. London: Praeger.
- Coleman, J. S., & Fararo, T. J. (Eds.). (1992). *Rational choice theory: Advocacy and critique*. New York: Sage Publications.
- Cossa, R. A. (1999). The agreed framework KEDO and four-party talks: Status prospects and relationship to the ROK's sunshine policy. *Korea and World Affairs*, 23(1), 45-70.
- Cumings, B. (2009). The North Korea Problem: Dealing with Irrationality. *Current History*. 108(719), 284-290.
- Dacey, R. (1998). Risk attitude, punishment, and the intifada. *Conflict Management and Peace Science*, 16(1), 77-88.
- Democratic People's Republic of Korea--United States of America: Agreed framework to negotiate resolution of the nuclear issue on the Korean peninsula (DPRK-US Agree Framework - October 21, 1994). (1995). *International Legal Materials*, 34, 603-7.
- DPRK nuclear weapons program. (2003). *International Debates*, 1(3), 70.
- Drennan, W. M. (2003). Nuclear weapons and North Korea: Who's coercing whom? In R. J. Art & P. M. Cronin (Eds.). *The United States and coercive diplomacy* (pp. 157-224). Washington D.C.: United States Institute of Peace Press
- Farnham, B. (1992). Roosevelt and the Munich crisis: Insights from prospect theory. *Political Psychology*, 13(2, Special Issue: Prospect Theory and Political Psychology), 205-235.
- Ferguson, C. (2002). Nuclear Posture Review. *The Nuclear Threat Initiative*. Retrieved from http://www.nti.org/e_research/e3_15a.html
- Freedman, L. (Ed.). (1998). *Strategic coercion: Concepts and cases*. Oxford: Oxford University Press.

- Friedman, T. L. (1994, September 4). A diplomatic question: Embargo or embrace? *The New York Times*. Retrieved from <http://www.nytimes.com/1994/09/04/weekinreview/the-world-a-diplomatic-question-embargo-or-embrace.html>
- Funabashi, Y. (2007). *The peninsula question: A chronicle of the second Korean nuclear crisis*. Washington D.C.: Brookings Institution Press.
- Gaddis, J. L. (1982). *Strategies of containment: A critical appraisal of postwar American national security policy*. Oxford: Oxford University Press.
- George, A. L. (1991). *Forceful persuasion: Coercive diplomacy as an alternative to war*. Washington D.C.: United States Institute of Peace Press.
- George, A.L. (1993). *Bridging the gap: Theory and practice in foreign policy*. Washington D.C.: United States Institute of Peace Press.
- George, A.L., Hall, D.K., & Simons, W.E. (1971). *The limits of coercive diplomacy: Laos, Cuba, Vietnam*. Boston: Little Brown.
- George, A. L., & Simons, W. E. (Eds.). (1994). *The limits of coercive diplomacy*. Boulder, Colorado: Westview Press.
- Geva, N., & Mintz, A. (Eds.). (1997). *Decision making in war and peace: The cognitive-rational debate*. Boulder, Colorado: Lynne Rienner Publishers.
- Gilinsky, V. (1997). *Nuclear blackmail: The 1994 U.S.-Democratic People's Republic of Korea Agreed Framework on North Korea's nuclear program*. Stanford, CA: Hoover Institution Press.
- Gordon, M. R. (1994, June 20). Back from Korea, Carter declares the crisis is over. *The New York Times*. Retrieved from <http://www.nytimes.com/1994/06/20/world/back-from-korea-carter-declares-the-crisis-is-over.html>
- Gordon, M. R. (2002, March 11). Nuclear arms: For deterrence or fighting? *The New York Times*. Retrieved from <http://www.nytimes.com/2002/03/11/world/nuclear-arms-for-deterrence-or-fighting.html>
- Government of the United States. (2002, December). *National strategy to combat weapons of mass destruction*. Retrieved from <http://www.state.gov/documents/organization/16092.pdf>
- Hanhimäki, J. (2004). *The flawed architect: Henry Kissinger and American foreign policy*. Oxford University Press.

- Hastie, R., & Dawes, R.M. (2001). *Rational choice in an uncertain world: The psychology of judgment and decision-making*. Thousand Oaks, CA: Sage Publications.
- Heo, U. (2008). The North Korean nuclear crisis: Motives, progress, and prospects. *Korea Observer*, 39(4), 487-506.
- Hermann, R. (1994). Coercive diplomacy and the crisis over Kuwait, 1990-1991. In A. L. George & W. E. Simons (Eds.). *The limits of coercive diplomacy* (pp. 229-266). Boulder, Colorado: Westview Press.
- International Atomic Energy Agency (IAEA). (n.d.) *IAEA safeguards overview: Comprehensive safeguards agreements and additional protocols*. Retrieved from http://www.iaea.org/Publications/Factsheets/English/sg_overview.html
- Jackson, D. R. (2007). *Jimmy Carter and the horn of Africa: Cold War policy in Ethiopia and Somalia*. Jefferson, NC: McFarland & Co.
- Jakobsen, P. V. (1998). *Western use of coercive diplomacy after the cold war: A challenge for theory and practice*. London: Macmillan.
- Jakobsen, P. V. (2007). *Coercive diplomacy*. In Collins, A (Ed.), *Contemporary security studies* (pp. 225-47). Oxford: Oxford University Press.
- Jentleson, B. W. (1994). The Reagan administration versus Nicaragua: The limits of "type c" coercive diplomacy. In A. L. George & W. E. Simons (Eds.). *The limits of coercive diplomacy* (pp. 175-200). Boulder, Colorado: Westview Press.
- Jentleson, B. W., & Whytock, C. A. (2006). Who "won" Libya? The force-diplomacy debate and its implications for theory and policy. *International security*, 30(3), 47-86.
- Jervis, R. (1992). Political implications of loss aversion. *Political Psychology*, 13(2, Special Issue: Prospect Theory and Political Psychology), 187-204.
- Joosten, J. Jr. (2000). Plowshares to swords: The North Korean agreed framework. *National Security Studies Quarterly*, 6(1), 43-66.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives*, 5(1), 193-206.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-291.

- Kahneman, D., & Tversky, A. (1982). The psychology of preferences. *Scientific American*, 246(1), 160-173.
- Kahneman, D., & Tversky, A. (Eds.). (2000). *Choices, values, and frames*. Cambridge: Cambridge University Press.
- Kelly, J. A. (2002, December 12). United States to North Korea: We Now Have a Pre-Condition. *Yale Global Online*. Retrieved from <http://yaleglobal.yale.edu/content/united-states-north-korea-we-now-have-pre-condition>
- Kelly, J. A. (2005, June 14). Mounting Tensions in Northeast Asia: a U.S. Perspective. *Global Communication Platform: Japanese Institute of Global Communications*. Retrieved from http://www.glocom.org/debates/20050614_kelly_mounting/index.html
- Korean Central Broadcasting Network (KCBN). (1993, March 12). Statement notes withdrawal. *Foreign Broadcasting Information Service, FBIS-EAS-93-047*.
- Korean Central News Agency (KCNA). (1993, March 12). KCNA reports statement. *Foreign Broadcasting Information Service, FBIS-EAS-93-047*.
- Korean Central News Agency (KCNA). (2002, October 22). *U.S. urged to drop strong-arm policy*. Retrieved from <http://www.kcna.co.jp/index-e.htm>
- Korean Central News Agency (KCNA). (2002, October 25). *Conclusion of non-aggression treaty between DPRK and U.S. called for*. Retrieved from <http://www.kcna.co.jp/index-e.htm>
- Korean Central News Agency (KCNA). (2002, October 31). *KCNA refutes U.S. claim for scrapping DPRK's "nuclear weapons program"*. Retrieved from <http://www.kcna.co.jp/index-e.htm>
- Korean Central News Agency (KCNA). (2002, November 1). *U.S. urged to accept DPRK's offer*. Retrieved from <http://www.kcna.co.jp/index-e.htm>
- Korean Central News Agency (KCNA). (2002, November 4). *U.S. frenzy diplomacy to pressurize DPRK under fire*. Retrieved from <http://www.kcna.co.jp/index-e.htm>
- Korean Central News Agency (KCNA). (2003, January 11). *Statement of DPRK government on its withdrawal from NPT*. Retrieved from <http://www.kcna.co.jp/index-e.htm>

- Korean Peninsula Energy Development Organization (KEDO). (2002, November 14). *Executive Board Meeting Concludes - November 14, 2002*. Retrieved from http://kedo.org/news_detail.asp?NewsID=23
- Lake, A. (1994, March/April). Confronting backlash states. *Foreign Affairs*, 73(2), 45-55.
- Lee, B. H. (2005). Irrational Mentality of the Kim Jong-il Regime. *Korea Focus*. Retrieved from http://koreafocus.or.kr/design1/layout/content_print.asp?group_id=124
- Levy, J. S. (1992a). An introduction to prospect theory. *Political Psychology*, 13(2, Special Issue: Prospect Theory and Political Psychology), 171-186.
- Levy, J. S. (1992b). Prospect theory and international relations: Theoretical applications and analytical problems. *Political Psychology*, 13(2, Special Issue: Prospect Theory and Political Psychology), 283-310.
- Levy, J. S. (1996). Loss aversion, framing, and bargaining: The implications of prospect theory for international conflict. *International Political Science Review / Revue Internationale De Science Politique*, 17(2, Crisis, Conflict and War. Crise, conflit et guerre), 179-195.
- Levy, J. S. (1997a). Prospect theory and the cognitive-rational debate. In N. Geva, & A. Mintz (Eds.), *Decision making on war and peace: The cognitive-rational debate* (pp. 33-50). Boulder, Colorado: Lynne Rienner Publishers.
- Levy, J. S. (1997b). Prospect theory, rational choice, and international relations. *International Studies Quarterly*, 41, 87-112.
- Litwak, R. S. (2000). *Rogue states and U.S. foreign policy: Containment after the Cold War*. Baltimore, Maryland: The Johns Hopkins University Press.
- Mack, A. (1993). The nuclear crisis on the Korean Peninsula. *Asian Survey*, 33(4), 339-59.
- Mansourov, A. (1995). The origins, evolution and current politics of the North Korean nuclear program. *Nonproliferation Review*, 2(3), 25-38.
- Mastny, V., Holtzmark, S. G., & Wenger, A. (Eds.) (2006). *War plans and alliances in the Cold War: Threat perceptions in the East and West*. New York: Routledge.

- McDermott, R. (1992). Prospect theory in international relations: The Iranian hostage rescue mission. *Political Psychology*, 13(2, Special Issue: Prospect Theory and Political Psychology), 237-263.
- McInerney, A. (1992). Prospect theory and Soviet policy towards Syria, 1966-7. *Political Psychology*, 13(2, Special Issue: Prospect Theory and Political Psychology), 265-322.
- Miller, J., & Sanger, D. E. (2002, March 20). U.S. to report North Korea is not meeting A-pact terms. *The New York Times*. Retrieved from <http://www.nytimes.com/2002/03/20/world/us-to-report-north-korea-is-not-meeting-a-pact-terms.html>
- Morgan, F. E. (2003). *Compellence and the strategic culture of imperial Japan: Implications for coercive diplomacy in the twenty-first century*. West Port, Connecticut: Praeger.
- Morrow, J. D. (1997). A rational choice approach to international conflict. In N. Geva & A. Mintz (Eds.), *Decision making on war and peace: The cognitive-rational debate* (pp. 11-32). Boulder, CO: Lynne Rienner Publishers.
- North Korea profile. (2003). *International Debates*, 1(3), 66.
- Nuclear non-proliferation treaty. (2003). *International Debates*, 1(3), 73.
- Oberdorfer, D. (1997). *Two Koreas*. Reading, Massachusetts: Addison-Wesley.
- Pak, G.Y. (2003). Is North Korea in violation of agreements to freeze its nuclear program? Con. *International Debates*, 1(3), 79-95.
- Payne, K. B. (1982). *Nuclear deterrence in U.S.-Soviet relations*. Boulder, CO: Westview Press.
- Pritchard, C. L. (2003, October 10). A Guarantee to bring Kim into line. *Financial Times*. Retrieved from http://www.brookings.edu/opinions/2003/1010northkorea_pritchard.aspx
- Reiss, M. (1995). *Bridled ambition: Why countries constrain their nuclear capabilities*. Washington D.C.: Woodrow Wilson Center Press.
- Roehrig, T. (2003). One rogue state crisis at a time!: The United States and North Korea's nuclear weapons program. *World Affairs*, 165(4), 155-78.
- Sagan, S. D. (1996/7). Why do states build nuclear weapons? Three models in search of a bomb. *International Security*, 21(3), 54-86.

- Sanger, D. E. (2002, November 24). In North Korea and Pakistan, deep roots of nuclear barter. *The New York Times*. Retrieved from <http://www.nytimes.com/2002/11/24/international/asia/24KORE.html>
- Schelling, T. C. (1966). *Arms and influence*. New Haven: Yale University Press.
- Schoff, J. L., Perry, C. M., & Davis, J. K. (2008). *Nuclear matters in North Korea: Building a multilateral response for future stability in Northeast Asia*. Dulles, Virginia: Potomac Books.
- Shafir, E. (1992). Prospect theory and political analysis: A psychological perspective. *Political Psychology*, 13(2, Special Issue: Prospect Theory and Political Psychology), 311-322.
- Snyder, S. (1999). *Negotiating on the edge: North Korean negotiating behaviour*. Washington D.C.: United States Institute of Peace Press.
- Stein, J. B., & Welch, D. A. (1997). Rational and psychological approaches to the study of international conflict: Comparative strengths and weaknesses. In N. Geva, & A. Mintz (Eds.), *Decision making on war and peace: The cognitive-rational debate* (pp. 51-80). Boulder, CO: Lynne Rienner Publishers.
- Towell, P. (1995, January 28). Senators grudgingly accept nuclear agreement. *Congressional Quarterly*, 294.
- Tversky, A., & Kahneman, D. (2000). Rational choice and the framing of decisions. In D. Kahneman & A. Tversky (Eds.), *Choices, values, and frames* (pp. 209-223). Cambridge: Cambridge University Press.
- U.S-North Korea agreed framework. (2003). *International Debates*, 1(3), 77.
- Von Neumann, J., & Morgenstern, O. (1944). *Theory of games and economic behaviour*. Princeton: Princeton University Press.
- Wit, J. S. (2000). Clinton and North Korea: Past, present and future. In D. Albright & K. O'Neill (Eds.), *Solving the North Korean nuclear puzzle*. Washington D.C.: Institute for Science and International Security Press.
- Wit, J. S. (2001). Leader of the pack. *Washington Quarterly*, 24(1), 77-92.
- Wit, J. S., Poneman, D. B., & Gallucci, R. L. (2004). *Going critical: The first North Korean nuclear crisis*. Washington D.C.: Brookings Institution Press.