

**REGIME SECURITY THEORY: WHY DO STATES WITH NO CLEAR STRATEGIC
SECURITY CONCERNS OBTAIN NUCLEAR WEAPONS?**

by

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Current realist explanations of why states decide to develop nuclear weapons cannot account for the behavior of states that lack a clear strategic threat. An alternative explanation is necessary to explain such behavior. I argue that domestic regimes in states with no clear strategic threat may develop nuclear weapons in order to ensure their survival. Such regimes are internationally isolated, under pressure from major powers in the international system and possess some preexisting nuclear capacity. Under these conditions, increasing domestic instability causes regimes to pursue a course of nuclear development. Nuclear weapons allow a regime to change the preferences of the great powers that would otherwise prefer to see the regime overthrown. If the regime possesses nuclear weapons, because of the costs and risks associated with those weapons, the great power will favor maintenance of the status quo and may even prop up a regime it intensely dislikes.

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CHAPTER I

INTRODUCTION

The Question

What causes states to acquire nuclear weapons? Despite the plethora of theories this question has produced, the dominant explanation for nuclear acquisition is the intuitive one – security. States seek a deterrent against a nuclear armed opponent. According to Waltz, nuclear weapons for the U.S. mean nuclear weapons for Russia. Further, “The Soviet Union having them was a spur for the Chinese Communists getting them. China’s having them was a spur for India, India was a spur for Pakistan, and so it goes. Now that’s not uniformly the pattern but it’s a very important part of [it].”¹ Great Britain and France fit into the chain of balancing in a similar way: Great Britain and France acquired nuclear weapons in response to the threat of the Soviet Union coupled with the lack of certainty about American security guarantees in Europe.² This “chain of balancing” hypothesis is by no measure unchallenged. It provides a strong logic for the dominance of strategic security

¹ Waltz 1981. There is some disparity in Chinese reasoning; Sagan cites balancing the US followed by balancing Russia when he lays out the same string that is described by Waltz above. Sagan 1996, 58. For the general “chain of balancing” logic see also, Shultz 1984.

² Sagan 1996, 58.

concerns in the nuclear decision making of states. It does not explain why states seek to acquire nuclear weapons in situations where there is not a strategic threat. This thesis seeks to answer the question of why some states with no clear strategic threat nevertheless obtain nuclear weapons.

The two cases of successful nuclear development which cannot be adequately explained by traditional threat hypotheses are North Korea and South Africa. Long before the completion of Pyongyang's nuclear program, shifts in international alignment and norms meant that the strategic threat against North Korea had evaporated, and North Korean artillery had established a reliable deterrent against any conventional threat. South Africa's non-aligned position during the Cold War, along with its overwhelming advantages in military strength compared to its neighbors, meant that it was never in real danger from nuclear weapons or conventional assault.

Even if the traditional security explanation sufficiently explained every other case of nuclear proliferation, a compatible alternate causal theory is necessary to explain proliferation for these two states in order for threat to be a satisfactory explanation of proliferation as a whole. While it is unlikely that the causal process is identical in these cases, it makes sense to compare these two non-standard states in search of similarities. This has not previously been done. When comparing North Korea and South Africa one striking similarity emerges. Scholars separately studying these states cite the security interests of the domestic regime as distinct from those of the state as a whole.³

³ Moore 1987; and Reiss 1995a.

Regime security as a variable appears underdeveloped in the existing literature. To date, it is addressed most thoroughly by Solingen, who describes the difference between regime security and state security as “the most important frontier in the study of nuclear choices.” Solingen argues that examining regime security is critical because treating the state as unitary undermines a successful study of a state’s nuclear cost benefit equation. However, Solingen goes on to test multiple conceptual approaches against a large number of cases rather than focusing on a regime security centered analysis.⁴

The Existing Literature

Existing nuclear proliferation literature arose in response to the reality of nuclear weapons and the possibility of additional states joining the existing nuclear club. The specific task of explaining why states with no clear strategic security concern develop nuclear weapons evolved from this body of literature. The existing nuclear proliferation literature is tackled from two angles: why do states get nuclear weapons, and why do states not get nuclear weapons. This chapter will briefly review theories and variables which attempt to answer both questions. The following chapter will focus on the major explanatory theories as to why states do acquire nuclear weapons.⁵

⁴ Solingen 2007.

⁵ The two subgroups of non-proliferation explanative theories which do not have an equivalent proliferation explanative theory are institution constraints and resource constraints, both of which have

Specific variables which explain the nuclear choices of states will be categorized under **security, domestic politics, prestige, and condition** variables. The variable list borrows explicitly from James Walsh, but modifies the categorization. First, because this paper deals with variables that affect a state's decisions to acquire nuclear weapons rather than their decisions to forego them, prestige variables are included. Second, the variables categorized as condition variables cannot be causes of proliferation, as they can be with non-proliferation, but they critically *affect* proliferation, and so they are listed and dealt with separately from potential independent variables. Third, because of the attention given to threat theories above, they will not be reviewed below. However, they will be addressed in detail in the following chapter.

Domestic Politics – Liberalism

Two variables that affect the chances of proliferation are level of democracy and level of integration into the international political economy. A high value for either of these factors is theorized to undermine the chances that a state will acquire

important implications for proliferation theories as condition variables. For a thorough theoretical division of non-proliferation variables see: Walsh 2001, 19-42. Walsh divides theories as to why states *do not* achieve nuclear weapons into 15 “testable hypothesis” They are, summarized; H1: lack of threat, H2: bipolarity, H3: security guarantees from great powers, H4: superpower pressure, H5: lack of funds, H6: lack of human resources/knowledge, H7: denial by suppliers, H8: norms against nuclear weapons, H9: democracy, H10: electoral politics, H11: liberalizing political economy, H12: restrictions in organizational politics, H13: membership in anti-proliferation regimes, H14: the prisoners dilemma of nuclear weapons can be solved by regimes, H15: pressure of international law.

nuclear weapons.⁶ A third variable, the effect of electoral politics, is theorized as potentially having either a positive or negative effect on the chances of proliferation.⁷

The final domestic politics theory falls into the institutionalist school, and specifically comes from bureaucratic politics theory.⁸ This theory argues that the particular interests of important subgroups within the domestic government of the state affect nuclear decision making. For example, the atomic energy branch of government may push for or against nuclear weapons based on whether they think it will garner them more funding or undermine their authority in favor of a military program.⁹

Prestige Variables

Prestige arguments suggest that states acquire nuclear weapons in order to enhance their own prestige. The two major subsets of prestige arguments are domestic level prestige theories and systemic level prestige theories. Domestic prestige arguments are similar to electoral politics arguments except that they are more general. These arguments hold that nuclear decisions reflect the goal of garnering or

⁶ Walsh 2001, 31-34. Also, for effects of democracy see Chafetz 1993, 133. For effects of economic liberalization see Solingen 1994, 324-333.

⁷ Reiss 1988, 117-119, 249-251; and Sagan 1996, 63-73.

⁸ Walsh 2001, 36-37; Allison 1971; Sagan 1996, 11; and Scheinman 1965.

⁹ Additional international integration variables of interest to non-proliferation scholars are membership in international regimes and the effects of international law. However, these variables specifically address why states may refrain from seeking nuclear weapons and thus have little to say in explaining why they would seek nuclear weapons. Meyer 1984, 102; Reiss 1988, 260-263; Sagan 1996, 80-82; and Walsh 2001, 39-41.

maintaining domestic support, whether from voters or other powerful interest groups.¹⁰

International prestige arguments, or systemic prestige arguments, follow two lines: they argue either that states seek nuclear weapons to increase their rank in power and position, regionally or globally, or to get attention and force interaction from more powerful states in the system.¹¹

Condition Variables

Conditional variables determine whether it is possible for a state to get nuclear weapons. No value of the condition variable provides an impetus to seek nuclear weapons, but certain values may be required to weaponize. It is necessary to look at condition variables for two reasons. First, while these are treated as condition, or scope, variables by regime security theory, they have been treated as independent variables when explaining why states *do not* develop nuclear weapons. Second, these variables do not always take a zero or one value, and may dissuade a state from acquiring nuclear weapons by either increasing the cost or decreasing the benefit without holding a value that is strictly prohibitive of development.

¹⁰ For examples of South African domestic prestige arguments see Moore 1987, 132. Sagan classifies the domestic symbolic power type of prestige argument as a normative argument; nuclear weapons produce an “important normative symbol of a states modernity and identity.” Sagan 1996, 55.

¹¹ For examples of South African systemic prestige arguments see Moore 1987, 129-132. The first line of argument, and the debate as to whether this is differentiable from security logic, is discussed in Sagan 1996, 76.

Condition variables include the technological and economic capacity to produce nuclear weapons, as well as access to external resources.¹² In order to have nuclear weapons capacity it must be true that a state can either produce those weapons domestically or buy them internationally. This basic requirement means that either both technological and economic capacity must be sufficient for the task of building a bomb, or there must be international access to ready-made bombs available, or both.

Regime Security Theory

South Africa and North Korea both developed indigenous nuclear capacity without a strategic nuclear threat.¹³ Why did these two states develop nuclear weapons? In the case literature for each individual state a specific observation emerges as to the state's behavior which deserves comparative attention. That is, the domestic regime of the state, but not the state itself, was under threat of internal destabilization exacerbated by the action or inaction of outside powers. The hypothesis proposed in this thesis is:

States that acquire nuclear weapons and do not face a strategic nuclear threat do so in order to increase the security of the state's domestic regime. Nuclear weapons deter intervention targeted at fomenting domestic unrest. Nuclear weapons also coerce intervention intended to alleviate existent domestic unrest. Rather than

¹² For technical and resource capacity see Meyer 1984, 68; and Walsh 2001. For access to external resources see Walsh 2001; and Snyder 1985, 183-212.

¹³ The timing of U.S. nuclear threats against North Korea precludes this explanation. See Chapter IV.

detering attack, these weapons make it irrational for other states to support the overthrow of the regime.

This hypothesis assumes that actors are rational in the most basic sense: they maximize their utility and value survival.¹⁴ The key element of the regime security hypothesis, as it differs from traditional security explanations, is that the actor concerned is the *domestic regime* and *not the state*. I suspect that this explanation has not been well developed within the existing security literature because it tends to treat states as unitary actors, thus ignoring domestic politics. The regime security hypothesis applies under the condition that the regime has the *capacity* to acquire nuclear weapons. In an environment where a regime has the requisite capacity, the independent variables which combine to cause a regime to acquire nuclear weapons are *international isolation* and *domestic instability*.

The acquisition of nuclear weapons allows isolated regimes to survive domestically unstable situations by changing the interests of the great powers in the international system. If an isolated regime does not have nuclear weapons, it may be in the interest of the great powers for it to fall; they may even aid in undermining such a regime. If the same regime has nuclear weapons, the great powers' interest is to maintain stability and the status quo. The great powers may even aid the isolated regime because of the high potential cost of an unstable nuclear state. The following

¹⁴ This assumption is actually less stringent than the realist assumption that states are rational actors because the unit of analysis is smaller. The regimes interests are not argued to be analogous to the states interests.

sections will provide further explanation of each of the variables of regime security theory as laid out above.

Capacity

The capacity variable is introduced under resource condition variables above, and encompasses domestic technological and economic capacity, as well as access to international resources. In order to achieve the reality of a nuclear arsenal, a state must be able to either produce weapons domestically or buy them internationally. The weaknesses of capacity as an explanatory independent variable are dealt with in Chapter II. In general, the conclusion is that capacity is not a good explanatory variable because all states could technically come up with the capital to buy a nuclear weapons program.¹⁵

Despite its lack of strength as an independent variable, capacity is an important *condition* variable. It is true that some states that have the capacity to build nuclear weapons have not done so. Nevertheless, the technology for, or cost of, nuclear weapons is difficult for smaller developing countries to come up with, *especially* over a short period of time.

¹⁵ Walsh 2001,85.

Perception of Isolation

The domestic regime must feel extremely isolated. A regime which perceives itself as isolated will feel threatened by pressure for domestic reform from *at least* one major pole and be viewed as an illegitimate regime by the world at large. The regime must be concerned that one or more of the major powers is considering interference with its domestic affairs.¹⁶ This is a realistic fear when world opinion reduces the chances of repercussions to actions by the larger power.

Domestic Instability

The domestic regime must fear current or future high levels of domestic instability. In order to understand the causal chain that leads from isolation and domestic instability to nuclear weapons it is necessary to lay out the interests of the actors. The regime's interest is to remain in power. It is the interest of the great power(s) and other states which view the regime as illegitimate that the regime be overthrown. Because domestic instability threatens to destabilize the regime, it worries that the great power(s) may decide to exacerbate the instability in order to overthrow the regime. By acquiring nuclear weapons it is possible for a regime to change the preferences of the great power(s) and other relevant states.

¹⁶ While the process of acquiring nuclear weapons temporarily increases the chance of international interference, the successful acquisition of nuclear weapons should dissuade great powers entirely from the same interference.

Once a state has nuclear weapons it is no longer in the interest of the great power(s) for the regime to be destabilized. Because survival is the priority of the regime, a regime in a stable environment will not use nuclear weapons offensively, as that would ensure retaliation and the end of its existence. Instability in the country greatly increases the chance that nuclear weapons will be used in two ways. First, in the chaos of regime change, unstable elements or small groups could get control of the weapons. Second, the regime itself may launch them out of desperation if it feels it has nothing left to lose.

Once a regime has nuclear weapons it is in the interest of the great power(s) to maintain the status quo in order to prevent an unstable environment in which there is an increased likelihood of nuclear weapons being used on either the domestic population or a neighbor. *Thus, growing isolation and instability causes regimes to acquire nuclear weapons in order to change the incentives of other powers in the system.*

Competing Explanations

The theories in the existing literature that are strongly critiqued or informed by a study of regime security are those based on national security, international trade and international prestige. However, as my work suggests that regime security is sufficient to explain the nuclear acquisition of both South Africa and North Korea, that

conclusion suggests that competing theories not directly engaged are unnecessary to explain those cases. They may contain variables that matter to a degree or in some cases; however, those variables are not determinate in the cases studied.

Security

The two variables which realists have argued cause states to acquire nuclear weapons are nuclear armed adversaries and overwhelming conventional security threats.¹⁷ The cases chosen in this study cannot be well explained by the argument that states develop nuclear weapons in response to a strategic threat. By a detailed review of the circumstances of each case in the following chapters, it will become clear that strategic nuclear security cannot explain proliferation in these cases because such a threat did not exist during the time period that would be necessary to explain development. Additionally, the case studies will reveal that there is no overwhelming conventional security threat which can explain nuclear weapons acquisition in either case.

The study *does not* imply that strategic nuclear and conventional security theory cannot explain other cases; only that they do not apply to all cases of nuclear weapons acquisition. This is still an important implication because threat hypotheses have been previously generalized to explain all cases of proliferation. The implications of this study *do* provide evidence for a critique of structural realism and its assumption

¹⁷ Walsh 2001, 21-24; Frankel 1993, 46; and Mearsheimer 1998.

that it is unnecessary to look inside the black box. Factors other than the position of units within the system are necessary to explain the South African and North Korean cases.

International Economics

The isolation variable suggests that the argument that the degree of international economic integration has an impact on decisions carries weight. The autarkic nature of the Kim regime minimizes the negative international trade externalities of nuclear development. In the South African case, nuclear development did not occur until after a drastic drop in international integration. This outcome is also consistent with the international economic integration argument.¹⁸

Systemic Prestige Arguments

While rejecting the idea that states acquire nuclear weapons for prestige as an end in itself, my findings support the argument that states acquire nuclear weapons to affect the type of attention and treatment they receive from other powers in the system. However, this is a security argument. The unit of analysis is the regime and not the state, but the interests of the regime are security and survival. Analysis of the cases suggests that international prestige arguments correctly identify the efforts of non-

¹⁸ Walsh 2001, 31-34; and Solingen 1994, 324-333.

standard proliferators, but misunderstand the logic behind those decisions. The logic is survival, further impetus is unnecessary.

An Introduction to the Methodology

As noted, South Africa and North Korea are the two cases of nuclear acquisition which are cannot be well explained by the strategic nuclear security threat, or chain of balancing, logic. This thesis employs comparative case study methodology in order to engage in theory generation based on these two cases. Because of the failure of existing theories to adequately explain the cases concerned, case comparison is used in order to build and propose a theory which provides an alternate causal hypothesis in order to explain the behavior of these two states.

Case Choices and Omissions

South Africa and North Korea were chosen as cases because regime security theory attempts to explain cases where the traditional security explanation fails, cases which must have a separate explanation. The theory does not argue against the chain of balancing logic put forward by realists, as that theory does appear to explain the rise of most nuclear armed powers. South Africa and North Korea are the cases for which the strongest arguments can be made against the traditional security logic, and thus they are cases which still require explanation.

It is certainly possible to argue that France and Great Britain do not perfectly fit the chain of balancing logic; however, it is very possible that these states developed nuclear capacity as a response to weakening American security guarantees in the continued face of the Soviet threat.¹⁹ It is true that Argentina and Brazil have been argued to possess alternative motivations for nuclear acquisition; nevertheless, their behavior falls directly into the predictions of threat based theories. They entered the nuclear age as dyadic competitors. It is not clear that Israel developed nuclear weapons in response to overwhelming conventional security threat or in response to nuclear ambitions from Pakistan, but nor is it clear that the security explanation falls through.²⁰

In the cases of South Africa and North Korea, conventional security logic fails. After analyzing the evidence of the individual cases we can say with a high degree of confidence that the traditional security explanations do not account for the development of nuclear weapons by either South Africa or North Korea. It is because of the confidence that can be built in the failure of the traditional threat explanations that these cases are interesting. These cases indicate that there *must* be another path states can take to obtain nuclear weapons. The cases were chosen in order to analyze similarities between these two non-conformers in an attempt to ascertain the cause or causes of their nuclear weapons capacity.

¹⁹ Sagan 1996, 58.

²⁰ Maoz 2003, 46.

The weakness of this case selection is that South Africa and North Korea are weak cases for the traditional security argument and strong cases for the regime security argument. Thus, discounting a strategic nuclear security explanation does not strongly undermine that argument and supporting a regime security explanation does not provide high confidence in the theory's applicability to other cases explained by the strategic nuclear security argument. Regime security theory does not deal with the same body of cases as the traditional security argument, rather *with those cases that a strategic nuclear security hypothesis cannot sufficiently explain*. As such regime security theory does not attempt to undermine the traditional security explanation of nuclear proliferation as it applies to states which faced a continuous nuclear threat during their period of nuclear weapons development. The opposite is true; this study begins by accepting as accurate the strategic nuclear threat theory for most cases.

By the same logic, South Africa and North Korea are neither easy nor hard cases for regime security theory. They are, rather, two cases which did not fit well into previous models and, as such, were studied in order to generate new ideas. Because South Africa and North Korea were chosen in order to produce a theory, they are not legitimate means of testing regime security theory. This thesis does do significant theory testing, as it applies existing general theories of proliferation to the cases studied. With regard to the regime security hypothesis presented, this thesis is explicitly an exercise in theory building and not theory testing. Further testing of regime security theory would require its application to additional cases.

An Overview of the Rest of the Work

This work is laid out in three major sections. Chapter II expands on the discussion of the existing literature on proliferation, provides additional discussion of the methodology, and lays out regime security theory in greater detail. Chapters III and IV provide details of cases and analysis. Chapter III focuses on South Africa. Chapter IV focuses on North Korea. Chapter V provides conclusions and observations, as well as suggestions for future research and cases to consider.

CHAPTER II

THEORY AND METHODOLOGY

Regime Security Theory

Regime security theory attempts to explain why states acquire nuclear weapons while not facing a strategic nuclear threat. Regime security theory posits an answer to the question of why decision makers in states not facing a strategic nuclear threat feel it is in their interest to develop nuclear weapons. The answer put forward is that decision makers do not consider nuclear weapons to be in the interest of the state, but rather, think that nuclear weapons increase the survivability of the state's domestic regime.

The logic of regime security theory is that a domestic regime, under threat of internal destabilization exacerbated by the action or inaction of outside powers, may use nuclear weapons not to deter attack, but to change the preferences of the great powers such that it is in the interest of those powers that the regime survives. This change in preferences is made possible by the risks associated with political instability and government overthrow in a country that possesses nuclear weapons.

Nuclear weapons add two major risks for a great power if it supports instability or overthrow of a regime. First, nuclear weapons introduce the loose nukes issue. Non-

state actors may take advantage of the power vacuum to secure the state's nuclear arsenal for their own purposes. Stable governments closely and jealously guard their nuclear arsenal. As stability decreases, and government resources become more and more strained, the safeguards against theft degrade. Second, as a domestic regime approaches overthrow there is a chance that the regime will adopt a "use it or lose it" mentality. This might mean using its arsenal for nuclear blackmail by threatening to fire against neighbors unless aid is forthcoming, or launching against rebellious population centers within the state in an attempt to crush domestic resistance.²¹ Conversely, because survival is the priority of the regime, a regime in a stable environment will not use nuclear weapons offensively, as that would ensure retaliation and the end of its existence.

Regime security theory assumes that decision makers within the regimes of potential nuclear states understand the effect nuclear weapons have on the priorities of the great powers, and, with that understanding, seek to ensure regime survival by acquiring a nuclear arsenal. Because of risks introduced above, once a state has nuclear weapons, it is no longer in the interest of the great power(s) for the regime within that state to be destabilized. A regime with conventional arms must cope with domestic instability and the strong possibility of outside interference. A regime with nuclear arms must deal with domestic instability, but outside interference is no longer

²¹ There are historical examples of dictators using weapons of mass destruction against their own population. For example, Saddam Hussein is accused of using chemical weapons against the Kurds within Iraq. Pelletiere 2003. While there has not yet been a case of a state launching a nuclear weapon at its population, the logic remains the same - it is possible that dictators may use weapons of mass destruction against their own population to eliminate domestic dissent in times of crisis.

likely. Instead, other powers will condemn the regime verbally while simultaneously propping them up financially.

The above logic leads to the following hypothesis: **States that acquire nuclear weapons and do not face a strategic nuclear threat do so in order to increase the security of the state's domestic regime.**

The key difference between regime security theory and traditional security explanations is that the actor concerned is the *domestic regime* and *not* the *state*. I suspect that a regime security explanation has not been well developed within the security literature thus far because realist theory typically treats states as unitary actors, thus ignoring domestic politics, while liberal and institutionalist theories, which deal with conditions inside the state, tend not to identify international security threats as explanatory variables.²² Regime security theory makes the assumption that actors are rational in the most basic sense: they maximize their utility and value survival. Regime security theory does not assume the state is a unitary actor. It does, however, assume that the regime is a unitary actor, acting inside and outside the state to maximize its own utility.

Regime security theory, at its heart, is an attempt to explain why regimes develop nuclear weapons in the absence of a threat to state security. The theory identifies what variables must be present in order for this to occur. The theory must

²² Krasner 1992.

assume that states which have the requisite condition and independent variables will successfully deduce the rationale by which nuclear weapons increase the chances of regime survival. The argument that regimes, under certain conditions, should seek nuclear weapons in order to maximize their utility can be made deductively. The observation that regimes, under such conditions, understand and act upon this cannot. Solid support of the logic of regime security theory would require direct evidence of the internal logic of these isolated regimes, evidence which is very difficult to substantiate. So, the best evidence available to support the theory is that states *behave* in the manner the theory predicts they should if they operate under the logic of regime security theory. Such evidence should not only consist of the development of weapons and the presence of the requisite conditions, but also the timing of these events. This means that evidence of regime security theory will almost always be indirect. This tends to be true of any theory which attempts to explain the internal rationale of secretive regimes.²³

²³ There is some direct evidence of members of the Apartheid government using regime security theory logic; however, such internal evidence is still highly suspect to bias and revisionism due to the nature of the regime. See Chapter III.

Variables

Regime security theory argues that, in order for it to be in the interest of a regime to seek nuclear weapons absent a strategic nuclear threat, several variables must exist. The regime must possess the *capacity* to acquire nuclear weapons. The regime must perceive itself to be *isolated* from the international community. The regime must fear for its survival from within, either through *domestic instability* or a significant perceived future increase in *domestic instability*. The following sections will explain each of these variables in detail to expand on the concepts laid out in Chapter I.

Capacity

The capacity variable, introduced in Chapter I as a resource condition variable, encompasses the domestic technological and economic capacity of a state, as well as its access to international resources. Capacity has been disproved as an independent variable. The capacity argument for nuclear acquisition is that nuclear technology is inevitable, the benefits outweigh the costs, and as states acquire the capacity to produce nuclear weapons, they will do so. This argument, which comes from technological inevitablism, was popular in the 1950s and 1960s when few states were sufficiently advanced to produce nuclear arsenals, and the ones that had the technology had done so. The arsenals of Great Britain and France provided some

support for the argument, as well as the growing nuclear aspirations of other industrialized countries. However, in the 1970s, as states realized that the original projections of the economic benefits of nuclear programs had been drastically overestimated, and states which reached the point of technological capacity chose not to pursue the bomb because of economic and/or political costs, the variable lost most of its weight. Today, the simplest, most damning condemnation of capacity as an explanatory variable for proliferation is the number of western European countries that long ago exceeded the capacity to produce nuclear weapons and have chosen to refrain from the bomb.²⁴

While it is an unconvincing independent variable, capacity is an important *condition* variable. For many countries, especially small, poor, less developed countries, the cost of the technology and resources required for nuclear weapons is prohibitive, *especially* over a short period of time. For many developing countries the price tag on a nuclear weapons program means sacrificing the lion's share of the state budget for a decade or more. Therefore, small states which desire an indigenous nuclear capacity must be willing to wait ten years for it to materialize unless they can purchase weapons ready-made internationally.²⁵ Technological capacity operates similarly. While it is possible for states to develop domestic technologies, it is

²⁴ Walsh 2001, 85; and Davis 1993, 106.

²⁵ It is unlikely that an extremely isolated state will be able to purchase nuclear weapons from another state. This chance is dependent on the degree of regime isolation, the breadth of their isolation, the number of nuclear actors in the international community at the time and the number of those actors which have ratified the non-proliferation treaty to the point that they have safeguards in place to prevent proliferation.

extremely costly and time consuming to do so.²⁶ These factors suggest that while capacity does not ultimately restrict a state from achieving nuclear capability, certain values of the capacity variable define the timetable for development.

It is likely that all states, regardless of how poor, can come up with the money to produce nuclear weapons. However, low domestic capacity can be prohibitive of nuclear development for two reasons. First, unstable states may worry that putting so much of the economy into weapons development will undermine their ability to control an already deteriorating domestic situation for an additional decade. Second, regimes in states with low economic capacity are particularly susceptible to the concern that over the long course of development their activities will attract unwanted attention, spurring the interference they are trying to prevent. Therefore, a state with a preexisting infrastructure advantage or a stronger economy is able to pursue nuclear weapons, whereas a regime starting from scratch, with a poor economy, is unlikely to do the same.

Operationalizing the capacity variable is deceptively complicated. As described above, categorizing capacity as a 1 or a 0 would be too simplistic. Also, such a measurement would be useless because every state would score a 1. Instead, capacity should be measured in two parts in an attempt to determine if it is feasible for a state to develop nuclear weapons.

First, can the state easily develop nuclear weapons? Universal measurements, such as percent of GDP, are not very useful because the cost of nuclear weapons is

²⁶ While the technology to build a simple gun-type device is not particularly difficult, the technological demands of producing sufficient enriched uranium 235 domestically are much higher.

dependent upon the level of technology in the state and in the international system. Instead, this question must be answered on a case by case basis, contingent upon the time period and development level of the country. If the answer to this question is yes, the state possesses the capacity to develop nuclear weapons. Often the answer is no, it is not easy for states to develop nuclear technology.

Once it has been established that a state cannot easily produce nuclear weapons, the next question is: does a state have a preexisting nuclear infrastructure or resource base? If the answer is no, then it is not feasible for the state to develop nuclear weapons. If the answer is yes then it is feasible for the state to develop nuclear weapons. While starting from scratch requires an extended period of vulnerability, hardship and scrutiny, a state which possesses significant pre-existing nuclear infrastructure or nuclear natural resources is more capable of developing nuclear weapons because these variables decrease the costs and timeline for weapons development.

Isolation

Once the regime of a state possesses the capacity to embark on a path to the bomb, it is necessary to explain the timing of nuclear development. The independent variables which explain the timing of weapons development are domestic instability and a perception of isolation in a capable regime. Defined below are statements which should be true if the regime perceives itself to be isolated internationally.

- The regime is under pressure for domestic reform from *at least one* major pole.
- The regime perceives that one or more major powers are considering interference with its domestic affairs.
- General world opinion views the regime as illegitimate, corroborated by specific instances of international condemnation, for example, near-unanimous votes critical of the regime in international organizations.
- The regime does not have reliable support from any pole.

If all the statements above are true, the regime is both significantly isolated and under threat of international interference enabled by that isolation. There have been few regimes which met all of these criteria. This was especially true during the Cold War. As the U.S. and the U.S.S.R. jockeyed for influence they were willing to extend their patronage to many unpalatable governments. The number of regimes which potentially have met the criteria increased following the Cold War, but not drastically. Most regimes continued to court and be courted by patron states eager to extend their influence, and often their control of raw material sources. It is rare to find a state and regime so undesirable in resources and politics that no powerful state feels it is in their interest to act as their advocate.²⁷

²⁷ Solingen posits an alternative path to isolation, suggesting it comes from nationalistic economic policies within the regime rather than political pressure from outside. While such a path would provide the same reduced costs of nuclear development, because a purposefully autocratic regime would suffer less from sanctions, it would not necessarily be identified with diplomatic isolation. Solingen 2007.

Domestic Instability

Domestic instability can take the form of either growing domestic instability or predicted future high levels of domestic instability. In order to understand why domestic instability causes states to acquire the bomb it is necessary to lay out the interests and preferences of the concerned actors – the state's domestic regime and the great power(s) the regime believes threatens its survival. The interest of the state's domestic regime is survival. The preferences of such regimes are universal in that their preference ordering for policies will always maximize their chances of survival. The interests of the great power(s) may be defined by the stability of the international system, influence in the international system, domestic political gain, normative views of leaders or a number of other things.²⁸ Regardless, the interests of the great power(s) (and often the rest of the international system), produce a preference ordering which runs counter to the existence of the domestic regime in question. Therefore, the preference of the great power(s) towards the regime is overthrow, regardless of the interest which spawned it.

Increased domestic instability, or perceived increases in future domestic instability, puts the regime in a precarious position. The regime fears, often accurately, that the great power(s) may decide to take advantage of the instability and support the overthrow of the regime, either by purposely exacerbating the issues causing the

²⁸ I suspect great power interests are most often defined pragmatically, either by systemic concerns or domestic popularity concerns. However, why the great powers care is an argument in itself, and no part of regime security theory is contingent on what led them to believe that it is in their interest to oppose the regime.

instability (an example could be trade sanctions), or by funding and/or supporting domestic resistance within the state. The regime's policy preference shifts to acquiring the bomb as a result of the regime's fear of outside interference aimed at its overthrow. This policy is meant to ensure its core interest, regime survival. A functioning nuclear arsenal serves to ensure regime survival by changing the preferences of the great power(s) and other relevant states.

The downside of a policy in which a regime develops nuclear weapons to ensure its security is that an incomplete nuclear program increases the incentives for the great powers to remove the regime without providing additional security. The policy remains rational for two reasons. First, as heavily evidenced in both cases studied, regimes spend a large amount of resources trying to obscure their nuclear weapons program as long as possible, thus minimizing the window of increased threat from the great powers. Second, if a regime believes that it is unlikely that it will be able to hide its nuclear weapons program until fruition, it is often still rational to take the risk that the cost of increased short term pressure is worth the payoff of long term regime survival.

Domestic instability is a difficult variable to quantify. Some states obviously meet the criteria. Extended periods of open rebellion within the country, as in South Africa, and millions of starvation deaths, as in North Korea, clearly substantiate domestic instability, but there are many unclear cases. Do I.R.A. activities mean that

Great Britain was unstable? There is no easy way to operationalize domestic instability as 1-0 without overlooking marginal cases.

A state is potentially unstable if it possesses: a domestic resistance group powerful enough to have attacked the central government, a failed or failing state infrastructure (to the point that it cannot support the existing population), or an attempted or recently successful military coup. There are a number of variables that affect the probability that a potentially unstable state is or will become so unstable that the domestic regime is in real danger of collapse. In their 2003 article, “Ethnicity, Insurgency, and Civil War”, Fearon and Laitin describe and test a list of variables that are theorized to increase the chances of civil war in a state. Many of the variables they described which correlate well with civil war can be used to further delineate grey area cases between unstable and not. In states in which one of the above events occurred, the value of these variables provides additional context for measuring domestic instability on a case by case basis.²⁹

- Low GDP per capita increases the chances of significant instability in two ways. First, GDP per capita acts as a proxy for relative strength or weakness of insurgents compared to the state. Insurgents will have less strength relative to the state the wealthier the state. Second, recruitment of young males into guerrilla groups is easier when the economic alternatives are worse. In states so poor that recruits have a higher

²⁹ Fearon 2003.

standard of living than they would otherwise guerilla groups are at a significant advantage in acquiring support.³⁰

- High disparity in income can produce the second effect of low GDP per capita even in states with high GDP per capita that have an accompanying race or class based income disparity. For example, the Apartheid regime was not poor, however blacks in South Africa had disproportionately low GDP per capita, and so the second affect of GDP per capita stilled existed because, within the possible guerrilla recruitment demographic, GDP per capita was very low.
- A large rural population makes centralization of authority difficult for the government, as well as increases the low income recruitment pool.³¹
- Foreign aid for insurgents significantly increases the chances of their success. While foreign support of domestic dissent is discussed under the isolation variable, it is worthwhile noting that direct economic support of domestic dissension has a compounding effect, increasing the level of threat produced by an insurgent group dramatically.³²
- A number of geographic factors can exacerbate domestic instability. Difficult terrain, (generally mountains or jungles) providing safe haven for guerrillas increases the effectiveness of guerrilla groups. Other types of terrain that make it easier for guerrillas to maintain control

³⁰ Ibid., 80.

³¹ Ibid., 81.

³² Ibid., 81.

over an area or remain hidden from authorities include large, sparsely populated areas and a physical division between the center of resistance and the country's center, such as a body of water or another state.³³

To summarize, a state can be coded as unstable if it has powerful domestic resistance groups, a failed state, measured by starvation, or a recent coup. However, the level of the exacerbating variables helps determine the severity of the instability on a case by case basis. States which have one of the key events but low values for the associated variables are strictly unstable but may have a very low degree of domestic instability. This helps answer the question posed earlier: does the existence and activities of the IRA mean that Great Britain was unstable? Technically, but the high GDP per capita of Great Britain at the time greatly decreases the likelihood of significant instability for multiple reasons and the low values of the exacerbating variables in general correctly suggest that a strong British government able to contain the problem and eventually negotiate a peace.

A prediction which follows naturally from regime security theory is that only illegitimate governments go nuclear without a strategic nuclear security threat. Illegitimacy is not laid out as a central hypothesis because, especially at the margins, it is a subjective label, and because the causal process which directly explains nuclear development is based on instability and isolation in a capable state. This makes regime illegitimacy *at best* an ultimate cause, not a proximate one. So, while it is almost

³³ Ibid., 81.

certainly the case that illegitimate regimes are more likely than others to push for nuclear weapons outside of the requirements of strategic nuclear security illegitimacy as a variable is of little use to regime security theory.

Alternative Theories

This section will explain and critique the major existing theories of nuclear proliferation as defined in Chapter I. It will attempt to provide support for the argument that none of the current lines of reasoning satisfactorily explain existing cases of non-standard proliferation. The following alternative theories of nuclear proliferation will be addressed: strategic nuclear threat, overwhelming conventional threat, democracy, international economics, domestic and bureaucratic politics, international prestige and domestic prestige.

Security Variables

There are two main security explanations. First, arguably the most cited, supported and intuitive explanation of nuclear acquisition, is strategic nuclear threat. Second is acquisition as a response to an overwhelming conventional threat. This section will discuss strategic nuclear threat and then briefly discuss overwhelming conventional threat and additional relevant security variables.

The strategic nuclear threat explanation is that states acquire nuclear arsenals as a response to an emerging or present strategic nuclear threat from another state. As Mearsheimer puts it, “no state is likely to attack the homeland or vital interests of a nuclear-armed state for fear that such a move might trigger a horrific nuclear response. Not surprisingly, therefore, states are often tempted to acquire nuclear weapons to enhance their security.”³⁴ The logic of strategic nuclear threat predicts two processes by which nuclear proliferation occurs. First, a state may go nuclear in response to a strategic rival obtaining nuclear capacity. This, in turn, causes the state’s other strategic rivals to go nuclear. This process provides an explanation for most of the current nuclear powers. The United States got the bomb, which forced the Soviet Union to get the bomb, which forced Britain, France and China to get the bomb. Chinese nuclear capability forced India to get the bomb, which forced Pakistan to get the bomb, which forced Israel had to get the bomb. The second process suggested by the logic of strategic nuclear threat is the development of dyadic nuclear powers, Argentina and Brazil for example.³⁵

Strategic nuclear threat has significant empirical support. Many of the cases above appear clear cut. However, there are objections to the strength of the argument

³⁴ Mearsheimer 1998.

³⁵ Walsh 2001, 21-24; Frankel 1993, 46; and Mearsheimer 1998. Mearsheimer specifically deals with the implications of realism to the logic of nuclear proliferation in the above New York Times article. However, those implications are built out of ideas more thoroughly discussed in Mearsheimer 2001. The idea that states balance strategic threat as opposed to possessing a tendency to balance strategic threat identifies this interpretation of strategic nuclear threat as coming out of offensive or neo-realism, rather than defensive realism as explained by Waltz 1979. The opposite end of the this spectrum, as argued by Paul, is that states prudently calculate the level of threat in their region and will develop nuclear weapons in response to threat only if the benefits to security outweigh the costs of seeming more threatening to neighbors. Paul 2000.

in a number of the cases it attempts to explain. It has been argued that Great Britain and France did not need to obtain nuclear weapons as a response to the Soviet threat because they were protected by the nuclear umbrella of the United States. This criticism is not particularly damning because during the period of British and French acquisition, early in the nuclear age, those states doubted the effectiveness of the United States nuclear umbrella in deterring an attack outside of U.S. territory. The concern of the British and French was that the Soviets would not be convinced that the U.S. would escalate all the way to a nuclear exchange in response to a Soviet strike on Western Europe. The strongest evidence of this uncertainty, stronger than any policy statement, was the existence of an American tripwire in West Germany. The tripwire was intended to deter Soviet aggression by signaling that an attack on Western Europe meant a direct attack on the United States military. This signal would not have been needed had western governments been convinced that the Soviet's believed that an attack on Europe would precipitate a full scale American response.

Another hard case for strategic nuclear threat is Israel. If Israel developed nuclear weapons out of strategic nuclear concerns, it needs to have either been in response to Pakistan's development or to the progressing development of Iran or Iraq. While Pakistan has historically been hostile towards Israel, the claim that Israel developed nuclear weapons as a direct response to Pakistani nuclear ambitions is not particularly strong. And Iran and Iraq have not, to date, successfully tested any nuclear weapons, though that may have been affected by Israel's proactive air attack on the

Osirak reactor.³⁶ Perhaps the stronger strategic nuclear threat argument concerning Israel is that it developed nuclear weapons in an intra-regional competition with Iran and Iraq, only it was successful where its competitors were not. However, the size of Israel and its history of regional conflict may provide a stronger case for the bomb as a means of deterring overwhelming conventional force.

The two most difficult cases for strategic nuclear threat are South Africa and North Korea. South Africa cannot realistically be argued to have developed weapons in response to a strategic nuclear threat, and, while North Korea did feel pressure from the U.S., the timeline of plausible U.S. nuclear threats against North Korea does not come close to matching the timeline for North Korean nuclear developments.

Strategic nuclear threat correctly sits atop the pile of explanations for proliferation. The theory has a convincing causal mechanism, significant empirical support in a number of cases, and is theoretically unambiguous and clear cut. The weakness of strategic nuclear threat as an explanation for proliferation is that it does not provide a good explanation for all cases. This noticeable weakness provoked the line of inquiry that lead to alternative security explanations – what causes states to get the bomb in cases which cannot be explained by strategic nuclear threat?

The second major security explanation, which evolves out of the preceding question, is that states may develop nuclear weapons in response to an overwhelming conventional military threat. The logic of the argument is that, if a state has a nuclear

³⁶ Raas 2007.

deterrent that it can use in response to attack on its territory, it will be safe from its rivals regardless of any disparity in conventional forces. There are two reasons why governments are argued to pursue nuclear weapons along these lines. The first reason is that when a state is vastly outclassed by its rivals and has significant cause to fear attack it will resort to nuclear weapons development. The second is that a state may develop nuclear weapons as an alternative to spending the money on a comparable conventional force because it is a more cost effective way to achieve a solid deterrent against attack. This second reason has fallen out of favor since it became clear that early estimates of the cost of a domestic nuclear program, either peaceful or military, had been drastically underestimated. The overwhelming conventional threat explanation does not attempt to explain all cases of nuclear proliferation. Rather, it is most often addressed within individual cases which are poorly explained by strategic nuclear threat.³⁷

On their own, the strategic nuclear threat hypothesis and the overwhelming conventional threat hypothesis both over predict the number of instances in which proliferation will occur. The factors considered by both security hypotheses that mitigate over prediction are security guarantees from great powers, bipolarity, and superpower pressure on potential proliferators.³⁸ Great powers dissuade proliferators by acting as patrons, by providing security guarantees to states under their influence.

³⁷ Overwhelming conventional threat will be addressed specifically in the case study chapters.

³⁸ These variables stem from the structural realist school of thought. They generally arise as explanations as to why early predictions of rapid proliferation fell short. Walsh 2001, 21-24; Frankel 1993, 46; and Mearsheimer 1998.

The nuclear arsenal of the power acts as a proxy arsenal for the smaller state once the great power has provided that state with a guarantee.

Bipolarity increases the number of states affected by great power patronage. In bipolarity, as the two poles compete for influence, states tend to fall under the influence of one pole and thus the security umbrella of that pole. In addition, because of the competition for influence, states concerned about security from an unaligned neighbor can successfully appeal to either pole for patronage. The problem with attributing the discrepancy between predicted and actual levels of proliferation to bipolarity is that doing so also means that the declining influence of the superpowers following the cold war should have encouraged proliferation. For the most part, this did not occur.³⁹ That the decline of bi-polarity failed to result in rapid proliferation is a problem which is indicative of a weakness in the general realist perspective on proliferation. Realist theories have consistently over predicted proliferation and then fallen back to new caveats when the predictions did not pan out.

Superpower pressure on potential proliferators can also dissuade states from going nuclear through a number of mechanisms including sanctions, refusal of aid, threats of alienation, or the removal of security guarantees. This is especially effective when that pressure comes from multiple poles.

As a whole, the tendency for realist scholars to justify over-prediction of proliferation with past tense caveats is problematic. However, while these conditions that supposedly dissuade states from proliferation are not entirely convincing, they do

³⁹ Davis 1993, 81.

not significantly impair the broader security reasoning. It seems clear that many states seek a nuclear arsenal to enhance their security against potential rivals. With clarification and expansion, the security centric explanations of proliferation provide the most promising building blocks for a general logic of proliferation.

Democracy, International Economics, Domestic and Bureaucratic Politics

This category includes the major variables addressed by the liberal and institutional schools of thought. The three variables rooted in liberalism that affect the propensity of a state to acquire nuclear weapons are its level of democracy, level of international economic integration and the effect of electoral politics on nuclear decisions.⁴⁰ The major institutionalist argument which delineates a potential cause of nuclear acquisition comes from bureaucratic politics theory. The argument is that particular interests of important subgroups within the government have determinate impact over nuclear decision making.

Many other institutionalist arguments exist in the broader proliferation literature. Generally though, they are concerned with how international institutions prevent, constrain or impair the spread of nuclear weapons. These arguments are relevant in the debate on why states seek to acquire nuclear weapons as they affect the

⁴⁰ Walsh 2001, 31-34; for effects of democracy see: Chafetz 1993, 133; and for effects of economic liberalization see Solingen 1994, 324-325, 332-333. For domestic politics see Reiss 1988, 117-119, 249-251; and Sagan 1996, 63-73.

cost-benefit analysis of states. However, they are not alternative theories of the *causes of nuclear proliferation*, and as such will not be addressed individually here.

The application of the democracy variable to nuclear proliferation produces two main claims. Democratic peace theory argues that democracies do not fight each other because they share a common identity and set of norms. Democratic peace theory, as applied to nuclear proliferation, suggests that democracies would tend to be less likely to go nuclear because they do not face strategic nuclear threats from other democracies, which significantly reduces the number of states in the system they could be in conflict with.⁴¹ A second claim is that democratic transition in a state can reverse nuclear aspirations by undercutting the domestic position of factions that favored weapons.⁴²

Currently, the first claim, that democracies are less likely to develop nuclear weapons, is not directly applicable to or testable by regime security theory. The group of states which score well on freedom and democracy variables, and thus are likely not to proliferate, do not tend to overlap with states which are alienated from the international system and have potentially unstable domestic regimes. The complementary claim implied by democratic peace theory may apply. It is almost certainly the case that rogue states are more likely to develop nuclear weapons. Their lack of investment in the international system means that they pay lower isolation

⁴¹ The implications of applying democratic peace logic to the issue of nuclear proliferation are discussed in both Walsh 2001, 31; and Solingen 2007, 16-17.

⁴² Walsh 2001, 31.

costs for obtaining nuclear weapons. While this logic is discussed more extensively elsewhere it is worth noting here that it is intuitively consistent with democratic peace ideas.⁴³

The second claim, that democratic transition in a state can reverse nuclear policy, seems to apply in one of the cases studied, South Africa, though not for the reasons suggested by proponents. Democratic transition in South Africa appears to have reversed the state's nuclear course because those in power before the transition did not trust the incoming democratically elected government with nuclear weapons.⁴⁴

The second liberal – institutional variable is the degree of global economic integration. The argument that the degree of economic integration may affect the propensity of a state to acquire nuclear weapons has joint components on the systemic and domestic level. On the systemic level, increased economic integration increases the costs for states which acquire nuclear weapons because nuclear weapons tend to produce economic sanctions; these are more damaging the more integrated the state. On the domestic level, increased economic integration produces influential players on the domestic political scene (companies, lobbyists and any others dependent on increased trade) who tend to be against the open development of nuclear weapons as it runs counter to their interests.⁴⁵

⁴³ Ibid.

⁴⁴ See Chapter 3.

⁴⁵ Walsh 2001, 33; and Solingen 1994, 317.

The degree-of-integration argument, like many of the liberal and institutionalist arguments, is about mechanisms that prevent or impair proliferation. However, the complementary argument, that a low level of integration reduces the costs of a nuclear weapons program, is useful. Globally, the level of international economic integration is such that isolation from the world market is now the exception rather than the rule. Thus, the rare regimes which are isolated from the world market can be considered significantly more likely to acquire nuclear weapons because they do not suffer the accompanied costs of isolation. This prediction both makes sense and is consistent with regime security theory. Regime security theory argues that political isolation lowers the cost of the nuclear option through several mechanisms, one of which is that isolated states have low initial levels of economic integration, with little cost associated with losing existing trade options to sanctions. The problem with using international economic integration alone to explain nuclear decision making is that it identifies a cost which must be taken into a state's decision making process, but not an impetus to develop nuclear weapons.⁴⁶

The third argument that comes from liberalism and institutionalism, though it is often difficult to distinguish from the domestic prestige argument, is the effect of domestic electoral politics on a state's decision to acquire nuclear weapons. The

⁴⁶ There are multiple perspectives as to the cause of high levels of international isolation, whether as international responses to unrelated domestic policies or nationalist policies eschewing the benefits of integration, as argued by Solingen 2007, 4.

argument is that politicians will reject or embrace nuclear weapons dependent upon what is electorally advantageous at the time.⁴⁷

This argument has particularly unreliable data. The data that would support the theory would be a high correlation between announcements of nuclear intentions as a major campaign issue and the modification of nuclear behavior after a change in government. In such a correlation it is difficult to separate the signal from the noise. When campaign promises do not produce change it is not an exceptional occurrence. Politicians often make campaign promises that have little or no effect on their policy agenda. Because of this it is difficult to deduce meaning, or signal, when campaign rhetoric happens to align with actions. In short, political speeches in general provide data of very poor quality.

Additionally, it is difficult for the electoral politics argument to reconcile the issue of concealed nuclear weapons programs in democratic states. Finally, the electoral politics argument cannot explain proliferation in states that are not democracies. As South Africa is a democracy that concealed its nuclear program and North Korea is not a democracy, the electoral politics argument does not provide a strong counter to either of the regime security theory test cases.

The fourth argument is institutional. The bureaucratic politics model argues that factions within a government have their own bureaucratic incentives, and that those incentives will push factions towards or away from nuclear weapons. For

⁴⁷ Walsh 2001, 32.

example, the civilian atomic energy agency in a government may push for or against a nuclear weapons program dependent on whether the agency believes it will result in increased influence and funding or undermine the agency's authority in favor of a program run by the military. The Bureaucratic Politics model effectively argues that governments are sectioned off into small groups of rational actors which produce irrational state policies as an unintended consequence of maximizing their individual utility.

Evidentiary support for the Bureaucratic Politics models tends to consist of demonstrating that groups within a particular government advocated a policy in their own interests, other groups advocated against the policy because it ran counter to their interests and the policy outcome was determined by which group(s) ended up having critical influence over the decision making process. The shortcoming with this model is that for any given state it will almost always be true that, a) some sections of the government want a policy and some do not, and b) one side prevails. To support the model, it is only necessary to construct a counterfactual such that, had the interests of actors not aligned in a certain way, another decision would have been reached. In most cases this means making a subjective determination about which interests and influences were critical in the policy outcome of the state. This process is unsatisfying because it is hard to imagine a situation that would disprove such a model save a case where all parties had interests in one outcome and another was reached.

The bureaucratic politics model could apply to both of the cases studied. However, both because of the level of opacity of the regimes and the subjective

importance which can be assigned to various interest groups in order to support or undermine the model, the model will not be tested against the North Korean or South African case.

Generally, the democratic and institutional arguments provide interesting insights into the process of nuclear proliferation, but they do so by identifying trends and tendencies rather than laying out causal paths. This is not the case in the Bureaucratic Politics Model. However, the model is both overly general and difficult to disprove. Another limitation of the democratic and institutionalist arguments, and the primary impediment to testing them against the cases in this study, is that they often rely on states being democracies or having transparent government functions, conditions which are not generally met with by states which are at risk or have undertaken non-standard proliferation activities.

Prestige

The prestige argument is that, given certain nuclear norms, developing nuclear weapons is politically advantageous, either internationally or domestically. The international prestige argument is that states acquire nuclear weapons in order to increase or maintain their international prestige, standing among nations, or regional influence. The domestic prestige argument is that politicians within a state pursue nuclear weapons in order to enhance their domestic prestige and thereby enhance their hold on power. This section will discuss the normative nature of the prestige

argument, the specifics of the international arguments, and critiques that apply to both international and domestic prestige arguments.

The prestige argument has been erroneously criticized by those arguing that “nuclear weapons are only prestigious if people believe so.”⁴⁸ This critique dismisses the prestige argument on the grounds that the argument is dependent on a norm (nuclear weapons are prestigious). However, the prestige argument specifically identifies the norm as the independent variable and argues that changes in the norm affect the dependent variable. To critique the prestige argument for being dependant on a norm it would be necessary to argue that the prestige argument made unrealistic assumptions about the norm, such as assuming that the norm is a constant when it could realistically change. Simply identifying that an argument is dependent on the existence of a particular norm is not grounds for dismissal.

Versions of the prestige argument which do not explicitly identify the norm of nuclear prestige as the independent variable instead make the implicit assumption that international or domestic nuclear norms which identify nuclear weapons as prestigious exist. Therefore, a better critique of prestige theory is that the degree to which nuclear weapons are prestigious is not set and defined, but based on international norms; thus it is by no means clear that the gains in international prestige garnered from nuclear weapons outweigh the costs in prestige or diplomatic standing in a given setting. This becomes increasingly problematic the lower the relative status of a state in the international community and the more vulnerable the state is to sanction.

⁴⁸ Davis 1993, 198.

The international prestige argument is that states want nuclear weapons to increase or retain their grandeur and stature in the international community. This argument is originally derived from the experiences of Great Britain and France, who, declining in relative world influence following World War II, are argued to have sought nuclear weapons in order to maintain the level of world status they perceived themselves to deserve.⁴⁹ Some versions of the argument claim that states use prestige to establish themselves as a regional power and make a bid for regional hegemony. An example of this comes from the South East Asian experience, where the argument is made that India sought nuclear weapons both to remain a regional power in Asia and to assert itself as the dominant power in South Asia, and Pakistan sought nuclear weapons in order to assert itself as a peer to India in South Asia.

There are two significant methodological issues common to prestige arguments. First, desire for prestige does not vary among states any more than desire for survival varies among states, as prestige provides additional security and thus enhances the chances of state survival. Prestige arguments must be based on what variables cause some prestige seeking states to acquire nuclear weapons and not others.⁵⁰ Second, while the prestige argument is general and should be universally applicable, it is often applied only to cases not explained by security. This means that, in a broad sense (though this argument is not made explicit), many authors promoting

⁴⁹ Davis 1993, 218.

⁵⁰ A response to the critique that prestige is a constant is that desire for prestige is opportunistic based on setting. This response is unsatisfying because the independent variable is then setting. *Ibid.*, 107.

prestige arguments do not claim that prestige is an alternative causal path to nuclear weapons, but rather that prestige is always around and explains whatever cases don't have sufficient evidence to be explained by security concerns.⁵¹

Empirically, it is difficult to provide unambiguous evidence supporting prestige arguments. Much of the evidence comes from the political rhetoric of state officials who have a target audience of citizens or other states. Such evidence is unreliable because governments seeking the bomb should be expected to maximize political gain, *regardless* of their core impetus for development. More convincing evidence must be from within the internal dialogue of governments. When such evidence exists, it is difficult to access. This data collection issue is not unique to prestige, many arguments are forced to rely on indirect or circumstantial evidence and find a way to compensate for the issue. However, the problem is acute for prestige arguments because of the degree to which many case analyses in support of prestige arguments tend to be based on public rhetoric.⁵²

From a theoretical perspective, the prestige argument has problems with explanatory power. In cases where governments do not consider it advantageous to announce their nuclear capacity prestige arguments have a very difficult time explaining why states retain a hidden nuclear weapons program after it has succeeded. If states sought nuclear weapons for prestige we should observe them advertising their accomplishment.

⁵¹ Ibid., 198.

⁵² Ibid., 201.

An additional theoretical issue is that prestige arguments have a tendency to morph into arguments about security. Distinct prestige arguments define prestige as providing or enhancing the chances of achieving or maintaining a particular place within the system. Less distinct prestige hypotheses argue that states can affect the type of attention and treatment they receive from other powers via the development of a nuclear bomb. However, this line of logic, where the perception of other powers is changed in a way that makes the state a less appealing target, is not significantly distinct from security arguments. Where a prestige hypothesis argues that security is enhanced by the general alteration of the perception of potential adversaries, a security hypothesis argues that security is enhanced by developing a sufficient deterrent. Both claim that nuclear weapons enhance security by changing the cost-benefit analysis of potential rivals. While they may explain the exact mechanism differently, it is not clear that this distinction is significant; it does not affect the potential policy or path of the state. Perhaps more importantly, almost no evidence could substantially undermine one line of reasoning while supporting the other. For these reasons, such indistinct prestige arguments seem to add little to existing security explanations.

On the whole, prestige appears a dated argument. In the 1950s and 1960s it provided a viable alternative to security explanations as the western European powers, clearly concerned with preventing their fall from importance on the international stage, were among the first to push for nuclear weapons. However, not only have their not been good cases for prestige since then, but the effectiveness of such a strategy is

made questionable by the postwar relative decline in international prestige of nuclear Britain and France compared to non-nuclear Germany and Japan.⁵³

Methodology

The spark of regime security theory was a specific question – why did North Korea develop nuclear weapons? While it is certainly possible to make the traditional proliferation arguments regarding North Korea, none stands out as a good explanation of the behavior of the Kim regime. A strong explanation of the North Korean nuclear program requires looking at similarly puzzling cases and addressing the limitations imposed by a low number of cases. In order to satisfy these criteria regime security theory was derived using a modified comparative case study approach. Generating a research question entailed:

- Determining a general question that reflects the research objective;
- Looking for outlier cases with similar deviations from the norm;
- Asking the general question of *each case* under study
- Generating a hypothesis consistent with the data from both cases;
- Employing variables that provide policymakers some leverage in order to enable them to *influence* outcomes;⁵⁴ and
- Describing the conditions under which the theory can be disproved.

⁵³ Ibid., 218.

⁵⁴ This methodology borrows from George and Bennett's structured and focused comparison. George 2005, 69.

The case which appears most similar to North Korea, and thereby provides a strong candidate to investigate for the purposes of theory generation, is South Africa. Like North Korea, South Africa developed a nuclear arsenal without an obvious security threat. Both South Africa and North Korea had significant preexisting nuclear infrastructure before they began to work towards weapons. Both countries expressed fear of interference by great powers. Both countries, during the course of their nuclear development, were ruled by domestic regimes which faced international isolation and condemnation. Both countries also underwent a significant period of domestic unrest. Like North Korea, South Africa is not explained well by any existing theory of nuclear proliferation. Regime security theory was generated as a potential explanation of the behavior of both of these anomalies based on a detailed study of available information on both cases and comparison of that information.

CHAPTER III

SOUTH AFRICA

Apartheid was officially ushered in with the election of the National Party in 1948, though the racial laws and constitution which define the regime had already been in place for some time.⁵⁵ The Apartheid regime was one of the most criticized and isolated regimes the world has ever known. I argue in this chapter that it was this isolation combined with domestically inspired and internationally exacerbated regime instability that led the Apartheid government to embrace the nuclear option.

The first section provides a brief chronology of South African domestic and foreign political issues from the rise to the fall of the Apartheid government -1948 to 1993. The second section of the chapter provides a chronology of nuclear decision making and development in South Africa. The third section presents the theoretical arguments discussed in previous chapters and tests of how well those arguments apply to the South African case. Specifically, the arguments dealt with are strategic nuclear security, conventional security, regime security, prestige and international economics. It ends with the conclusion that the South African case provides fairly strong support for regime security theory. Finally, the fourth section of the chapter compares the

⁵⁵ Moore 1987, 46.

timing of the South African decision to renounce their nuclear weapons capacity with the proposed theories and logic.

A Brief Chronology of Foreign and Domestic Relations

A Litany of Domestic Woes

The Apartheid government came to power in 1948 with the election of the Afrikaner-dominated National Party. In 1955 the African National Congress (ANC), which would quickly become the major domestic political opponent of and resistance to the Apartheid regime, spelled out the provisions of the Freedom Charter, with universal suffrage and a unitary, non-racial South African state as its goal.⁵⁶

On March 21, 1960 during a protest of the “pass laws,” between 67 and 69 blacks were killed in what became known as the Sharpeville Massacre. This event set the tone of the tense domestic atmosphere of Apartheid South Africa. The pass laws restricted black movement in the white areas of South Africa. For the white South African community Sharpeville served to raise the fear of black urban violence, as well as reminding the white South Africans of their minority status. Following Sharpeville, the Apartheid regime banned both the ANC and the Pan Africanist Congress of South Africa (PAC) from operating as political parties. The ban backfired. The ANC, with legitimate political activity ruled out, turned to violence.

⁵⁶ The incident is also referred to as the Sharpeville Tragedy. Ibid., 46-50.

Umkhonto we Sizwe (Spear of the Nation), the military wing of the ANC, began attacking police stations and sabotaging military targets following its 1961 founding.⁵⁷

The South African economy struggled in the 1970s due to the Apartheid regime's growing international isolation. However, the economic downturn was mitigated by the high price of gold, of which South Africa is the largest producer in the world market. Racial tensions in South Africa hit a new high during the Soweto riots of June 16, 1976, in which between 176 and 600 blacks were killed, most of them schoolchildren.⁵⁸

ANC resistance against the Apartheid regime continued into the 1980s, and broad level anti-Apartheid demonstrations continued in the mid 1980s, with attacks on police, and even on black South Africans seen as collaborators with the regime. Domestic instability caused investors to become increasingly worried. Foreign capital flight ensued, causing the collapse of the rand. Political discontent against Apartheid hit the South African economy with a 1-2 punch. South Africa was unable to repay its short term loans because of the collapse of the rand, and pressure from within the United States caused U.S. banks to refuse to renew those failing loans. This crisis

⁵⁷ Reiss 1988, 174; and Moore 1987, 50. The PAC was similar to the ANC, but with exclusively black membership. Over the following years it played a substantially smaller role than the ANC. Much of the subsequent information in the South Africa timeline comes from the case studies written by Reiss and Moore. This information is supplemented by several less thorough cases studies providing information that does not directly overlap with Reiss or Moore, and is also supplemented by an update by Reiss, written after South Africa renounced its nuclear weapons.

⁵⁸ Moore 1987, 65.

prompted Pretoria to suspend payment on foreign loans and impose government controls on the foreign exchange market.⁵⁹

The Deteriorating International Relations of South Africa

There is unanimous consensus among those writing on the situation that the racial policies of the Apartheid regime were the primary cause of South Africa's isolation from the rest of the world. J.D.L. Moore goes so far as to describe South Africa as a "pariah state," defying "a post-war global consensus that finds racism abhorrent and seeks to promote decolonization worldwide." Moore describes international reaction to such states, and South Africa specifically, as a "united and overwhelming attack from non-aligned and socialist countries in international forums such as the UN."⁶⁰

In 1987, Moore writes, "South Africa faces a combination of internal and international opposition aimed at her isolation and the eventual overthrow of the government." The push towards isolation by both widespread public opinion and civil rights activists supports these claims. There is a wealth of specific evidence of sanctions against South Africa beginning in the early 1960s. Two examples which

⁵⁹ Ibid., 52.

⁶⁰ Snyder 1985, 156; and Moore, 1987, 46-48.

show substantial opposition to South African policies are the oil and arms embargos against South Africa.⁶¹

A microcosm of broader South African isolation, the oil embargo against South Africa, began in 1973 with the original participants being the Arab states at the behest of the Organization of African Unity (OAU). Britain and other states followed suit, and, critically, the embargo was joined in 1979 by Iran following the Islamic revolution. Before the revolution, South Africa got 90% of its oil from the Shah, whereas after the revolution South Africa was forced to get oil at increased cost through spot market purchases, swap arrangements and loopholes. Tellingly, South African production of oil from coal and stockpiling of oil in abandoned mine shafts are indications that it expected and prepared for increased isolation during the 1980s.⁶²

Early in the 1980s, the Apartheid government prepared for a siege. Pretoria was not alone in this. The regime's siege mentality was widely shared by the Afrikaner electorate. South Africa's cumulative setbacks in international relations spurred talk of "fortress South Africa" as early as 1980, with South Africa viewing herself as a "solitary actor against the outside world." The country's fears were not unfounded. By 1981 South Africa had formal diplomatic ties with only 15 countries.⁶³

⁶¹ Moore 1987, 50-52.

⁶² *Ibid.*, 50-65.

⁶³ Reiss 1988, 178. Additional evidence for South African knowledge and fear of isolation can be found in Reiss 1988, pages 178 and 179; and Moore 1987, 66.

South Africa's Nuclear Policies: A Timeline for Nuclear Decisions

This section outlines South Africa's nuclear energy and weapons programs, and where possible, delineates the range of time in which the series of critical decisions culminated in the construction of nuclear weapons. Much of the timing of actions on nuclear issues corresponds to events in other policy areas. Analysis of this correlation will be kept to a minimum in this section and addressed later.

South Africa's nuclear industry got a very early start. In the late 1940s, South Africa began extraction of uranium from gold for export to the United States and Great Britain. At that time it was estimated that South Africa held 25% of the non-communist world's uranium reserves.⁶⁴ The South African Atomic Energy Board (AEB) was established in 1949, and in the beginning worked closely with its U.S. and U.K. counterparts.

During the early nuclear period, South Africa participated as a responsible member of the Western nuclear infrastructure. The first South African uranium processing facility was opened in 1952, primarily funded by Great Britain and the United States. In 1957, the United States and South Africa signed a twenty-year agreement under Eisenhower's Atoms for Peace program. The agreement with the U.S. allowed South Africa to purchase the U.S. designed Safari I, its first research reactor, as well as low enriched uranium (LEU) to fuel the reactor. The same agreement allowed South African nuclear scientists and technicians to train in the

⁶⁴ Snyder 1985, 148; and Moore 1987, 82. As seen above, the 25% estimate was later revised downward to about 13% of easily extractable reserves.

U.S., gave South Africa the means to begin its own nuclear research, and made the Apartheid regime a charter member of the International Atomic Energy Agency (IAEA). During this period, South Africa was considered a leading member of the IAEA. However, the regime was interested exclusively in the technical aspects of the IAEA's work and ignored the ideological and political goals of the other members.⁶⁵

As the 1960s progressed, South Africa focused more on the development of an indigenous nuclear capacity. In 1965, the Safari I research reactor went critical. While the reactor operated under IAEA safeguards, those safeguards primarily existed to prohibit the removal of spent fuel and other byproducts. The safeguards did not prevent Safari I from being used for experiments designed to develop a nuclear weapons capability.

When the Safari II reactor went critical in 1967, unlike Safari I, it was not subject to IAEA safeguards. Safari II was a heavy water moderated reactor, so it possessed the potential to produce plutonium, the removal of which would not be monitored. However, because of the limited capacity of Safari II, both in power output and plutonium production, the international community considered it not to be a significant risk from a proliferation viewpoint. The Safari II reactor was online for three years before being dismantled in 1970. According to the AEB, budget constraints forced the organization to choose between investing capital in the reactor or on a pilot uranium enrichment facility.⁶⁶

⁶⁵ Snyder 1985, 148-149; and Moore 1987, 82-107.

⁶⁶ Snyder 1985, 149; and Moore 1987, 83-84.

In July 1970, Prime Minister Vorster announced the indigenous development of a unique and economically efficient means of commercial uranium enrichment, as well as plans for the Valindaba pilot uranium enrichment plant.⁶⁷ At the time of the announcement, Vorster claimed the purpose of the enrichment plant was to make light enriched uranium (LEU) for energy purposes. During the mid-60s many countries presented plans for large nuclear power programs before later realizing they had underestimated the costs and overestimated the profits.⁶⁸

Suspicion that the Apartheid government was not being completely forthcoming came with the announcement that the Valindaba plant was not subject to IEAE safeguards, with the South African explanation being that they were worried that international monitors would expose their new, secret enrichment process. While this rationale was consistent with the economic basis for the program which had been presented to the international community, it was received dubiously because there were doubts about how original or indigenous the South African enrichment technique was.⁶⁹

⁶⁷ Snyder 1985, 150; and Moore 1987, 84-89. Also from Moore: The name, Valindaba, translated from a local African language means "We do not talk about this at all." The original/alternate name for the Safari II reactor, Pelindaba, adjacent to the new enrichment plant, means "We don't talk about this anymore."

⁶⁸ Moore 1987, 95.

⁶⁹ In 1975, at the European Nuclear Conference in Paris, it became evident that the South African process was a modification of the West German Becker jet-nozzle process, with the South African innovation being a helicon cascade arrangement needed to compensate for the low "cut" used by South Africa. The South African process produced a smaller quantity of more highly enriched uranium. This was a suspicious modification because it suggested that South Africa was prioritizing higher enrichment

This second phase of South African nuclear development, beginning in the 1970s looked more suspicious and less peaceful. In 1972, the ANC obtained and released a document published by the AEB assessing the seismic effect of a 10-kiloton nuclear explosion in the border areas, and what effect the explosion might have on the white population. Additionally, it was later revealed that the 1972 and 1973 annual reports of the AEB contained information on the board's investigations into peaceful nuclear explosions. Unannounced to the international community at the time, in 1974 the AEC informed Prime Minister Vorster that it could build a nuclear device. Vorster authorized development of the device, at the time still described as a "peaceful nuclear explosive." Construction began at the Kalahari test site.⁷⁰

In 1975, the pilot enrichment plant at Valindaba came online, but at low capacity. The pilot plant didn't hit full capacity until March 1977. Also in 1975, Abraham Roux, head of the AEB, announced plans to build a large-scale enrichment plant with the stated purpose of producing more LEU for export. This was an attempt to move South Africa up a step on the production chain.⁷¹

In 1977, South Africa entered a more confrontational phase in its nuclear development. In June of that year, increased tensions over the racial policies of the Apartheid regime resulted in South Africa's removal from the IAEA board of governors. Two months later, on August 6, 1977 the Soviet Union claimed that South

level, which makes more sense if you are trying to achieve HEU than if you are trying to achieve LEU. For more on the specifics of the South African process see, *Ibid.*, 85-88, 169-171.

⁷⁰ Moore 1987, 114; and Reiss 1995b, 9.

⁷¹ Snyder 1985, 150; and Moore 1987, 90.

Africa was preparing for a nuclear test at the Kalahari site. Senior U.S. intelligence officials, having taken their own pictures of the site, were convinced of the Soviet claim. South Africa failed to offer a convincing alternative explanation for the Kalahari site. Though unconfirmed at the time, the Kalahari site had been preparing for a nuclear test and the attention from the big powers “put the entire testing program on ice.”⁷²

In January 1978, the pilot enrichment plant produced a small quantity of highly enriched uranium (HEU), with production continuing throughout the year. That year South African leaders publicly opted for a smaller plant than the 1975 proposal outlined by Roux. The factors which affected the decision to scale down the enrichment plant were the doubling of the projected cost of the plant to over \$2 billion, the Carter administration’s 1977 decision to suspend long term contracts to supply LEU for the two reactors under construction in Cape Town, and the U.S. Nuclear Non-Proliferation Act, which formalized the ban on selling fuel to states which were not signatories of the Nuclear Non-Proliferation Treaty (NPT).⁷³

According to the South African account, it was in 1977 that Vorster convened senior officials to discuss the future of South Africa’s nuclear program. This information came to light in 1993 as South Africa announced the destruction of its weapons stockpile. In April 1978, Vorster formally approved his officials’

⁷² Snyder 1985, 154; Moore 1987, 106-111; Reiss, 1995b.

⁷³ Reiss 1995b, 8; and Snyder 1985, 150.

recommendation. Later that year, in October of 1978, the newly elected Prime Minister P.W. Botha, moving forward with the broader plan endorsed by Vorster, appointed an action committee to recommend future plans for producing nuclear devices. The committee delivered its recommendation, proposing seven nuclear weapons in July of 1979.⁷⁴

In September of 1979 the “double-flash” over the South Atlantic was theorized to be an atmospheric nuclear test. There was high level debate about whether it was a natural event or a nuclear detonation. At the time, South Africa was the primary suspect, followed by Israel. As of 1995, the unofficial widespread view in the U.S. government was that it was most likely that Israel tested a low yield warhead. This view does not appear to have changed since.⁷⁵

According to the South African government’s 1993 revelations, South Africa’s first workable gun-type device was fitted with not-quite-weapons-grade HEU in November 1979, precluding its culpability for the September 1979 double flash.⁷⁶ It was not until 1981 that South Africa publicly announced its success in producing “small quantities” of uranium-235 enriched to 45%. This report was contradicted by South Africa’s 1993 account, as 45% enriched uranium is nowhere near enriched

⁷⁴ Reiss 1995a, 9.

⁷⁵ For the specifics of the early debate see Snyder 1985, 148,154-157; and Moore 1987, 116-117. For later revelations by the South African government see Reiss 1995, 11.

⁷⁶ After the device was assembled to ensure everything fit properly, it was disassembled into halves, and two sections were stored separately at high security installations. It is worth noting that this process was repeated for all South African bombs. A note on the devices themselves: In order to insure effectiveness without testing, the South African devices were packed with about twice the amount of HEU typically used in a gun-type nuclear weapon. Reiss 1995, 8-11.

enough for weapons productions, with the standard percent enrichment to qualify at 90%.⁷⁷

The 1980s saw a decline in public debate over the South African nuclear situation. By this period, the state had developed a minimal deterrent and was content to sit on it. Koeberg 1 came online in 1984, producing power for the Cape Town region. This is significant because the Koeberg project, delayed repeatedly, was the first nuclear power plant to produce significant power for public consumption in South Africa.⁷⁸

June 1988 saw the last test preparations conducted by the Apartheid regime. President Botha ordered test preparations again at the Kalahari site. Unlike 1977, these preparations were not publicized by the Soviet Union or the United States because of the delicate state of negotiations over the Namibian situation at the time. Undertaken almost a decade after South Africa achieved the bomb, the test preparations were perceived by the United States as a transparent signal by the South African regime to take the Namibia negotiations seriously, and were almost certainly a direct response to the bellicose language of Castro during the incident.⁷⁹

In September, 1989 President de Klerk was briefed on the current status of South Africa's nuclear program, after which he directed an "Experts Committee" to

⁷⁷ Snyder 1985, 151.

⁷⁸ Moore 1987, 97.

⁷⁹ Reiss 1995a, 14.

evaluate the pros and cons of the existing program. In February of the following year de Klerk commissioned a study on the best way to destroy the existing nuclear arsenal. In July, he settled for a plan of gradual destruction of South Africa's seven nuclear devices. The weapons dismantlement was completed one year later, and the vast majority of the technical documents were destroyed. That same month, July of 1991, South Africa at last signed the NPT. In September 1991 South Africa signed a safeguards agreement with the IAEA and authorized inspections for "go anywhere, anytime."⁸⁰

There are four conclusions that can be drawn from the timetable of the South African nuclear program. First, even with an active nuclear program, it took South Africa almost a decade to build an actual nuclear weapon. Plans for the Valindaba plant, the most likely source of the HEU for South African weapons, were announced in 1970, and yet it was not until the end of 1979 that South Africa was able to produce a rudimentary nuclear device. The earliest available evidence suggesting that South Africa was seriously considering developing nuclear explosives came in 1972, seven years before successfully producing a weapon. It is likely that had the Valindaba plant not already been in the works this time lag would have been even longer. This timeline demonstrates that implementation of nuclear decisions is far from immediate. Even with sufficient nuclear technology it took South Africa almost a decade to produce enough HEU for a bomb.

⁸⁰ Ibid., 17-19.

Second, there is a range of time between 1970 and 1977 during which critical South African decisions on the building of a nuclear weapon likely occurred. South Africa began production of the infrastructure that would be required for nuclear weapons production in 1970. The major indication that 1970 may have been the decision point is the refusal of South Africa to allow foreign observers into the Valindaba site with the excuse that they might steal “unique” South African technologies. However, it seems more probable that Pretoria was maneuvering to keep its nuclear options open than that it had actually made the decision to develop nuclear weapons in 1970. The 1977 endpoint to the range exists because 1977 is when construction of the Kalahari test site began. By August 1977 the Apartheid government had clearly decided it was in its best interest to construct a nuclear weapon, and was gearing up to undertake a test as soon as enough HEU was available.

Third, the most likely final decision point to build nuclear weapons was 1977. The above analysis suggests 1977 as the decision point because it is the same year that South Africa was removed from the IAEA, the year of Vorster’s conference on the future of South Africa’s nuclear program, and the same year it began construction of the Kalahari test site. It also occurred during a period of dramatic increase in internal and external pressure on the Apartheid regime. Clearly, this decision point does not encompass the entire development process; South Africa had been considering nuclear weapons for some time beforehand.

The final conclusion that can be pulled from the timing of the South African case is that the timetable for nuclear weapons development is heavily dependent upon

the existing nuclear infrastructure. The likely 1977 decision point shows that, while it may take a decade to move from generic nuclear technology to a weapon, with an operating, un-safeguarded uranium enrichment facility, the timetable to build a bomb is limited only by the productive capacity of that facility, in this case about 2 years.

Analysis of the South African Case

This section will test the arguments explained in Chapter II against the observations of the South African case. Analysis of this case can be summarized in three main points. One, the traditional security arguments cannot explain the acquisition of nuclear weapons by South Africa. Two, detailed analysis of the South African case strongly supports regime security theory. Three, neither the international economics argument nor the systemic prestige argument adequately explains the South African case. Support for these conclusions will be developed in three subsections.

These will:

- Test the strategic nuclear threat argument and the conventional security threat argument;
- Review the evidence of the South African case as it applies to each part of the regime security argument; and
- Apply the international economic and international prestige arguments to the South African case.

Traditional Threat Arguments

The Strategic Nuclear Threat against South Africa

South Africa was under substantial pressure from the Soviet Union from the early sixties to the early eighties. During this period a number of factors may be argued to have led Pretoria to think they were under threat of nuclear attack from the Soviet Union. First, the Soviets had committed resources to southern Africa, and over the course of this twenty year period, an increasing number of African states were both friendly to the Eastern bloc and reliant on the U.S.S.R. as a patron. In particular, the governments of Angola, Mozambique and Zimbabwe had all come to power through revolutionary violence directly or indirectly supported by the Soviet Union.⁸¹ Second, the Apartheid regime, especially in dealings with the West, emphasized the strategic importance of South Africa, as it sat on the Cape of Good Hope. Third, the Apartheid regime was not confident that they could rely on the nuclear umbrella provided by the Western powers. However, none of these factors stand up to scrutiny when purported to signify a Soviet nuclear threat.

While the Soviet Union did provide support for communist forces in southern Africa, this support came primarily as equipment and training. When actual troops were deployed they came in the form of Cubans, not Soviets. The Soviet Union

⁸¹ Moore 1987, 52.

committed limited resources for communist movements in southern Africa because the region was never a strategic priority during the Cold War.

Pretoria drastically exaggerated the strategic importance of oil shipments through the Cape of Good Hope in order to push for support from the West. Pretoria attempted to use the Cape argument to push for a special NATO extension which included South Africa. The regime also made overtures on both sides of the Atlantic for a South Atlantic Treaty Organization, emphasizing the strategic importance of the Cape route as the country's value added. These attempts were repeatedly denied by all involved parties, evidencing that the Cape route was not of significant strategic importance.⁸²

The supposed importance of the Cape route is also undermined by the West completely ignoring the South African response to the expiration of the Simonstown agreement, where Pretoria announced that "the West would have to police the shipping lanes around the Cape by itself." However, the most damning evidence against the strategic importance of the cape argument is that at the time Simonstown expired in 1975 Western analysts simply didn't take seriously the idea that the Soviets would be prepared to go to war by impeding the flow of raw materials around the Cape during peacetime.⁸³

The above logic speaks to the concern that South Africa could not count on the nuclear umbrella of the West against the Soviets. It is possible that, if Great Britain

⁸² Ibid., 63.

⁸³ Ibid., 63-64.

and France were worried about the resolve of an extended U.S. nuclear deterrent, South Africa had cause to be. At the same time, South Africa was a stretch for the Soviet sphere of influence in the first place, and was significantly less strategically important than many other non-aligned states. Southern Africa was so unimportant to the Soviets strategically that their lack of economic incentive to invest resources in the region is cited as one of the reasons they pulled out in the early eighties and offered minimal support to the frontline states throughout the Cold War period.⁸⁴ At no time was South Africa close to being worth the global political and military costs of a nuclear attack from the standpoint of the Soviet Union.

It is possible to argue that the nature of the Apartheid regime caused a unique level of ire from the Soviet Union. However, a nuclear response would not follow from such an objection. Using nuclear weapons because of an objection to how a government treats its citizens would kill hundreds of thousands of citizens. If the Soviet interest in South Africa was an objection to the Apartheid regime, and not a strategic interest in the state - an idea to which the chronology of Soviet activities in the region strongly points, the Soviet nuclear threat was non-existent from the start. The lack of logical support for the idea that South Africa needed to be concerned with a nuclear threat from the Soviet Union undermines the strategic nuclear threat theory. If the strategic nuclear threat against the Apartheid regime did not exist, it does not make sense for South Africa to have developed nuclear weapons as a response to that threat.

⁸⁴ Ibid., 56.

The Overwhelming Conventional Threat against South Africa

By the mid seventies white South Africa feared it would be alone in facing the conventional Soviet threat. In 1981 foreign observers speculated that Pretoria might develop nuclear weapons in order to alleviate the country's insecurity and to guarantee the preservation of its singular racial policies.⁸⁵ There are three main claims that need to be addressed in regards to the possible conventional military threat to South Africa. One, because South Africa could consider the majority of its neighbors as rivals, it was therefore in a hostile environment and legitimately concerned with the conventional military balance. Two, there is evidence of cross-border skirmishes between the Apartheid regime and its neighbors. Three, there is significant evidence of Soviet activities in southern Africa during the Apartheid period.

The first claim is partially correct; South Africa was surrounded by rivals. However, the conventional military balance between South Africa and its immediate neighbors was overwhelmingly in favor of South Africa. By 1976 South African defense spending amounted to half of the defense budget of the rest of the African states combined, excluding Egypt. From 1976 to 1986 South Africa's defense budget continued to rise. During the 1980s South Africa's military vastly exceeded the capacity of regional rivals, especially in armor and air power.⁸⁶ The power of the South African economy, coupled with the military weakness of the newly emerging

⁸⁵ Reiss 1988, 176-179.

⁸⁶ Additional details on the makeup of the conventional military balance can be found at: Moore 1987, 53-55; and Reiss 1988, 175.

southern African states, ensured that, without significant great power assistance, South Africa's neighbors could not be considered a conventional threat.

While there were instances of cross-border skirmishes, those skirmishes were primarily initiated by South Africa crossing the border into Angola, Zimbabwe or Mozambique. In the case of Angola, this was to intervene in the Angolan civil war; in the cases of Zimbabwe and Mozambique it was to target SWAPO and ANC bases in those countries. While the Apartheid regime did come under limited attack by numerous non-state actors, most prominently the SWAPO in Namibia and the ANC in South Africa itself, these were resistance organizations, not national militaries. At no time did the national governments of South Africa's regional competitors attack South African territory. During the Apartheid period the closest South Africa came to being under attack by another state was the *threat* by Castro that his forces would cross the border from Angola into Namibia.

Soviet activity in southern Africa provides the strongest argument that South Africa may have been imperiled by conventional forces. Prime Minister P. W. Botha outlined the Soviets' objectives in South Africa as follows: "The main object ... under the guidance of the planners in the Kremlin, is to overthrow this state and to create chaos in its stead, so that the Kremlin can establish hegemony here." Deputy Defense Minister Coetzee claimed that East German troops were deployed in Angola and Mozambique at one point, and the presence of Soviet tanks and support vehicles

across the border indicated that South Africa must prepare to face a conventional threat at some point.⁸⁷

It is important to contextualize comments of the Apartheid government during this period. The government had every incentive to overstate the Soviet threat, both domestically and internationally. Domestically, the nationalist party received increased popularity for its hard line against the nebulous Soviet threat, and internationally, the more threatening the Soviets, the more South Africa thought it could garner support from the West. Domestically, this strategy of threat inflation appears to have been convincing. The communist threat was believed by the populous. In 1982, 80% of white survey respondents disagreed with the statement “the communist threat against the country is exaggerated by the government.”⁸⁸

The actual record of Soviet actions in southern Africa paints a very different picture than that put forward by the Apartheid government. Soviet actions appear limited by the same rationale outlined under strategic threats, above; the region was a low priority. Historically, Soviet strategy in the region followed the pattern of supporting domestic resistance groups and supplying arms and training, not overt military action. Summarizing Soviet involvement, Moore describes it as *limited* to the *armament* and *training* of anti-South African, non-state actor groups.⁸⁹

Considering the conventional balance of military forces, the predominance of South African aggression in the border conflicts of the period, and the well established

⁸⁷ Snyder 1985, 158-159.

⁸⁸ *Ibid.*, 158-159.

⁸⁹ Moore 1987, 56.

pattern of limited Soviet intervention through funding opposition groups, a conventional attack against South Africa by any party in the region was extremely unlikely. The lack of anything close to an “overwhelming conventional threat” in the South African case suggests that the conventional military threat hypothesis cannot explain the decision of South Africa to acquire nuclear weapons.

Regime Security Theory

Because we know that South Africa did develop nuclear weapons, in order for regime security theory to provide an adequate explanation of the South African case, four things must be true.

- The Apartheid government must be dealing with a period of increasing domestic instability.
- The Apartheid regime must have a perception of international isolation, including pressure from at least one major pole for domestic reform and fear that one or more major powers is considering interfering with its domestic affairs.
- The Apartheid regime must have the capacity to produce nuclear weapons, and the time lag between increased pressure and active weapons should reflect that capacity.
- The timing of the decision to build nuclear weapons should correspond to a period of increasing domestic instability and international isolation.

Direct evidence of the logic that the Apartheid regime wanted weapons in order to prevent unwanted international interference and to promote international support in order to maintain the status quo is not requisite for regime security theory, but, if available in the case, strengthens the theory.

Evidence of South African Domestic Instability

The domestic political history of South Africa is characterized by an increasingly prevalent pattern of instability beginning in the 1960s and continuing through the 1980s. The account paints a picture of instability which hits a new high in 1976, and continues to go up from there. There is no doubt that the degree of domestic instability that existed in South Africa was sufficient to cause the Apartheid regime to worry about its continued control. In fact, many of the Apartheid regime's policies were openly made with the goal of preventing regime overthrow.

As early as 1960, the Sharpeville massacre undermined the regime's claims of domestic stability. For white South Africa, Sharpeville raised fears of black urban violence. The Apartheid regime responded to Sharpeville by banning black opposition political parties. The ban backfired. With the removal of legitimate political activity as an option the ANC actively rebelled, founding its military arm the following year. The result of Sharpeville was that by 1961, an active, organized and well supported domestic resistance group was making attacks against and sabotaging Apartheid targets. The undermined political stability and the subsequent outflow of over half the

country's foreign capital led to the first predictions of the Apartheid regime's *imminent collapse* originating in the early 1960s.

The Apartheid government quickly rebounded, however, restoring substantial domestic stability in the mid-1960s. This was accomplished by outlawing black resistance organizations and leading a series of raids against their hideouts, including the Rivonia raid, which resulted in the public treason trial of high ranking members of the ANC, including Nelson Mandela.⁹⁰

With low level racial tension and continuing ANC resistance during the interim, the next major destabilizing event was the Soweto riots of June 16, 1976. The possibility of increased internal turmoil resulting from the riots is one of the reasons cited by the Apartheid regime for enacting its "total national strategy" of military mobilization. The predictions of increased turmoil were accurate. The late seventies saw a rise in black unemployment and continued black disenfranchisement, which led to increasing anger at the Apartheid regime and caused an exodus of black youth. These youth left South Africa proper and joined up with militant resistance organizations such as Umkhonto we Sizwe, which in turn increased attacks on the regime. In addition to black anger, in late 1978 Pretoria's authority was undermined in white South Africa following revelations of high level corruption.⁹¹

During the 1980s, resistance by the ANC consisted primarily of military sabotage and attacks on symbolic targets. In 1981 the ANC blew up oil storage tanks

⁹⁰ Reiss 1988, 174; and Moore 1987, 52.

⁹¹ Reiss 1988, 176-178.

in Sasol. In July 1982 the ANC claimed responsibility for a fire at the not yet operational Koeberg nuclear power station. In December 1982, the ANC claimed responsibility for four bomb explosions at the Koeberg site. Finally, in 1983 the ANC claimed responsibility for a bomb exploding in an air force headquarters building in downtown Pretoria.⁹²

In 1984 and 1985 there were broad level anti-Apartheid demonstrations and attacks on police and black collaborators. In July of 1985 the Apartheid government declared a state of emergency, enacting additional repressive measures which resulted in the deaths of over 1000 black South Africans. Widespread unrest continued into 1986. The domestic instability predictably made investors nervous and precipitated a major flight of foreign capital which in turn caused the collapse of the rand and increasing economic chaos.⁹³

A Perception of International Isolation

The short history of the Apartheid regime is one of increased international isolation from the world at large (primarily via the UN), its neighbors and the Soviet block, and finally from its former Western patrons. This section will present substantial evidence of increasing regime isolation, and then check for the specific conditions of the perception of isolation variable. Evidence will be subdivided into

⁹² Snyder 1985, 163; and Moore 1987, 97. Both acts of sabotage against the Koeberg plant took place before fuel was put into the reactor, so there was no danger of radioactive release from the sabotage.

⁹³ Moore 1987, 51-52; and Reiss 1988, 174-178.

three categories: the relationship between South Africa and the United Nations, focusing on the UN reactions to the Namibia situation and Apartheid itself; the relationship between South Africa, the rest of Southern Africa and the Soviet Union; and South Africa's deteriorating relationship with the Western powers. The specific conditions of the isolation variable that will be checked are, first, that the Apartheid regime feared domestic interference by one or more of the great powers, and second, that in addition to being isolated internationally, the Apartheid regime widely *perceived* that it was isolated internationally.

The United Nations, Namibia and Apartheid

Apartheid was formally placed on the United Nations agenda as an issue in September of 1952. However, the focus of the UN at this point was on the emerging superpowers and areas of direct competition between them. Significant UN attention did not shift to South Africa until the 1960s. In November of 1960, Ethiopia and Liberia mounted a legal challenge before the International Court of Justice over South Africa's right to administer the League of Nations mandate of South West Africa. In June 1963 a special committee on Apartheid was established and resolutions were passed condemning the regime. On October 27, 1966 the United Nations General Assembly passed resolution 2145 (XXI), which declared that South Africa failed to

fulfill its obligations under the League of Nations mandate, and that South West Africa was now “the direct responsibility of the UN.”⁹⁴

Momentum on the South West Africa (Namibia) issue stalled in July of 1966 when the International Court unexpectedly dismissed the South West Africa case. In June 1971, the International Court delivered an Advisory Opinion on South West Africa that reversed the 1966 decision. The court ruled that the Republic of South Africa’s mandate for the territory had been lawfully terminated by the General Assembly in 1966. In 1973, despite South Africa’s continued administration and military control of Namibia, the claim of the South West African Peoples Organization (SWAPO) was recognized by the United Nations.⁹⁵

In 1974 the continued occupation of Namibia and Apartheid policies led to an attempt to expel South Africa from the United Nations, a move only blocked by the veto power of the big Western states – the U.S., France, and Great Britain. However, South Africa was barred from the XXIXth General Assembly session. In 1976, just three years after SWAPO was recognized by the General Assembly, it was granted observer status.⁹⁶

In 1977 the UN Security Council passed a resolution making the 1963 voluntary arms embargo against Pretoria mandatory. This resolution followed a pattern of especially publicized civil rights abuses by the Apartheid regime. The 1963

⁹⁴ Reiss 1988, 175; and Moore 1987, 48.

⁹⁵ SWAPO was a resistance organization operating within Namibia and bordering states to represent the Namibian people. Reiss 1988, 175-176; and Moore 1987, 48.

⁹⁶ Reiss 1988, 176-177. Taiwan and the Vatican both have observer status at the United Nations.

voluntary arms and mixed use embargo followed the Sharpeville massacre; the 1977 mandatory arms embargo followed the detention of Steven Biko, a prominent activist and black consciousness leader. More general international criticism continued to match up with Apartheid abuses later in 1977 with increased criticism following the beating and death of Steven Biko while still in the custody of the Apartheid regime.⁹⁷

The Namibia dispute continued to draw attention during 1977. Five Western states – the U.S., Britain, France, West Germany and Canada – created a contact group to take a more active role in the transition of South West Africa to popular rule. This contact group led to a UN resolution calling for supervised elections in 1987, adding to pressure on the Apartheid regime to release its hold on the territory. The regime's response to this pressure was to set up their own "transitional government," effectively a stalling tactic, and in 1980 to raid deep into Angola and establish virtually continuous occupation of southern Angola in an effort to control the movements and capacity of SWAPO.⁹⁸ It was not until 1988 that Pretoria, under pressure from neighbors, the West, and the Eastern bloc, granted Namibia its independence under the condition of Soviet satellite troops being withdrawn from the continent.⁹⁹

⁹⁷ Reiss 1988, 177; and Moore 1987, 50.

⁹⁸ Reiss 1988, 177; and Moore 1987, 48-49.

⁹⁹ The key actors in the actual negotiations on the release of Namibia were South Africa, Angola, and Cuba, whose troops the South Africans wanted removed. Reiss 1995a, 34.

A United Southern Africa with a Little Soviet Help

The Organization of African Unity (OAU) was formed in June 1963. One of its main goals was the independence of African nations still under minority rule. From the onset the OAU faced a specific set of challenges. Its membership consisted primarily of countries with small, dependent economies and younger, less established governments emerging from the decolonization of the continent. Over time these problems were exacerbated with the continued weakening of OAU member economies and the increasing corruption and instability in their governments.¹⁰⁰ Despite these challenges, the OAU was able to put significant pressure on the Apartheid regime by appealing to its more powerful allies for resources and diplomatic support. South Africa's continuing strategy in regards to her regional opponents during this period was to use economic and military power to keep them off balance, relying heavily on the weaknesses of the OAU, and the frontline states (those bordering South Africa and South West Africa) in particular.

Possibly the most important success of the OAU was that in 1973 it was able to forge an alliance with Arab nations in order to get them to boycott oil exports to South Africa. Iran joined the boycott in 1979, significantly increasing its effectiveness. Arab nations agreed to undermine South Africa because the OAU reciprocally ostracized Israel.¹⁰¹ While the oil boycott was a point of light for the OAU, the

¹⁰⁰ Reiss 1988, 174; and Moore 1987, 48.

¹⁰¹ Moore 1987, 49-50.

regional juggernaut that was the South African economy continued to allow the Apartheid regime to engage in a strategy of international manipulation over the following two decades.

South Africa's use of financial pressure to manipulate its neighbors goes back to their decolonization. From the independence of the southern African states until well into the 1980s, South Africa was able to maintain strong trading links with each of them despite those countries' objections to the Apartheid government. Pretoria used her economic dominance to undermine the stability of her neighbors through methods such as the manipulation of credit flows and utility infrastructure.

In 1966, shortly after the International Court's reversal of its decision on Namibia, South Africa partially reversed course. Pretoria embarked on a concentrated campaign of *uitwaardse beweging* (outward movement), seeking to use economic power positively to increase ties to neighbors and bolster their economies in order to overcome regional inhibitions to dealing with the Apartheid regime, while at the same time continuing to use economics as a tool of manipulation.¹⁰²

The policy of reducing external hostilities to the regime through economic openness was partially successful, producing positive change in the relationships between the Apartheid regime and Botswana, Lesotho and Swaziland. This success was moderated by two factors. First, Lesotho and Swaziland were small, relatively weak states already deep within South Africa's sphere of influence and economic

¹⁰² Reiss 1988, 175.

orbit. Second, these states comprised the entirety of the subgroup of southern African nations which feared communism more than Apartheid.¹⁰³

The event that perhaps most undermined South Africa's comfortable dominance of the region in the early post-colonial period was the overthrow of the Caetano regime in Portugal in 1974. This precipitated Portuguese divestment of its interests and colonies in southern Africa. Following the Portuguese pull-out, the peaceful transition of power in Angola (a former Portuguese colony) broke down in January 1975 and led to the Angolan civil war. South Africa embarked on an intervention mission into Angola in October 1975, with the goal of installing a friendly government in Luanda. The intervention mission failed, and a government hostile to the Apartheid regime came to power. The primary cause of the failure of the South African intervention mission was the interference of Cuban troops, supported by arms and advisors airlifted into Angola by the U.S.S.R. The new Angolan government itself received substantial arms transfers from the U.S.S.R., and 20,000 Cuban troops remained in Angola to support the new state.¹⁰⁴

The emergence of a hostile Angola was only one of a string of regional security setbacks for South Africa during the 1970s. Angola provided a safe haven that allowed increased exposure of South African forces in Namibia to guerilla raids by SWAPO. In addition to Angola, a Marxist government came to power in Mozambique. The late 1970s also saw the fall of the beleaguered white settler

¹⁰³ Ibid., 175.

¹⁰⁴ Reiss 1988, 176; Moore 1987, 49; and Snyder 1985, 157.

government in Rhodesia. In a blow to South African regional prestige, the Lancaster House accords of 1979, which paved the way for the peaceful transfer of power in Rhodesia, were negotiated without South Africa's participation.¹⁰⁵

The Apartheid government's response to these setbacks in neighboring states was to formulate a "total national strategy" in 1978 and develop it through the late 1970s and early 1980s. The "total national strategy" is cited as a response to a Soviet backed "total onslaught," which referred to the shift in the governments of Angola, Mozambique and Zimbabwe (formerly Rhodesia). All of which came to power through Soviet-backed revolutionary violence. It is important to note that at the time Angola, Mozambique and Zimbabwe formed an almost complete cordon around South Africa and South West Africa on its northern borders. Pretoria, not without cause, felt surrounded by hostile governments.¹⁰⁶

Statements by Deputy Defense Minister H. M. J. Coetzee reinforced the perception of "total onslaught." In 1979 Coetzee claimed that four to six thousand East German troops were deployed in Angola and Mozambique and were preparing to directly interfere in support of SWAPO. In 1981, Coetzee again promoted the idea of an overwhelming military threat, claiming that the presence of 300 Soviet tanks and similar numbers of support vehicles meant that Pretoria must prepare to face a conventional Soviet threat.¹⁰⁷ Regardless of the drastically exaggerated claims of the

¹⁰⁵ Moore 1987, 48,113; and Reiss 1988, 176-178.

¹⁰⁶ Moore 1987, 52. For another perspective on the specifics of this policy see Zolberg 1989.

¹⁰⁷ Snyder 1985, 159.

Apartheid regime, the Soviets did fund Umkhonto we Sizwe (the military arm of ANC), providing specialist training and weapons.¹⁰⁸

Shortly after the election of Prime Minister Botha in 1978, and concurrent with the formulation of a “total national strategy” on the military front, the new South African Prime Minister pushed for a regional constellation of states in order to increase economic cooperation between an increasingly regionally isolated South Africa and other African nations. In response, other African leaders established a South African Development Coordination Conference (SADCC) in 1979 to promote intra-regional trading while excluding South Africa. The ultimate goal of SADCC was to escape South Africa’s economic orbit and thus give members the freedom to pursue active measures against Pretoria.

The Apartheid regime successfully minimized the effects of the SADCC by employing the same economic pressure tactics it had used previously (as well as actual sabotage) in order to undermine the independence of the SADCC states. These same economic destabilization tactics were also used to attempt to undermine the movements and activities of the ANC in neighboring countries during this period.¹⁰⁹

In the early 1980s the Apartheid regime signed non-aggression pacts with its neighbors Botswana, Lesotho and Mozambique. While this relieved tensions on the eastern edge of South Africa’s border, these were the states least threatening to South

¹⁰⁸ Moore 1987, 51.

¹⁰⁹ Reiss 1988, 178; and Moore 1987, 58-60.

African security and most cooperative in past agreements. In fact, the only substantial benefit of these non-aggression pacts appears to be that they allowed Pretoria to curtail ANC movements within these border countries. This suggests that the primary purpose of these external arrangements was to enhance domestic stability – security against the ANC, and not to decrease regional threat – security against other states in the region.

Despite the non-aggression pacts, the Apartheid regime engaged in a military operation in Mozambique in which South African armed forces attacked ANC personnel in a compound outside of Maputo. Again, this suggests the pacts were valuable to South Africa only to the point at which they undermined the ANC.

In response to this attack, Mozambique called upon a treaty of friendship with the Soviet Union, who reluctantly responded. Ten days later two Soviet warships appeared in Maputo harbor to “show the flag.”¹¹⁰ With the exception of this flag waving, the 1980s saw a dramatic reduction in the Soviet presence in southern Africa. It was practically non-existent between 1981 and 1987 with the exception of the Cuban troops in Angola. The last push of the Soviet bloc and its allies in the region, coming in late 1987 and early 1988, was made not by the Soviet Union, but by Castro, who increased hostilities along the Angolan border in a final effort to increase pressure for Namibian independence.¹¹¹

¹¹⁰ Moore 1987, 56-58; and Snyder 1985, 163.

¹¹¹ Reiss 1995, 14; and Moore 1987, 56-60.

A Deteriorating Relationship with the West

From the 1950s onward, South Africa had been dependent on the great powers of the West to relieve its growing isolation. The nature of South Africa's relations with the West was critical throughout the period because the UN veto of the United States and Great Britain was the only barrier between South Africa and significant economic sanctions. Relations with the West were also the only thing standing between the Apartheid regime and stronger condemnation and intervention against South African activities. These included brutal responses to domestic unrest, failure to grant independence to Namibia, and military raids into neighboring countries. Finally, South Africa constantly pushed for technological assistance from the West.

Western relations with South Africa degraded as the reign of the Apartheid regime progressed, starting strong and undergoing constant strain and eventual deterioration. Protection within the international community waned, and assistance was increasingly withheld.¹¹²

In the 1950s and as late as the early 1960s South Africa fought to ensure its place as a staunch ally to the Western powers in their battle against communist expansion. Its primary asset in this bid was as a natural resource exporter. South Africa supplied a wide range of raw materials, but its huge and accessible uranium reserve was of special interest to the Western powers. Even up until the 1970s, South

¹¹² Moore 1987, 60-66.

Africa supplied 13% to 14% of the non-communist world's demand for uranium.

According to a 1983 report by the IAEA, South Africa contained 13% of the world's total supply of accessible uranium, second only to Australia. During the early development of nuclear programs South Africa participated in the Combined Development Agency (CDA) with the United States and Great Britain, contracting with them on uranium mining and export.¹¹³

There were a number of other factors which South Africa used in attempts to prove itself a valuable ally against communism besides its stores of uranium. Probably the most important of these was a more general reciprocally profitable trading relationship with the West. South Africa exported raw materials and imported Western goods while remaining a stable venue for reliable, profitable return on investment for Western companies.¹¹⁴

Additionally, it had a stated and open devotion to opposing the spread of Soviet influence. This was reinforced by the Apartheid government dispatching a fighter squadron to Korea and negotiating the Simonstown naval base agreement of 1955 with Great Britain, which allowed the British a port on South African territory. As a final incentive for the West, South Africa pushed the idea that its position on the Cape of Good Hope was important for the stability of oil shipments.¹¹⁵

¹¹³ Snyder 1985, 149; Reiss 1988, 173; and Moore 1987, 61-71. This information originally comes from OECD Nuclear Energy Agency and IAEA, *Uranium Resources, Production and Demand*, Paris: OECD, 1983.

¹¹⁴ Moore 1987, 61.

¹¹⁵ Reiss 1988, 173-174; and Moore 1987, 62,63.

The 1960s saw the beginning of the deterioration of relations between the Apartheid regime and the West. Pretoria endured constant condemnations of Apartheid's racial policies from the U.S. These came in increasingly severe tones as the decades passed. However, except for the arms and "dual purpose" items embargos, there was little in the way of substantive sanctions against Pretoria.

Western countries had divergent interests in South Africa. Western companies wanted continued economic ties, whereas Western publics wanted to condemn and isolate the Apartheid regime. These conflicting interests created a dilemma for Western governments when dealing with the region. They tried to maintain the money flow while simultaneously condemning the Apartheid system. This resulted in a hands-off approach, and a low, but constant, pressure on South Africa to change.

In April 1961 South Africa was forced to withdraw from the British Commonwealth. In 1975 the Simonstown naval agreement expired and was not renewed. In April 1976 the United States rescinded its policy of "selective relaxation" toward white minority regimes in southern Africa, instead strongly endorsing majority rule on the continent.¹¹⁶

These policy changes on the part of the United States and Great Britain through the 1960s and 1970s caused South Africa to feel abandoned by the West, a perception which was driven home by the lack of U.S. support in Angola. In 1976 international response to the Soweto Riots was emphatic, with increased worldwide

¹¹⁶ Reiss 1988, 174-177; and Moore 1987, 63. The withdrawal from the British Commonwealth was an enforced withdrawal and was precipitated by Apartheid policies, directly by the Sharpeville massacre.

censure of the Apartheid racial policies. International reactions included a United Nations mandatory arms embargo against South Africa.¹¹⁷

The level of international ire against Apartheid rose to the point that Pretoria informed the South African public that in the event of military conflict it would not be supported by the West. The state's international status and lack of allies, coupled with the possibility of increased internal turmoil or aggression by neighbors, led the Apartheid regime to announce a "total national strategy" for mobilizing the state for defense.¹¹⁸

The inauguration of the Carter administration, with its emphasis on human rights, ensured the continued commitment of the United States to the cause of black majority rule. Further, the Carter administration's self-described absence of "an inordinate fear of communism" signaled to the Apartheid regime that it could no longer garner U.S. support by portraying itself as a bastion against communism in southern Africa. In 1985, responding to increased domestic repression by the Apartheid regime, Western governments tightened the arms embargo, curtailed nuclear cooperation and finally imposed their own, limited, economic sanctions.¹¹⁹

¹¹⁷ Reiss 1988, 177; Moore 1987, 10; and Snyder 1985, 159. All three authors list different casualty figures.

¹¹⁸ Reiss 1988, 177; and Moore, 1987, 49.

¹¹⁹ Reiss 1988, 177; and Moore 1987, 52.

Checking the Conditions of Isolation

There is ample evidence that the Apartheid regime feared domestic interference. South Africa both feared and experienced Soviet interference with her domestic affairs. While the U.S.S.R. never directly attacked South Africa, it did fund, train and arm Umkhonto we Sizwe. The Soviets also funneled some of their arms shipments in southern Africa into the hands of the small South African communist party. In addition to funding the ANC and South African communists, the Soviets also aided SWAPO in its fight against Pretoria for control of South West Africa (Namibia) through Cuban troops with Soviet arms, advisors and airlifts. In sum, the Soviet Union provided critical funding for each of the organized non-state actors attempting to undermine South Africa from the inside.¹²⁰

It is also clear from the historical record that the Apartheid regime understood and fought against its growing isolation. Following are quotes and direct policy explanations made by members and associates of the Apartheid regime in which they discuss the consequences of their perceived isolation. In 1977, referring to the growing sense of South African isolation, then Defense Minister Botha told the National Party Congress that South Africa was “moving more and more in the direction in which the state of Israel has already been since 1948.”¹²¹ Also in 1977, an excerpt from the pro-government paper “Beeld” lays out the great powers, both the Soviets and the West, as

¹²⁰ Moore 1987, 49-56.

¹²¹ Snyder 1985, 160.

bullying South Africa: “The great powers which have nuclear weapons have adopted an odd attitude. One would have thought that it would have been tactically more profitable for them to draw closer a potential member of the nuclear club, which South Africa is. Their bullying attitude could result in making us a maverick bull in the nuclear herd, and that is surely not a sound situation from their point of view. South Africa will go its own way and its own interests will be decisive.”¹²²

Capacity Concerns

South Africa clearly had the economic and scientific capacity to create an indigenous nuclear weapons program. Two things are interesting about the capacity variable in the South African case: one, how capacity issues affected the timing of nuclear development, and two, what decisions were modified by capacity concerns to the degree that suggests the variable is important as a conditional variable in other cases.

How the capacity variable affected the timetable for decision making is discussed in the conclusion of the section on South Africa’s nuclear policies. There are two important points to reiterate. First, beginning with an active nuclear power and research program but no domestic uranium enrichment, it took the Apartheid regime almost a decade to build a nuclear weapon. Second, the timetable for nuclear weapons development is heavily dependent upon the existing nuclear infrastructure. The 1977

¹²² Ibid., 168. Originally from *Beeld*, August 24th, 1977.

decision point shows that, while it may take a decade to move from generic nuclear technology to a weapon, an operating, un-safeguarded uranium enrichment facility allows a state to build a bomb in the time it takes that facility to produce sufficient quantity and quality of HEU. In the South African case, it took about 2 years.

The South African case provides some well documented examples of how restricted resources affect the scope and timing of development. The U.S. refusal to supply enriched uranium for the Safari I reactor greatly impaired research operations, reducing the scope of programs and forcing the reactor to spend alternate weeks off-line. Supply restrictions by the United States also affected the scale of the uranium enrichment facility South Africa was able to build. The Valindaba plant, as announced in 1970, was scaled down because the costs of a large scale, commercial enrichment plant increased to the point that a massive amount of foreign capital would have been required. This price increase was primarily precipitated by the U.S. government convincing European countries to agree to withhold critical technological components, including computers.¹²³

Another significant modification that was made to the South African nuclear path was the design of their testing facility. When explaining why the entirety of the Kalahari facility was not concealed underground to avoid satellite detection, J.W. de Villiers, at various times weapon designer, president and chairman of the board of the directors of the AEC, complained that it was “too damned expensive to go

¹²³ Moore 1987, 91-98.

underground completely.”¹²⁴ This is perhaps the most interesting resource defined component of the South African plan because it suggests limited resources and increased costs may prevent states from building the capacity to *secretly* test a nuclear device or complete a test facility without the great powers finding out significantly beforehand.

Lastly, South Africa claimed its nuclear program cost a total of \$200 million, though when taking into account associated costs and rand depreciation this looks more like \$300 to \$600 million. Even with this budget and an abundant domestic uranium supply, it still took South Africa a decade for its nuclear program to proceed to the point where it could produce a weapon, suggesting that a fast-track plan of weapons development would be prohibitively expensive for most states.¹²⁵ Overall, evidence suggests that both the available funds of the AEC, and the limited capacity of the Apartheid regime to obtain sensitive equipment and resources from the outside world, had a significant effect on the timetable for weapons production.

Checking the Timing of Nuclear Development

Testing the timing of increased instability and international isolation against the decision to acquire nuclear weapons is problematic because it is difficult to establish when the decision points for nuclear weapons development occurred with a

¹²⁴ Reiss 1995a, 10.

¹²⁵ Ibid., 10.

high degree of confidence. The difficulty in establishing decision points is due in large part to the time lag between policy decision and production implementation, especially because that time-lag is not set. Nevertheless, the conclusions provided in the nuclear decision timeline section attempt to outline the most likely decision points and define the range of possible times for the final decision of South Africa to acquire weapons.

The range of possible dates for nuclear decisions most likely falls between 1970 and 1977. The 1977 endpoint to the range appears the most likely point of final decision because it is the same year that South Africa was removed from the IAEA, the same year of Vorster's conference on the future of South Africa's nuclear program, and the same year South Africa began construction of the Kalahari test site, which indicates an active decision to proceed with a nuclear test. As cautioned above, this decision point does not encompass the entire development process; South Africa had clearly been considering nuclear weapons for some time beforehand.

The available information on decision points provides us with two questions, both of which should be able to be answered in the affirmative if the South African case supports regime security theory. First, if development and discussion of nuclear weapons occurred over the course of the 1970s, does that coincide with a period of domestic instability or perceived future domestic instability and a period of increased international isolation? Second, if 1977 is the most likely final decision point on nuclear weapons, does that year coincide with a period of heightened domestic instability and increased international isolation?

The answer to the first question is yes. The 1970s was a period of some domestic unrest in South Africa, and it followed significant upheaval during the 1960s in response to the Apartheid regime's racial policies. Internationally the Apartheid regime experienced increasing pressure during the 1970s from the United Nations on Namibia and from the West on its racial policies. Finally, the 1970s was the period of heavy Soviet intervention in neighboring countries, including but not limited to the Angolan civil war during 1975.

As the 1970s progressed the level of domestic unrest certainly increased. The Soweto riots in 1976, accompanied by the domestic and international response, increased the perception of vulnerability of the Apartheid regime. This is explained earlier in this section under the evidence for domestic instability. The answer to the second question, does 1977 make sense as the likely decision point, is an unqualified yes. During 1977 the aftermath of Soweto was still playing out both domestically and in the resulting alienation from Western powers. The year was the beginning of a period of increased ANC activity as the late seventies saw a jump in ANC recruits. It was also the year that an attempt was made to expel South Africa from the United Nations.¹²⁶

¹²⁶ The timing of the South African decision to develop nuclear weapons provides additional evidence for the importance of domestic threat rather than a conventional military threat from the Soviets. While there were increased international tensions during the period, they were predominantly (with the exception of Angola where South Africa was the aggressor) created by the South African response to significant domestic unrest. The aftermath of the Soweto riots strongly suggests that the final decision to develop nuclear weapons was a response to the situation at home, and would most likely have occurred regardless of the intensity of the echoes from abroad.

Additional Evidence of Regime Security Theory

This section will provide additional evidence of regime security logic. It consists of both an outline of South Africa's stated nuclear strategy and an observation on the timing of Soviet departure. South Africa's nuclear strategy stated that, in the event that South Africa was under threat, it would quietly reveal its nuclear arsenal to the U.S., who would then intervene before it was overrun. The stated reason for U.S. intervention would be that the U.S. would be disturbed by the potential use of nuclear weapons in the region and sensitive to the affect on its non-proliferation agenda.¹²⁷ While this strategy referred to an amorphous threat to South Africa, it may be implied that it was in reference to the conventional Soviet threat. However, the strategy would have been equally if not more effective in convincing the U.S. to intervene against a threat of domestic origin to South Africa. A full Soviet invasion of South Africa would not have gone unanswered by the West, thus, ensuring U.S. intervention for such a contingency was unnecessary. However, if South Africa had not possessed nuclear weapons, the U.S. would have been unlikely to have intervened against domestically incited instability. U.S. enmity towards the Apartheid regime was such that the need to ensure nuclear stability would have been the only motivation sufficient for the U.S. to have intervened in an internal conflict in support of the Apartheid government.

¹²⁷ Ibid., 15. The full national nuclear strategy included three stages. Stage 1 was nuclear ambiguity as a deterrent. Stage 2 was revealing nuclear capacity to the U.S. in order to get U.S. intervention. Stage three consisted of South Africa conducting active nuclear tests and demonstrating its capacity to deliver warheads to targets, again with the goal of pushing for U.S. intervention.

The timeline of Soviet withdrawal from southern Africa provides an ancillary note in support of the application of regime security theory to the South African case. As noted above, the Soviets and their allies ceased activities in southern Africa almost entirely in 1981, with the exception of the Cuban presence in Angola. This partial withdrawal occurred less than two years after the completion of the first rudimentary nuclear device by South Africa. While it is unclear what level of knowledge the Soviet government possessed as to the exact developments within the South African program, it does seem significant that after two decades of low level interventions in southern Africa (which had produced significant political changes in favor of the Soviets), they would withdraw so soon after the culmination of the South African weapons program. This suggests that, not only was the goal of the South African program to undermine the Soviet will to intervene in Pretoria's affairs, but that the goal was achieved.¹²⁸

Discussing Alternative Explanations

Evidence in the South African case can be applied to a number of the competing theories of nuclear proliferation. The following section will examine these

¹²⁸ If the South African nuclear weapons program was in part a response to Soviet activity, and the Soviet's were forced to withdraw upon its success, why did the Soviet Union not withdraw much early so that South Africa did not develop nuclear weapons in the first place? First, it is unclear that the Soviet Union was aware their behavior would precipitate nuclear development. To date, the Soviet experience had been that states developed nuclear weapons in response to nuclear threat. Second, even with 20/20 hindsight, it is unclear how worried the Soviets were about South Africa developing nuclear weapons. South African weapons did not pose a threat to the Soviet Union; from the Soviet perspective, they only precluded further undermining of the Apartheid regime. Southern Africa was a low priority region for the U.S.S.R. and their interests were to push their goals through proxies where possible and stop where not. It is very possible that the Soviet's were comfortable with the possibility that the Apartheid regime would develop nuclear weapons and were simply progressing because it might not happen, and if it did it would not be a major setback.

relevant alternative proliferation arguments. These arguments include democratic transition, international economic integration, electoral politics, and prestige.

The argument that democratic transition in a state can reverse nuclear policy appears to hold in South Africa, though not for the reasons suggested by proponents.¹²⁹ While South Africa had competitive elections during the Apartheid regime, only a small minority of the population was enfranchised, and thus the Apartheid regime scored low on the democracy variable. The move to popular rule, effectively a democratic transition for South Africa, does appear to have reversed the state's position on nuclear weapons. However, the South African renunciation decision was made before the transfer of power to a popularly elected government, rather than after. This timing strongly suggests that a nuclear free South Africa was not caused by undercutting the domestic position of factions that favored weapons, as those factions were in power at the decision point, nor any norms or ideals of the new democracy. Rather, it was caused by the fears of the Apartheid regime, which did not trust the incoming democratically elected government with nuclear weapons.

At first glance the South African case appears to undermine the argument that high levels of economic integration lower the chance that a state will develop nuclear weapons. During the early nuclear period South Africa was a critical trading partner of the West, exporting uranium and other raw materials to the Western powers, granting

¹²⁹ Walsh 2001, 31.

exclusive contracts for its uranium to the U.S. and U.K.¹³⁰ Looking at the timing of South African nuclear development as described above, it is evident that South Africa's push toward nuclear weapons followed rather than preceded the increased isolation from the West. This means that during the period of nuclear development the Apartheid regime had drastically reduced international economic integration as compared to the early nuclear period. Thus, the South African case does not conflict with the idea that high levels of integration inhibit nuclear weapons development. The complementary argument that a low level of integration reduces the costs of a nuclear weapons program appears to be supported by the South African case.

The argument that politicians will reject or embrace nuclear weapons is dependent upon what is electorally advantageous at the time is not supported by the South African case. South Africa's nuclear program remained concealed from the public until after the decision to dismantle it. Since the program was secret, the decision to start the nuclear weapons program cannot be based on electoral politics, nor can the one to end it.

The prestige argument falls flat when applied to South Africa for the same reason as electoral politics. It is very difficult to explain the case with prestige arguments because the Apartheid government did not announce its nuclear capacity to the world until after the program succeeded. If the regime had sought nuclear weapons for prestige, it would have advertised its success.

¹³⁰ Snyder 1985, 149; Reiss, 173; and Moore 1987, 61-71. This information originally comes from OECD Nuclear Energy Agency and IAEA, *Uranium Resources, Production and Demand*, Paris: OECD, 1983.

Timing of Dismantlement

South African nuclear disarmament began with the election of President de Klerk on September 14, 1989. Why did South Africa give up the bomb? Two major factors seem to have impacted the decision of the regime to de-weaponize. First, the Soviet Union, while not gone, was failing. Second, de Klerk's major policy change was to move South Africa towards popular rule, ending the Apartheid system.¹³¹ The following section looks at how these possible reasons for disarmament provide additional support for regime security theory.

First, both traditional security arguments and regime security theory are partly supported by the removal of the Soviet Union from the picture. The Soviet threat was the variable which justified a nuclear route for traditional security hypotheses; it was also the power which attempted to interfere with South Africa's domestic affairs as theorized in regime security theory. Any of the three security hypotheses would predict that removal of the Soviet Union as a threat would remove one of the major incentives to acquire and hold nuclear weapons. However, it's not clear that removal of the Soviet Union as a power undermining South African domestic stability would precipitate disarmament in regime security theory. The perception of isolation would have remained in effect, and the groups working to undermine domestic stability could have looked for another arms supplier. Even if another supplier was not forthcoming, it would have been very difficult for the Apartheid government to determine if that

¹³¹ Reiss 1995a, 17.

was the case. Nevertheless, the Soviet decline decreased the utility of maintaining the South African nuclear arsenal.

The second factor that affected the South African disarmament decision was de Klerk's policy change of moving the country towards popular rule. In 1989 South Africa was unstable, but not on the verge of collapse. As such, de Klerk's reasons for promoting a policy of popular rule remain unclear. However, it seems likely that his decision was a response to what he saw as one of only the available alternatives. De Klerk could either preside over a government that continued oppression of blacks, which would result in future domestic unrest, or gradually change the structure of government while the Apartheid regime was still stable enough to guide and control the course of that change.¹³²

That the Apartheid regime willingly gave up control of South Africa has interesting implications for regime security theory. It suggests that, when faced with near-certain eventual overthrow or a slow dispersion of power, illegitimate regimes may opt for the latter over the former. Choosing slow reform makes sense for a rational regime if that route has a higher aggregate utility in the long term for members of the regime than the alternative. Giving up power may seem counterintuitive. This is not always the case. In situations in which the aggregate utility of members of the regime is higher if power is given up than if it is kept, giving up power is rational.¹³³

¹³² Ibid., 22.

¹³³ For example, if staying in power means possible brutal death for the leading members from revolt, while slowly giving up power means retiring to a long life of relative luxury, it is absolutely rational for a regime to give up power. The more gradual and controlled the transition process, and the more the

The move towards popular rule also lends support to both the traditional security and regime security hypotheses. For the traditional security hypotheses, because it was the policies of the Apartheid regime which caused the security threat in the first place, the removal of those policies would negate the threat. For regime security theory, the move towards popular rule makes sense as the primary cause of disarmament on two levels. Domestic resistance would, for the most part, end with the move towards popular rule – the goal of the domestic resistance groups. Similarly, as international ire directed at South Africa was a response to the nature of the Apartheid regime, popular rule would end international isolation and reduce the incentive for outside interference. With the removal of both domestic and international pressure resulting from the end of Apartheid, nuclear weapons, and their associated costs, would simply no longer necessary. In summary, the timing and major events that surround the disarmament of South Africa provide support for both the traditional security and regime security hypotheses.

Conclusions

Traditional security explanations cannot adequately explain the Apartheid's regime's decision to develop nuclear weapons because of the lack of a credible nuclear or conventional threat against South Africa. In addition, because of the time-line of South African weapons development compared to that of the international

actors can ensure themselves of safety after they no longer hold the sole reins of power, the more likely the regime is to consider such a course of action rational.

environment and because of the clandestine nature of South Africa's nuclear weapons, the case is not a good fit for the democratic or prestige arguments.

Regime security theory provides a strong explanation of the South African case. The application of regime security theory to the case is supported by the chronologies of the Apartheid regime's foreign and domestic relations and the regime's nuclear development. The Apartheid regime was increasingly internationally isolated, had a preexisting raw material base and technical knowledge set, and both feared and experienced increasing domestic instability directly aided by a foreign power prior to its development of nuclear weapons.

CHAPTER IV

NORTH KOREA

The Kim regime's nuclear aspirations originated from the threat of U.S. intervention on the peninsula following the Korean War. As the Cold War dragged on, North Korea developed its artillery deterrent, and the attention of the U.S. waned. Soon, the prospect of war was restricted to the propaganda machines of the North Korean airwaves, and the Kim regime proceeded with nuclear development at a gradual pace.¹³⁴

The end of the Cold War left the Kim regime internationally isolated and the North Korean economy in a precarious position. As communist governments began to fall in eastern Europe, North Korea renewed its efforts to develop nuclear weapons. In this chapter, I will argue that the Kim regime saw acceleration towards nuclear weapons development as the solution to its worsening domestic and international situation.

The first section of the chapter provides an outline of North Korean domestic issues and international relations from the end of the Korean War in 1953 to the present day. The second section provides a chronology of nuclear decision making and

¹³⁴ The program progressed gradually enough that the U.S. remained, for the most part, disinterested until the early 1980's. Reiss, 1995a, 233.

development in North Korea. The third section presents tests of how regime security theory applies to the North Korean case, and summarizes the information from the case as it relates to the relevant alternative explanations in Chapter II: strategic nuclear security, conventional security, prestige and international economics. The conclusion of this analysis is that regime security theory provides the best explanation of North Korean behavior approaching and following the end of the Cold War.

A Historical Outline

The North Korean nuclear program cannot be treated as an isolated issue with a clear, constant, limited chain of cause and effect.¹³⁵ In order to understand the North Korean case, it is critical to understand the context and nature of the North Korean state, as well as the actors and interests involved over the course of the last 50 years. This section briefly describes the domestic situation in North Korea after the Korean War, and introduces the major international actors and their interests. The timeline will focus on the period beginning with the decline of Soviet influence in the late 1980s up through the collapse of the Soviet Union and its aftermath for three reasons. First, it is the period in which the domestic situation of North Korea began to rapidly deteriorate. Second, it is the period in which the interests of other actors in the system changed most suddenly. Third, it is the period in which North Korea accelerated its nuclear program.

¹³⁵ Ibid., 234.

A Context of Domestic Decay

During the late 1950s and early 1960s North Koreans were introduced to the political philosophy of *jucheism*, a uniquely North Korean form of communism focusing on independence. Outside observers have described it as xenophobic, fascist, racist, and nationalistic. In the 1960s, under the tenets of *juche* philosophy, the Kim regime attempted to eradicate all outside influences from North Korea by cutting off any communication between private citizens and the outside world. The regime endeavored to become the sole source of information, banning radios capable of receiving channels other than the official state channel. By the end of the 1960s, North Korea was arguably the world's most complete police state.¹³⁶

Political repression in North Korea was accompanied by incredibly inefficient economic policies. Unsustainable and ill informed agricultural practices led to continually decreasing harvests from the 1970s onward. Large scale industrial projects, individually costing up to 25% of North Korean GNP, ended in complete failure. Meanwhile, strict adherence to a command economy meant that North Korean citizens were for decades forbidden to grow private gardens to supplement their food. The Kim regime's massive military expenditures exacerbated conditions within the failing economy. The isolationist nature of the Kim regime was directly responsible for many of its economic woes. The most rudimentary technical advice from the West could have prevented the calamitous failures of North Korea's large-scale industrial

¹³⁶ Becker 2005, 64-66.

projects and explained why state agricultural policies, such as increasing seed density in order to increase long run harvest, were doomed to failure.¹³⁷ Economic decline worsened between 1990 and 1992. The fall of the Soviet bloc caused North Korean trade to decrease in volume by 50%. When combined with domestic factors, this resulted in an annual GNP contraction of between three and five percent during the early 1990s.¹³⁸

The continually worsening situation reached a tipping point by the mid-1990s, and North Korea entered a period of famine that resulted in the death of approximately two million North Koreans – almost ten percent of the population.¹³⁹ The famine only receded after years of Chinese, South Korean and Western aid shipments to North Korea. Beginning in 1994, China shipped approximately one million tons of wheat and rice and five hundred thousand tons of heavy fuel to the Kim regime each year.¹⁴⁰

In recent years, there is evidence that the Kim regime has recognized that it must accept outside assistance in restructuring its economy. North Korea has experimented with pockets of economic reform, supporting Special Administrative Regions along both the Chinese and South Korean border. Additionally, in recent

¹³⁷ Becker 2005, 101-123.

¹³⁸ Reiss 1995, 241.

¹³⁹ Becker 2005, 20-39; and Park 2005.

¹⁴⁰ Shambaugh 2003, 47.

years Kim Jong Il himself has received lectures from Chinese economists and reportedly demonstrated sophisticated knowledge of economics.¹⁴¹

North Korean International Relations

During the Cold War North Korea remained, to varying degrees over time, a client state of the large communist patrons, China and the U.S.S.R. While these states did not ensure absolute safety or constant security, they did provide the Kim regime with important economic support, international military alliances and a shield from popular international censure for its policies. North Korea maintained a rough parity in diplomatic allies with its estranged southern counterpart. The Kim regime relied on the Soviet Union and China, while South Korea was backed by the Western powers. When the Cold War ended, so did this parity. With the collapse of the U.S.S.R. and the fall of the communist bloc, North Korea emerged from the Cold War more isolated than at any other time in its brief history.¹⁴²

The Soviet Union, the largest source of advanced military equipment to the Kim regime, no longer existed. The newly emerged Russia established diplomatic ties with South Korea, and South Korea was able to successfully pursue reconciliation with communist China. North Korea was unable to do the same with the United States

¹⁴¹ *Ibid.*, 50.

¹⁴² Reiss 1995a, 231.

or Japan. North Korea was further isolated by the internal collapse of its eastern European allies and the absorption of East Germany by West Germany.¹⁴³

The post Cold War isolation of North Korea, when combined with its failing economy, pressured the Kim regime into increasing international openness and participating (to varying degrees) in the proliferation control regimes.¹⁴⁴ The most prevalent non-proliferation negotiations with North Korea are considered chronologically in the nuclear timeline section below. Negotiations with the Kim regime on the nuclear issue continued on and off from the 1980s into 2008 without resolution, and hit an all time low in 2006 when North Korea successfully tested a low-yield nuclear weapon.¹⁴⁵

The following sections lay out the interests of the important international actors involved in the North Korean case, how those interests have changed over time, and how those actors have affected the behavior of North Korea.

¹⁴³ *Ibid.*, 231-237.

¹⁴⁴ *Ibid.*, 241.

¹⁴⁵ While there is some debate as to whether or not the North Korean test was a success or a failure, the available information is consistent with a successful low yield explosion and within the acceptable yield range announced by the Kim regime prior to the explosion. For details of the explosion analysis see, Hui 2007.

A Timeline for Nuclear Decisions: North Korea and the IAEA

North Korea's nuclear program began in the mid 1950s with aid from the Soviet Union and China.¹⁴⁶ In 1964, a nuclear research center was established at Yongbyon, accompanied by a four megawatt research reactor which came online the following year. This first Yongbyon reactor was not placed under IAEA safeguards until 1977, 12 years later.¹⁴⁷

During the early 1980s the United States' attention turned to the North Korean nuclear program when Washington detected the construction of a thirty megawatt reactor at the Yongbyon facility.¹⁴⁸ The reactor, which came online in January of 1986, was a natural-uranium, graphite moderated reactor. This meant two things. First, the low burn rate of the reactor was well suited to producing high proportions of uranium 239 in its spent fuel, which decays into plutonium and is therefore useful for nuclear weapons. Second, the reactor did not use heavy water, a North Korean import, meaning that it could be operated independently.¹⁴⁹

On September 12th 1985, during the construction of the Yongbyon reactor, the Kim regime, under pressure from the U.S.S.R., signed The Treaty on the Non-Proliferation of Nuclear Weapons (NPT), but failed to sign the associated IAEA

¹⁴⁶ Reiss 1995, 233; and Spector 1991.

¹⁴⁷ Spector 1991, 9.

¹⁴⁸ Reiss 1995a, 233.

¹⁴⁹ Reiss 1995a, 234; and Spector 1991, 9.

safeguards agreement.¹⁵⁰ In 1986, the same year that the Yongbyon thirty megawatt reactor went online, North Korea began construction of a two hundred megawatt Yongbyon reactor and another reactor at Taechon with a capacity between six and eight hundred megawatts. If both of these new reactors were to become operational they could produce enough plutonium to build forty-five nuclear weapons each year.¹⁵¹

It was two years later, in 1988, that U.S. satellites found solid evidence of nuclear weapons development at the Yongbyon facility. The United States discovered a plant capable of reprocessing the spent fuel rods from the graphite moderated reactors and extracting fissile plutonium, as well as a high explosives test range. In the spring of 1989, North Korea shut down the thirty megawatt Yongbyon reactor for around three months, which was enough time for them to remove the nuclear fuel rods containing the plutonium necessary for reprocessing. The reactor shutdown, combined with previous events, led the U.S. 1989 National Intelligence Estimate to conclude that North Korea was attempting to develop a nuclear weapon.¹⁵²

Between 1989 and 1991 the Yongbyon facility expanded to over 100 buildings. In June of 1991 South Korea announced that the Kim regime had conducted a test of the non-nuclear components for a nuclear device at the thirty megawatt test reactor at Yongbyon. North Korea denied the charge, claiming that the thirty

¹⁵⁰ Reiss 1995a, 234; and Kerr 2003.

¹⁵¹ Reiss 1995, 234.

¹⁵² South Korea had already come to this conclusion. Reiss 1995, 236.

megawatt reactor was part of its civilian energy program, an unlikely claim considering that the reactor contained no electrical lines or transformers.¹⁵³

On December 31, 1991, North and South Korea announced a “Joint Denuclearization Declaration” which stated that neither would test, manufacture, produce, introduce, possess, store, deploy or use nuclear weapons, nor possess reprocessing or uranium enrichment facilities. In January of the following year, after Seoul and Washington canceled the annual Team Spirit joint military exercise, North Korea signed the IAEA safeguards agreement and ratified it in April, allowing IAEA inspectors into North Korea.¹⁵⁴

Through most of 1992 inspectors operated with relative freedom of movement, but problems developed. The IAEA was concerned with two sites. The first was “building 500.” U.S. satellite intelligence had shown North Korean workers digging trenches and laying pipe between it and the Yongbyon reprocessing facility. The second was an older site that the North Koreans had attempted to hide by covering it with dirt and landscaping the area. The IAEA demanded inspections of these two sites based on the fear that together they could contain up to 4000 cubic meters of liquid nuclear waste. They were denied.¹⁵⁵

In addition to the two problem sites, the IAEA found a discrepancy between the lab analyses of the plutonium North Korea had admitted to separating in 1990 and

¹⁵³ Reiss 1995, 234-236.

¹⁵⁴ Reiss 1995, 239.

¹⁵⁵ Reiss 1995, 244-246.

the North Korean story that they had only separated plutonium once. Isotope analysis showed that separation had occurred three times. After additional analysis provided by a smear on a glove box inside the hot cells, inspectors determined that the North Koreans had conducted plutonium reprocessing in 1989, 1990 and 1991. This meant that North Korea had lied about its nuclear activities, and that it had accumulated more plutonium than it had admitted.¹⁵⁶

The IAEA inspectors, after failing to gain access to the restricted sites in late 1992 and early 1993, forwarded the matter to the IAEA board of governors. North Korea denied everything, including the IAEA evidence and the U.S. satellite photos presented. The board of governors issued a resolution calling for North Korea to accede to the inspection requests. North Korea refused the following day, threatening to take “self-defensive measures” to safeguard its sovereignty.¹⁵⁷

On March 12, immediately after Team Spirit 1993, the Kim regime announced that it was pulling out of the NPT, citing Team Spirit and the demand for special inspections by the IAEA. The response of the international community was to move back from insisting on special inspections to just focusing on keeping North Korea in the NPT. Over the course of the rest of year the IAEA attempts to gain access to the restricted sites were met with a series of obstructions and threats by the North Koreans. On November 1, 1993 the U.N. General Assembly passed a resolution

¹⁵⁶ Ibid., 246.

¹⁵⁷ North Korea actually cited the movie “Star Wars” as demonstrating that the United States was capable of “high tech sleight of hand” and had faked the satellite shots. Reiss 1995, 246-250.

criticizing North Korea's failure to adhere to safeguards. North Korea was the only dissenting vote.¹⁵⁸

By signing the Agreed Framework in October of 1994, North Korea agreed to freeze its nuclear activities in exchange for two light water nuclear reactors from the United States and heavy fuel shipments until the completion of the reactors to offset the energy lost by leaving inert the graphite moderated reactors that North Korea had in operation. The agreement also provided for inspections of the new, proliferation resistant reactors once operational.¹⁵⁹

After several years of relative quiet, on August 31, 1998, North Korea launched a Taepo-Dong 1 missile over the Sea of Japan. The Taepo-Dong 1 test is argued to have demonstrated progress towards an ICBM delivery system, and, therefore, evidence of renewed nuclear aspirations.^{160 161}

In 2002 the U.S. discovered that the Kim regime was engaged in an additional, covert nuclear program independent of the one at the Yongbyon facility, and

¹⁵⁸ Reiss 1995, 251-288.

¹⁵⁹ Unlike graphite moderated reactors, light water reactors are proliferation resistant because the spent fuel byproducts are far more difficult to weaponize. Snyder 2000, 164; Mearsheimer, 1994; and Reiss 1995, 288.

¹⁶⁰ Perry 2006. It is also possible that the intention of the test was to elicit diplomatic attention from the U.S., and that the technology was geared toward missile sales abroad. However, the size of the subsequent 2006 North Korean nuclear test also suggests an attempt to produce a bomb with a viable intercontinental delivery vehicle.

¹⁶¹ Despite the tensions stoked by the missile test, by 1999, near the end of the Clinton administration, talks with North Korea had progressed in a positive direction. The Kim regime seemed interested in engagement and movement toward normalization of relations. It appeared that the current level of U.S. engagement and investment gave the North Koreans the assurances they needed. The diplomatic environment with North Korea changed in early 2000, as the incoming Bush administration effectively cut off the dialogue with the Kim regime and proceeded to take a year and a half to formulate a new policy before re-engaging North Korea. This new policy never came to fruition. Perry 2006.

announced that North Korea had admitted in a high level meeting to having a clandestine highly enriched uranium (HEU) program, a claim disputed by the North Koreans.¹⁶² In response to U.S. evidence of a clandestine HEU program, in November 2002, the Korean Peninsula Energy Development Organization (KEDO) suspended the heavy fuel shipments to North Korea that had been promised under the Agreed Framework. Following the suspension of heavy fuel shipments by KEDO, North Korea restarted its graphite moderated Yongbyon reactor. The United States confirmed the restart in early 2003 around the same time that North Korea both expelled IAEA inspectors and began reprocessing spent fuel rods. On April 23, 2003, North Korea publicly announced it possessed nuclear weapons.¹⁶³

Between 2003 and 2005, six party talks were conducted between the regional powers and the two Koreas. These talks appeared to finally produce an agreement in August 2005. North Korea agreed to give up its nuclear weapons program, and the United States promised to not initiate military force to overthrow the North Korea regime and to restart the light water reactor program. However, the agreement was short lived; both the United States and North Korea insisted that the other be the first to take a substantive move forward.¹⁶⁴ On October 9, 2006, North Korea officially

¹⁶² Perry 2006; Kerr 2003; and Abromowitz 2003. Bruce Cummings disputes this date, claiming that the Clinton administration knew about this program in 1997 or 1998 and it was not outed until 2002 for political reasons. Cummings 2004, 60.

¹⁶³ Shambaugh 2003, 47; Kerr 2003; and Perry, 2006. Cummings offers an alternative explanation of the HEU program, claiming that the centrifuges used to create HEU are the same equipment used to provide LEU for the North's coming light water reactor facilities, and NK has clearly expressed strong interest in independence, and that because of this the existence of a "second nuclear program" is unclear. Cummings 2004.

¹⁶⁴ Park 2005, 76; and Perry, 2006.

declared the completion of a successful nuclear test.¹⁶⁵ On May 25, 2009 North Korea declared a second successful nuclear test.¹⁶⁶

There are three conclusions that should be drawn from the timetable of the North Korean nuclear program. First, the available information suggests a broad range of time for the original decision to produce nuclear weapons. The development of North Korean nuclear weapons took place over half a century. The lack of information about the internal decision making process of North Korea leaves us without a way of nailing down the date. However, the likely time period for the initial decision to produce nuclear weapons is between the construction of the thirty megawatt Yongbyon facility in 1985, and the start of construction on the Yongbyon fuel rod reprocessing plant in 1988.¹⁶⁷

Second, it is likely that the decision was made in stages. For North Korea, weapons development was likely an ultimate goal from the beginning of its nuclear program. However, the point at which they chose to accelerate the program by building both reprocessing facilities and beginning new, larger power plants occurred in the late 1980s. The physical evidence suggests the late 1980s as the point at which North Korea stepped up the clock on its nuclear weapons program.

Third, after receiving help from the U.S.S.R. and China as early as the mid 1950s and having a thirty megawatt nuclear reactor running by 1986, North Korea did

¹⁶⁵ Hui 2007.

¹⁶⁶ Sang-Hun 2009.

¹⁶⁷ Reiss 1995, 234; and Spector 1991, 10.

not produce a nuclear weapon until the late 1990s at the earliest, and 2006 at the latest. This timeline, like the South African case, belies the idea that any country can simply throw enough money at its nuclear weapons program and have it materialize overnight. Like South Africa, even after North Korea had the necessary facilities for plutonium reprocessing in 1988, it took many years to produce a nuclear weapon. Had North Korea not had an existing, longstanding domestic nuclear program as it entered post-Cold War isolation, its decision calculus would likely have been entirely different.

Analysis of the North Korean Case

This section will summarize the conclusions resulting from testing the arguments explained in Chapter II against the North Korean case in three main points. First, the traditional security arguments do not fully explain the acquisition of nuclear weapons by North Korea. Second, analysis of the North Korean case strongly supports the premise that regime security theory best explains North Korean behavior near the end of the Cold War and during the post Cold War period. Third, neither the international economics argument nor the systemic prestige argument adequately explains the North Korean case. Support for these conclusions will be developed in three subsections. These will:

- Test the strategic nuclear threat and conventional security threat arguments;
- Apply regime security theory to the North Korean case; and

- Attempt to apply the international economic and international prestige arguments to the North Korean case.

Traditional Threat Arguments

The Strategic Nuclear Threat against North Korea

North Korea had a legitimate fear of U.S. nuclear attack during and after the Korean War. The United States publicly discussed using nuclear weapons against the Kim regime three times during the Korean War - once at the beginning, when U.S. forces were pushed back to Pusan, again, right after the Chinese entered the war, and again, right after Eisenhower took office. After the Korean War the United States adopted a doctrine of “massive retaliation” which included a corollary that stated its willingness to use nuclear weapons to resolve regional issues. The strategic nuclear threat hypothesis provides a strong explanation of North Korean actions in the era of the Korean War. It is conceivable, even likely, that the U.S. nuclear threat prompted the North Korean artillery deterrent and the extensive North Korean bunker system.¹⁶⁸

While it is undeniable that the United States did give North Korea cause to have strategic nuclear fears, these fears do not explain North Korean behavior in the late and post-Cold War eras. By the late 1980s the situation both in North Korea and around the world had changed drastically. First, North Korea had successfully placed

¹⁶⁸ Perry 2006, 81; and Spector 1991, 9-10.

artillery batteries that could level Seoul, a city of 12 million, at a moment's notice. As South Korea had by that point developed into a key Western ally, the North Korean artillery alone was sufficient to deter the United States from seriously contemplating nuclear attack against the Kim regime. Second, even if the Kim regime was not convinced by its own deterrent capacity, nuclear weapons had not been used in war for almost fifty years, and the international cost to U.S. interests of launching a nuclear attack against North Korea vastly outweighed any potential benefits. There are other reasons why a nuclear attack by the United States was incredibly unlikely, including rising international and domestic norm against nuclear weapons use and the U.S. domestic political cost. However, even if we assume that North Korea discounted these rationales completely or had no knowledge of them, it would be absurd to claim that the Kim regime was so out of touch with the climate of international relations as to not understand the costs to the U.S. of such an attack. By the time that North Korea made the decision to build the reprocessing plant at the Yongbyon facility, the chances of a United States nuclear attack, realistic in the 1950s, was incredibly remote.¹⁶⁹

Additional problems for a strategic threat explanation of North Korea nuclear development arose in 1991 when President Bush announced the unilateral withdrawal of ground and sea launched nuclear weapons from overseas. The remaining U.S. nuclear weapons on the Korean Peninsula, those designed for aerial delivery, were removed later that year. By the end of 1991, well before North Korea had completed

¹⁶⁹ Robinson, 2004.

any nuclear weapons, the United States had unilaterally and without precondition removed all U.S. nuclear weapons from the Korean peninsula.¹⁷⁰

The information available in the North Korean case undermines the strategic threat theory's applicability to that case. The evidence shows that there was an initial strategic nuclear threat against North Korea in the 1950s, but no similar threat during the expansion of the weapons program beginning in the early 1980s.

The Overwhelming Conventional Threat against North Korea

The overwhelming conventional threat argument loses credence over time in the North Korean case. South Korea has not posed a conventional threat to North Korea since the Korean War. In the time period following the Korean War, North Korea possessed a far larger military than South Korea, and, long before modern technology eclipsed North Korea's numerical advantage, the Kim regime had firmly established the artillery batteries aimed at Seoul. Further, the South Korean military composition was designed to be uniquely suited for defense. At no time since the Korean War South Korea posed a conventional threat to North Korea.¹⁷¹

The conventional military threat theory has some support in the period following the Korean War when considering the possibility of conventional attack by the United States. However, the artillery deterrent stifles the feasibility of conventional

¹⁷⁰ Reiss 1995a, 237.

¹⁷¹ Beldecos 1995; and O'Hanlon 1998.

U.S. attack in the same way it does nuclear attack, and so the overwhelming conventional threat argument cannot explain North Korean nuclear weapons development following the establishment of that deterrent.

Regime Security Theory

This section summarizes the application of available evidence regarding North Korea's domestic and international context to the timeline of the regime's nuclear weapons program. It then discusses the results of testing whether that evidence supports the conclusion that regime security theory provides a strong explanation of North Korea's acceleration in nuclear development and eventual weapons program.

The inner dialogue of the Kim regime is not public knowledge. However, I argue that it is likely that the Kim regime understands that, if it possesses a nuclear deterrent, regime collapse is no longer a viable policy preference for the United States. I also argue that the regime is aware of the potential cost of the collapse of a nuclear state. Further, it understands that, in an effort to prevent a catastrophic collapse, the United States has every incentive to cooperate with China in providing enough aid to keep North Korea afloat. The regime understands that the U.S. will be compelled to do this regardless of the level of North Korean domestic decay or how diplomatically isolated North Korea remains.

The North Korean case supports regime security theory; however the logic is slightly different than that applied to South Africa. South Africa sought to change

great power preference in order to coerce the Soviet Union to end interference aimed at destabilizing the state. North Korea sought to change great power preference in order to coerce the United States to aid in propping up a failing state instead of supporting its eventual collapse.

Because we already know that North Korea did possess the capacity to develop and test nuclear weapons, in order for regime security theory to provide an adequate explanation of the North Korean case three additional things must be true.

- The Kim regime must be dealing with a period of increasing domestic instability or a strong potential of future increasing domestic instability.
- The Kim regime must perceive that it is experiencing a period of international isolation, including pressure from at least one major pole for domestic reform and fear that one or more of the major powers is considering interfering with its domestic affairs.
- The timing of the decision to build nuclear weapons should correspond to the changes in the independent variables.

Evidence of North Korean Domestic Instability

Due to the isolationist nature of the Kim regime and the continuing lack of reliable information coming from North Korea, most of the information about domestic instability in North Korea necessarily comes from refugees and defectors. This information cannot be fully trusted. Refugees have a strong tendency to

exaggerate the direness of the situation from which they escaped, and political defectors have a clear interest in portraying the worst possible picture of the state from which they defected. What we do know is that the North Korean economy and food infrastructure were on the verge of collapse by, at the latest, the early 1990s. This crisis was decades in the making. North Korean harvests began declining in the 1970s with the beginning of *juche* agricultural practices. While it is unclear that the regime was aware of the full extent of the agricultural decay, as its officials were often fearful of reporting shortfalls, the famine developed out of a steady, three decade decline in harvest caused by over-planting, lack of crop rotation, single crop planting and extensive hillside planting which eroded the hills so that the crops were washed away by the rain.¹⁷² The aggregate economic situation, the mere existence of high level political defectors from North Korea, the multitude and similarity of refugee accounts emerging from the Hermit Kingdom, and the increasing frequency of defectors and accounts over time, give both sources some credence. While any given individual refugee cannot be counted on as a credible source, in numbers, the accounts become more and more difficult to dismiss.¹⁷³

During the 1990s, North Korean refugee stories were initially dismissed to a large degree, despite their numbers, because so many sounded extreme beyond belief. Of the thousands of refugees that fled the country during the famine, many reported

¹⁷² Becker 2005, 101-123.

¹⁷³ The highest ranking North Korean defector to date, Hwang Jang yop, the creator of the *Juche* ideology and Kim Il Sung's top advisor on ideology, defected to South Korea in 1997. Hwang claims that Kim Jong Il has perverted Stalinism from a system where the dictator served the people to a feudal system where the people served the dictator. Becker 2005, 64-66.

that the famine was so severe that some of the population had resorted to acts of cannibalism. There are multiple accounts of citizens being shot after they were caught luring street children into their homes or shops, killing them and then mixing the meat with pork to sell at the market.¹⁷⁴

Refugee reports detailing the results of food shortage also include accounts of increasing unrest as the food ran out. Desperation for food led to an increase in violent attacks, protests, strikes, uprisings, sabotage of government buildings and the killings of officials and their families by the starving population. This unrest tells us much about the condition of the North Korean state. Conditions during the famine were unstable to the point that citizens participated in public uprisings in a country where the wrong political discourse could result in being sent to a death camp.¹⁷⁵ Kim Jong Il responded to domestic dissent with waves of countrywide purges and summary public executions. In addition, beginning in 1995, once food shortages became severe enough to be felt at the higher levels of society, Kim Jong Il channeled much of the food aid coming into the country to the upper class and the military in order to maintain their loyalty. The Kim regime's efforts, combined with continued food and fuel aid shipments, successfully kept a lid on the instability resulting from the 1990s famine. It is apparent, however, that the Kim regime's efforts to maintain stability within the country have at many times been dependent on foreign largess.¹⁷⁶

¹⁷⁴ Becker 2005, 29.

¹⁷⁵ *Ibid.*, 36.

¹⁷⁶ Park 2005; and Becker 2005, 37,64-66.

The idea that foreign aid is a necessity for the North Korean regime to avoid collapse is supported by concerns expressed within the Chinese government. The Chinese are so concerned with the stability of North Korea that any Chinese action meant to drive home a point, such as temporarily shutting down an oil pipeline, must be gauged by how it will affect the limited domestic stability of North Korea.¹⁷⁷

While it bears repeating that much of the evidence of regime instability coming out of North Korea is not completely reliable, the unmistakable overall picture is of a country on the brink of collapse. The available information supports the assertion that there has been a period of increasing domestic instability in North Korea, rooted as far back as the beginnings of the Kim regime and hitting critical levels in the 1990s.

A Perception of International Isolation

During the Cold War North Korea was strongly aligned with the communist bloc. The breakup of the communist bloc and eventual fall of the Soviet Union was diplomatically disastrous for North Korea. Well before the Soviet Union finally fell, North Korea's patron had grown increasingly distant and less cooperative. Following the fall of communism in eastern Europe and the disappearance of the Soviet Union, North Korea became more isolated than at any previous point in its history. This era of increased isolation was characterized by the self-perceived ideological victory of the West, the very real decrease in recipients of Western ire, and the decrease in North

¹⁷⁷ Park 2005.

Korea's allies. The dearth of allies and patrons, combined with increasing international attention to the North Korean domestic situation, meant a very frightening landscape for the Kim regime as it entered the 1990s. General world opinion of the Kim regime was unsympathetic. On November 1, 1993, the U.N. General Assembly passed a resolution criticizing North Korea's failure to adhere to IAEA safeguards. North Korea stood alone, the *only* dissenting vote.¹⁷⁸

This section will present evidence of increasing regime isolation over the course of the Kim regime, and then check for the specific conditions of the perception of isolation variable. Evidence will be subdivided into four categories, and will consist of North Korea's relationship with the United States, South Korea, China and the Soviet Union. The specific conditions of the isolation variable that will be checked are: first, that the Kim regime feared domestic interference by one or more of the great powers; and second, that, in addition to being isolated internationally, the Kim regime *perceived* that it was broadly isolated internationally.

The United States

After the United States and the U.S.S.R. divided the Korean Peninsula following World War II, the U.S. retained control of South Korea and set up a government sympathetic to the West. The United States then proceeded to participate in the Korean civil war on the side of its South Korean allies. U.S. involvement in the

¹⁷⁸ Reiss 1995a, 243.

Korean War, subsequent entrenchment in South Korea, support of the South Korean government, and threats of nuclear attack against the Kim regime determinately established the United States as the primary great power threat to North Korea.¹⁷⁹

The United State's interests in Korea shifted significantly during the period following the Korean War. First, as the threat of renewed war on the peninsula decreased, U.S. attention shifted to combating the spread of communism elsewhere, and its interests in Korea shifted to maintenance of the status quo - an isolated and weak North and an economically prosperous, pro-West South. Second, beginning in the 1980s, the U.S.'s main interest in North Korea became preventing the Kim regime from successfully building nuclear weapons. In addition to these two major shifts, the United States joined South Korea and the world community in condemnation of the Kim regime's human rights record and the domestic situation in North Korea. It also condemned North Korean activities against South Korea, and, following a North Korean bombing of South Korea in 1987, officially added North Korea to the U.S. list of state sponsors of terrorism in 1988. In the late and post-Cold War world it became feasible for the U.S. to pressure other countries to cut aid and impose sanctions in a way that was not possible during the Cold War. The U.S. had been constantly applying pressure against North Korea since the early 1980s when their attention returned to the North Korean nuclear program. Fear of U.S. intervention within North Korean borders replaced fear of an actual military strike.¹⁸⁰

¹⁷⁹ . During the early 1950's the United States threatened or publicly discussed the use of nuclear weapons against North Korea on no less than three occasions. Perry 2006, 81.

¹⁸⁰ Sciolino 1988; and Spector 1991, 8.

While it is impossible to be certain of the perspective of the North Korean government towards the U.S., it is safe to say that, even during times of low tension, it has feared U.S. interventionism on the peninsula, either through or on behalf of South Korea. This is supported by repeated requests for security assurances from the U.S. as part of or as a precondition to multiple bargains.

The Team Spirit joint military exercise between the United States and South Korea exemplifies the perspective of North Korea towards the great power's relationship with its southern neighbor. North Korea's distaste for military cooperation between the two countries has allowed the U.S. to use Team Spirit to pressure North Korea on weapons inspections issues. In 1993 North Korea responded to threats to resume Team Spirit, which had been canceled in 1992, by threatening to leave the NPT in response to what it saw as United States interference with North Korean internal affairs. North Korea claimed that it would be forced to leave the NPT until "the U.S. stopped its nuclear threats against North Korea" and the IAEA returned to "its principle of independence and impartiality." While this threat was clear posturing, as the U.S. had not threatened North Korea with nuclear weapons and there was no evidence that the IAEA was biased or coerced, it is evident that the Kim regime was threatened by the prospect of U.S. pressure coercing it into accepting internal inspections.¹⁸¹

¹⁸¹ Reiss 1995, 252.

South Korea

South Korea has had a conflicted relationship with its northern counterpart. North Korea represents the most immediate military threat to South Korea. It has built a massive artillery deterrent aimed at Seoul and committed numerous acts of aggression against South Korea since the Korean War.¹⁸² However, the division of Korea split many families, which left many South Koreans sympathetic to the living conditions of their northern counterparts, many of whom are literally brothers and sisters. As a result of these ties, South Korea sent and supported food and energy aid, as well as repeatedly tried to move toward reconciliation with the North despite repeated limited engagements initiated by the North.¹⁸³

The relationship between North and South Korea has changed over time in response to the vastly widening gap between the wealth and productive capacity of the two countries. After the Korean War, South Korea was concerned primarily with

¹⁸² These acts include, but are not limited to: a suspected attempt to sabotage the Wolsong nuclear reactor in 1983, an assassination attempt in 1983 against Chun Doo Hwan which killed members of his entourage, including four cabinet level officials, and a bombing of a Korean Airlines passenger jet, killing everyone onboard in 1987. Spector 1991, 8.

¹⁸³ Two major moves toward reconciliation occurred during the end-of-Cold-War period. The first was the Sunshine Policy initiated by Kim Dae Jung in 1998. The second was a series of steps toward reconciliation on nuclear and other issues taken in the early 1990s, spurred by the Sunshine policy and North Korea's new openness to international negotiations. In 1991, South Korea offered the North a bilateral, intensive inspections regime to be implemented after U.S. nukes were removed from South Korea. In November of 1991, President Roh Tae Woo unilaterally declared that Seoul would use nuclear energy for peaceful purposes only and asked Pyongyang to do the same. In December, the two parties signed a reconciliation agreement that omitted the nuclear issue; however, later that month they produced the "Joint Declaration on the Denuclearization of the Korean Peninsula." While these moves towards reconciliation and denuclearization were ultimately unsuccessful they are important evidence that South Korea (and, to some degree, North Korea), felt that reconciliation was within their interests. Reiss 1995a, 237-239.

deterrence of the North. Over time, the state of the North Korean economy increased South Korean humanitarian interest and added the possibility of the collapse of the Kim regime to South Korea's concerns. In addition to concern for what would happen from a military standpoint, the South Korean economy, while relatively strong, would suffer significantly under the burden of absorbing the millions of people who would need help should the Kim regime collapse. For both of these reasons, as well as humanitarian ones, while the South Korean government has repeatedly condemned actions of the Kim regime, the national interests produce a policy preference for a gradual, controlled opening of North Korea and reform of its economy, a process that would end in reconciliation, but not produce the same level of hardship in South Korea.¹⁸⁴

The separation in the South Korean mind between the Kim regime and the North Korean people has allowed the Kim regime to exploit the country that is its competition for control of the peninsula during the past few decades. North Korea has raised tensions through limited attacks and spy rings and pushed for concessions, while betting that South Korea is unwilling to go to war and will continue to provide humanitarian relief regardless of North Korean military actions.¹⁸⁵

¹⁸⁴ Policy stance toward North Korea, hard or soft, is one of the most important domestic political issues in South Korea.

¹⁸⁵ South Korea uncovered a North Korean spy ring in 1993. Reiss 1995a, 244-245.

China

China's interest in North Korea has been defined by their shared border. In the 1950s this meant fighting in the Korean War in order to prevent a bastion of capitalism from taking hold. Through the Cold War this meant acting as a patron of the Kim regime for the same reason. In the post-Cold War world, proximity created a new primary interest. Regional instability, influx of refugees, and the possible nuclear repercussions that could be caused by the collapse of the Kim regime changed the defining interest of China in North Korea to regime stability.¹⁸⁶

Believing the Kim regime's policies are unsustainable, Beijing has been the strongest external advocate of overhauling North Korea's *juche* system.¹⁸⁷ China has extended food and energy aid to the ailing regime and allowed significant refugee influx from North Korea, despite the cost to northeastern China. This is most likely because China viewed the influx as a safety valve for the Hermit kingdom.¹⁸⁸

China's relationship with the Kim regime is not one dimensional. Like the U.S., China seeks and has sought to become the dominant power on the Korean peninsula. In order to reinforce its role as the key actor on the peninsula, China has both prevented the international community from undertaking measures that it considers counterproductive, and sided against North Korea when it feels its

¹⁸⁶ Shambaugh 2003, 47.

¹⁸⁷ Chinese critics compare North Korea to Maoist China and argue that the only option is reform. *Ibid.*, 46-50.

¹⁸⁸ *Ibid.*, 49.

problematic client state is out of line. China has also maintained good economic relations with South Korea since their reconciliation in the early 1990s. Today, South Korean Chinese relations dwarf North Korea's relations with its closest "ally".¹⁸⁹

China, like the U.S., would prefer that North Korea not possess nuclear weapons. However, unlike the U.S., this preference is part of its broader goal of regional stability, not an individual top priority. The current Chinese perspective is that the North Korean nuclear program is more bark than bite; they view it as a bargaining chip used to gain concessions rather than as a security threat.¹⁹⁰

Chinese incentives toward stability and against the costs of regime collapse have meant that, in the past, North Korea has had leeway to act out toward China in a manner that belies their relative sizes and location. In the post-Cold War era North Korea continued its nuclear weapons development and belligerent actions toward South Korea over Chinese objections. However, China's demonstrated willingness to cut off aid supplies when the Kim regime gets out of hand has acted as a restraint on North Korean brinkmanship behavior against South Korea and the West.

China did block sanctions against North Korea twice during 1993, saying that such efforts would only complicate matters. Since 1994 China has said that it views coercive strategies as counterproductive in gaining North Korean cooperation, fearing that such strategies could prompt the regime to take desperate actions.¹⁹¹

¹⁸⁹ Shambaugh 2003, 51; Reiss 1995a, 243; and Spector 1991, 10.

¹⁹⁰ Shambaugh 2003, 52-55; and Park 2005.

¹⁹¹ Reiss 1995a, 250; and Shambaugh 2003, 55.

In the early 1990s, when Beijing promised Pyongyang that Chinese reconciliation with South Korea would not hurt relations with North Korea, China added a caveat: China would continue to guarantee the existence of North Korea as long as North Korea abandoned its nuclear weapons program.¹⁹² In early 2003, China warned North Korea that renewed provocations against the U.S. could strain Chinese–North Korean relations. To reinforce that point, China shut off an oil pipeline to North Korea for three days in March, officially citing technical problems. According to a Western diplomat, the Kim regime got the message – behave.¹⁹³

It is fair to say that while China does not wish North Korea to fail, it is not pleased with the conduct of the North Korean government. The Chinese preference for regime survival should not be misconstrued as an affinity for the Kim Regime. Beijing has considered North Korea a “headache” since the 1950s, and, at times, Chinese officials speak of the North Korean situation with despair and disdain. Finally, while China claims to want to work against the continued isolation of the Kim regime, its punitive attitude and veiled threats towards the Kim regime indicate that China’s preferences lie in nothing more than dealing with a problem neighbor however feasible.¹⁹⁴

¹⁹² Reiss 1995a, 243.

¹⁹³ Park 2005.

¹⁹⁴ Chinese critics have complained about North Korea for the following reasons: the cult of personality around the Kim dynasty, the Stalinist security state, the command economy, the poverty, the use of scarce resources by the military, the mass mobilization techniques, the condescension of North Korean officials to their Chinese counterparts, and the autarkic, xenophobic paranoia. An additional indication of tense relations is the rarity and superficiality of military officer exchanges between the two governments. Shambaugh 2003, 46–47.

Russia

In 1961 the Soviet Union signed a defense pact with the Kim regime which called for automatic intervention should North Korea be invaded. During the Cold War period the Soviet Union was an ideological ally of North Korea, but often at odds with the Kim regime. As early as 1965 there was significant tension in the client-patron relationship. North Korea worried that the Soviets would sell them out, and the Soviets accused the Kim regime of being Chinese pawns. The Kim regime's emphasis of independence from Soviet or Chinese "control," a product of the *juche* philosophy, caused additional tensions with its Soviet patron. During the late Soviet period, Moscow repeatedly pressured Pyongyang into complying with non-proliferation guidelines. In 1990 Soviet Foreign Minister Shevardnadze pressured Pyongyang to sign the IAEA safeguards agreement, which produced an especially hostile atmosphere between the two countries. When the Soviets moved toward improving relations with Seoul, the Kim regime's response to the overtures was to threaten the Soviets, claiming it would embark on a nuclear development program and would recognize Japanese claims to four U.S.S.R. occupied islands.

The North Korean threat lacked teeth. The Kim regime already had an active nuclear program, and recognition of Japanese claims to the islands would not affect the status of the islands in the slightest. Nevertheless, Moscow responded harshly. The U.S.S.R. both threatened to cut off all nuclear cooperation if the North Korean nuclear

facilities were not placed under IAEA safeguards and pointedly ignored the North Korean threat, establishing diplomatic relations with Seoul within the month.¹⁹⁵

What relations did exist between Moscow and Pyongyang died with the Soviet Union. Russia, no longer concerned with propping up an ideological ally, continued improving the relations already established with South Korea by the collapsing Soviet Union. Russia allowed South Korea entry into the UN in 1991, and both withdrew its promise of military aid and renewed its moratorium on nuclear cooperation with North Korea in 1992.¹⁹⁶ Post-Cold War Russia washed its hands of the problems of the Hermit Kingdom. It took policy leads from the U.S. and China on the remaining nuclear issues. The new Russia remained open to continued commercial ventures with the Kim regime regardless of other issues, but that has been the extent of its cooperation to date.¹⁹⁷

In November 1992, the new Russian government frankly abandoned any commitments to North Korean defense. Boris Yeltsin, on a visit to Seoul, declared that Russia would halt all military assistance to North Korea, and stated that the 1961 defense pact, which called for automatic intervention in case North Korea was invaded, needed to be “either canceled or drastically revised,” adding that Russia did “not intend to render such military assistance”. Yeltsin also announced that Russia would not resume any nuclear cooperation with the Kim regime until they fully

¹⁹⁵ Reiss 1995, 237.

¹⁹⁶ Reiss 1995, 237-243.

¹⁹⁷ Park 2005.

implemented IAEA safeguards, a statement denounced by Pyongyang as “foolish and despicable”¹⁹⁸

Checking the Conditions of Isolation

North Korea clearly feared domestic interference from the United States following the inception of the North Korean nuclear program. However, it is less obvious that it was actively concerned with domestic interference before beginning along the path of nuclear weapons development. Before the acceleration of its nuclear program North Korea's concerns about U.S intervention were twofold. First, it feared that the United States would both aid in efforts to undermine the regime by supporting the erosion of the wall blocking information getting into North Korea through the mechanisms of South Korea and individuals operating within the North. Second, it feared that because of the U.S. preference for regime overthrow, the U.S. would use international pressure to undermine the amount of aid North Korea would receive in the coming food shortage, a shortage most certainly long predicted within North Korea. This fear came true as the United States did use cutting off aid and pressuring other countries to do the same as a coercive diplomatic tool against North Korea during the early 1990s. Not only did North Korea fear U.S pressure towards destabilization, (both from within, through subversion, and without, through

¹⁹⁸ Reiss 1995, 243.

diplomacy) but it also had a strong incentive to coerce positive U.S. interference, needing food imports to stabilize the threat of famine.

It is also clear that the Kim regime understood its international isolation. The Kim regime's two main allies, the Soviet Union and China, both publicly expressed distaste for the regime's particular policies early in the Cold War period. The repeated attempts of the Kim regime to play off the Soviets and Chinese against each other demonstrated North Korea understood how tenuous its relationship was with both powers. Further, the movement of both the Soviet Union and China towards economic relations with South Korea prior to the end of the Cold War was a clear signal to North Korea that its relatively severe isolation was increasing. The regime's loud objections and threats towards its patrons attest to its understanding of this shift.

Checking the Timing of Nuclear Development

The lack of reliable information coming out of North Korea makes checking the timing of the regime's nuclear decisions against regime instability and perceived isolation inexact. The North Korean nuclear program began in the 1950s at a point when the Kim regime was relatively stable and possessed a solid patron in the Soviet Union. The nuclear threat from the United States during this period meant that the strategic security threat explanation could account for all North Korean nuclear developments. Therefore, regime security theory does not explain the early decision to embark on a nuclear development program. The likely timetable for the acceleration of

the North Korean nuclear weapons program is the late 1980s, in the period leading up to the fall of the Soviet Union and the Eastern bloc.

Did North Korean nuclear development correspond with a period of increasing international isolation and a period of domestic instability or future projected domestic instability? This question requires refinement into four separate questions. First, was North Korea facing increased domestic instability during the 1980s? Unfortunately, a reliable answer to that question is unavailable. Second, did North Korea expect to face future increased domestic instability in the late 1980s? I argue that it is likely that the Kim regime was aware of the coming period of increased domestic instability. Third, was North Korea facing increased international isolation during the 1980s? Fourth, did North Korea expect to face future increased international isolation in the late 1980s? I argue that North Korea's international isolation remained at a constant, high level throughout the 1980s, and that, with the beginning of the fall of Soviet satellites in eastern Europe, the Kim regime understood that its relations were likely to further deteriorate.

The primary factor that caused domestic instability in North Korea was the collapse of the agricultural economy. The Kim regime may have been unaware of the full extent of its economic downturn at the beginning. During the late 1970s Kim Il Sung was receiving news from his subordinates of higher than actual harvest results. However, based on its behavior, described below, it is unlikely that the Kim regime was ignorant of the continual worsening of the agricultural situation in its own country over the following twenty years. The Kim regime oversaw the large scale industrial

projects that failed to increase food or energy production. The regime also pioneered government programs to supplement harvests with “food substitutes.” Perhaps most telling, the Kim regime stopped publishing agricultural statistics in 1978 after the predicted harvest came up twenty to thirty percent short. Clearly, by the late 1970s, the government was aware that its agricultural policies were not providing the intended results; instead North Korea faced a stark reality of an ever decreasing food supply.¹⁹⁹

It is clear that the Kim regime understood, for the most part, the severity of the food production issues in North Korea earlier than 1980. With that conclusion in mind, it seems unlikely that by the late 1980s the regime was unaware that the country was at the brink of famine. While, again, the limited information available makes a concrete statement impossible, it is far more likely that the Kim regime feared increasing future domestic instability caused by food shortages in the late 1980s than that it did not.

North Korea’s level of international isolation has always been relatively high. The Kim regime was isolated from the developed West, and aligned with the Soviet block during the Cold War. Directly following the Korean War the Soviet Union was an active patron, providing a mutual defense pact and supplying the Kim regime with nuclear power, technology and training. The Soviet relationship quickly degraded. As early as the mid 1960s the Russians had taken a cool tone toward North Korea who had repeatedly attempted to play off the Soviet Union and China against each other in bids for patronage. From the late 1960s onward North Korea’s relations with its patron

¹⁹⁹ Becker 2005, 108-109.

states were cool and antagonistic to varying degrees, though they remained under the Soviet nuclear umbrella.

Previous to the fall of the Soviet Union, as the Russians began repairing relations with South Korea over North Korean objections, it became clear that the alliance with North Korea had degraded to a formality. As the Eastern bloc began to fall, all Soviet support for North Korea dried up, and the Russian Federation quickly rescinded any commitments on the peninsula. China has retained a functional relationship with the Kim regime, though it has been strained since the mid 1960s onward. The People's Republic's primary interest, at this point, is keeping the ailing regime from disgorging too many refugees into northern China. While North Korean international relations did plummet during the late 1980s, it is not clear that this was foreseeable by the regime. Nevertheless, the constant isolation of North Korea, a problematic ally to the East and a pariah state to the West, means that it met the conditions of the international isolation variable during the period of perceived future instability.

Discussing Alternative Explanations

Evidence in the North Korean case can be applied to the international economic integration and prestige arguments of nuclear proliferation. As North Korea has not been a democracy at any point, democracy, democratic transition, and domestic politics arguments cannot be applied to the case.

The North Korea case appears consistent with the argument that high levels of economic integration undermine the chance that a state will develop nuclear weapons. North Korea's independence oriented *juche* philosophy and low levels of international cooperation have produced a state with extremely low levels of international economic integration. However, because the Kim regime was never economically integrated, North Korea can only present a consistent case, and does not directly support or undermine the international economic integration argument.

The domestic prestige argument, that politicians within a state pursue nuclear weapons in order to enhance their hold on power, is applicable to North Korea. The Kim regime has used its nuclear capacity as a propaganda tool on the general population repeatedly.²⁰⁰ However, the Kim regime has maintained unprecedented control over media and information. North Korea's propaganda machine claimed for years that North Korea was a socialist paradise with far higher living standards than the rest of the world, while much of the population lived near starvation. The regime could advertise a successful nuclear weapons program as public propaganda whether or not one actually existed. This makes the domestic prestige gains of nuclear weapons with regards to the general population meaningless.

On the surface, the North Korean case appears to support the international prestige argument. The Kim regime has often publicly emphasized its nuclear capacity, threatening "retaliation" for actions of foreign governments to which it

²⁰⁰ Myers 2009; and Becker 2005.

objects.²⁰¹ However, the Kim regime's incentives for advertising its nuclear arsenal are most likely not a push toward regional hegemony, and far more likely a method of altering the perception of other powers in order to make North Korea a less appealing target. The geopolitical situation of North Korea, which makes the argument that North Korea wants prestige in order to make itself a less appealing target more likely, makes the prestige argument effectively indistinct from traditional security arguments, and, as discussed in Chapter II, impossible to distinguish.

Conclusions

After reviewing the specifics of the North Korean case, traditional security explanations appear to do a poor job of explaining the Kim regime's decision to accelerate its nuclear program in the late 1980s. Additionally, neither prestige nor international economic integration arguments can provide a compelling explanation of North Korean behavior. Regime security theory does provide an explanation consistent with the information available regarding North Korea. In the period concerned, the late 1980s, North Korea had a preexisting nuclear program, was internationally isolated, feared increasing domestic instability and embarked on an acceleration of its nuclear weapons program.

²⁰¹ Sang-Hun 2008; and Reiss 1995a.

If regime security theory does explain North Korea's behavior, then we should expect certain future behavior. Specifically, we should see North Korea unwilling to relinquish a minimum nuclear deterrent.

CHAPTER V

CONCLUSION

Scholars debate whether states develop nuclear weapons for reasons of security, prestige, or domestic politics. The problem that tends to arise with these approaches is that, because they come out of individual worldviews, they often provide blanket explanations for a state's decision to go nuclear. Such decisions are both complex and context dependent, and may have entirely disparate causes in separate cases. This same pressure in theory creation tends to produce an overemphasis on parsimony at the cost of overlooking variables critical to particular subsets of cases. This is the eternal trade-off of any modeling endeavor – the battle between abstraction and accuracy.

I argue that in order to adequately explain cases of nuclear development not satisfactorily accounted for by existing theories, a more contextual, less general theory is necessary. My thesis has focused on two cases which are significantly similar to each other and significantly dissimilar to other cases of nuclear proliferation to date. Neither South Africa nor North Korea has been adequately explained by existing theories, and both cases are especially problematic for existing security theories of nuclear proliferation. After comparing the cases, a striking number of similarities were apparent. During the period of their nuclear development both South Africa and North

Korea had domestic regimes which had preexisting nuclear resources, had been ostracized by the international community, were the targets of ire of at least one major pole of world power, and experienced a period of domestic instability.

Regime security theory was developed out of this comparison. Regime security theory argues that in cases of no clear strategic threat, regimes which possess some preexisting nuclear capacity may respond to international isolation, pressure from a major power(s), and increasing domestic instability by developing nuclear weapons. Nuclear weapons allow such a regime to change the preferences of the great powers because of the costs and risks associated with a nuclear armed state. The great power(s) will favor maintenance of the status quo and may even prop up a nuclear armed regime it intensely dislikes.

Regime security theory is useful primarily as a means to explain and understand the decision making process of small potential nuclear powers. The utility of understanding this decision making process is that it allows for more informed foreign policies intended to prevent the completion of a nuclear program. There are four significant policy implications that come out of this thesis. The first three policy implications are connected. Each is derived from the causal processes laid out in regime security theory and explains that if you remove one of the variables which lead to non-standard nuclear weapons development, it will not occur.

The first preventive policy suggestion is that because small or poor states without a preexisting resource advantage will not develop nuclear weapons, removing or denying such an advantage significantly decreases the chances of proliferation.

Both South Africa and North Korea had significant nuclear programs, developed via cooperation or funding from the great powers, before they decided to develop nuclear weapons. The second policy suggestion is that the marked inclusion of the state in the international environment and non-coercive, non-threatening interaction from the great powers may serve to ameliorate the isolation variable. The third policy suggestion is that working with the regime to ensure domestic stability will remove the main pressure towards developing nuclear weapons. A stable, secure regime will not have the same incentives to proliferate.

Finally, regime security theory suggests that coercive diplomacy, trade sanctions, limited military actions and threats will be ineffective measures in preventing proliferation. Once a regime feels threatened, alone and unstable, it will be incredibly reluctant to give away its nuclear potential. The only coercive strategy that is likely to be effective against such a regime is the costly option of regime overthrow; anything less will serve to justify the regime's perception of the hostile world around it. It will back further into a corner, compelled to complete its nuclear program for protection.

This thesis has been an exercise in theory creation, not theory testing. Much further research is necessary to test the applicability of the theory to alternate cases. Two subsets of cases provide possible candidates. The first subset is cases in which states without clear strategic security threat developed significant nuclear weapons

programs that did not reach fruition.²⁰² These cases would be specifically interesting to look at to determine why they did not reach fruition and check whether that explanation is consistent with regime security theory. Such cases might include Egypt, Congo and Libya. The second subset is cases where states which possibly meet all the conditions of regime security theory have not attempted to develop nuclear weapons. If cases exist in which the condition and independent variables were met and the state did not attempt to develop nuclear weapons, regime security theory would be undermined.

In a broader theoretical context this thesis undermines the idea that regime interests are analogous with state interests and thus casts doubt on the black box as a useful construct. Further research which explains instances of “irrational” state behavior by exploring contexts in which centralized governments make decisions irrational for the states but rational for the government could be informed by the observations in this thesis.

Despite the significant task of theory testing which remains to be accomplished, this thesis has produced and explained a testable theory of nuclear proliferation which provides an internally consistent explanation of previously problematic cases. While regime security theory lacks the extreme parsimony of

²⁰² Possible test cases for regime security theory do not include every country which has ever considered embarking on a program of nuclear development. Walsh, citing a source in the Egyptian defense department states: “One person, when asked about radiological weapons, responded that ‘naturally,’ Egypt had looked at a ‘trash bomb.’ He explains that ‘in every military there are dreamers and exploiters’ who convince their bosses to back some scheme.” Such discussions within a government are, on their own, not evidence of a “near miss” for proliferation. Walsh 2001.

traditional security theories, it is my hope that what is lost in generality by opening the black box is made up for with more context specific, useful, policy insights.

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