NUCLEAR DISARMAMENT THROUGH A REALIST-LIBERAL-CONSTRUCTIVIST MOSAIC

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Abstract

Nuclear weapons are unrivalled as tools of destruction, are extremely difficult to defend against, and are proverbial double edged swords, being capable of both enforcing stability in international relations through deterrence and inflicting unfathomable casualties.

Bearing this in mind, the current non-proliferation regime depends on consensual compliance with nuclear weapons free norms. Consequently, this dissertation seeks to analyse the cases of South Africa, Ukraine and North Korea using a tripartite framework drawn from national security based realist, economic interdependence based liberalist and moral norms based constructivist factors so as to understand the motivations for nuclear arms development in South Africa and North Korea, and the arguments for nuclear arms retention after Ukrainian independence. Thereafter, this tripartite theory approach will be used to examine subsequent motivations for nuclear disarmament and relinquishment in South Africa and Ukraine while attempting to account for unprecedented nuclear weapons policy transparency and tentative disarmament seen in North Korea from 2007 – 2008. Additionally, the nuclear weapons relinquishment of Belarus and Kazakhstan will be examined and dismissed as subsidiary cases.

By analysing these five case studies using this eclectic theoretical framework, common security, economic and norms based motivational drivers can be detected across nuclear proliferants and former proliferants who choose to practice nuclear arms abstinence. By identifying similar decisional drivers for nuclear weapons aspirants/retainers and states completely or partially relinquishing nuclear arms, the determination of potential nuclear armaments proliferators can be evaluated, while nuclear arms possessors like North Korea or suspected nuclear aspirants like Iran could be encouraged to disarm or limit their nuclear activities, thereby strengthening nuclear disarmament policies.

Chapter One – Introduction

1.1 Overview and Objective of Dissertation

Among weapons, nuclear arms have arguably caused the most alarm and concern. With unmatched destructive and deterrence capabilities, nuclear arms are both shunned for their horrific destructive potential and desired as strategic equalisers to convince adversaries not to threaten the nuclear proliferant's security.

This dissertation seeks to investigate the reasons behind nuclear arms development and why some nuclear weapons proliferators or inheritors have subsequently chosen to voluntarily disarm. It is hoped that a systematic study of nuclear arms acquisition and disarmament would lead to a workable framework for predicting nuclear weapons proliferation, forecasting the success of nuclear disarmament policies and proposing policy changes for efficacy enhancement.

This analysis of nuclear armament and disarmament drivers will be performed using a tripartite theory approach involving Realism, Liberalism and Constructivism. Specifically, only middle or third world powers will be examined as these have shown the highest propensity to pursue nuclear weapons in recent times. Focus will be given to examining the security based (realist), beneficial interdependence based (liberalist) and international norms-based (constructivist) factors contributing to: 1) the nuclear arms relinquishment in Belarus and Kazakhstan within a few years of inheriting former Soviet nuclear weapons in 1991, 2) nuclear arms acquisition and subsequent total nuclear disarmament in South Africa, 3) the policy debate between those who wished to retain nuclear arms and those who wanted to relinquish them in Ukraine, and 4) the North Korean nuclear programme during periods of nuclear brinkmanship

(1993 – 1994, 2002 – 2006 and 2009) as well as visible disarmament progress (2007 – 2008). As will be subsequently elaborated, neither realism, liberalism nor constructivism serve as exclusive drivers of nuclear armaments policy. They all have mutually reinforcing and interrelated roles to play.

Additionally, the realist, liberalist and constructivist theoretical frameworks will be further analysed by accounting for the roles that interdependence, norms and leadership based factors play in all three theories across both the nuclear arms acquisition and relinquishment phases. This will be explained later in chapter 2.

Therefore, the main contribution of this work is the derivation of interconnected eclectic tripartite explanatory frameworks utilising realism, liberalism and constructivism to account for nuclear arms proliferation or disarmament in the developing world. These frameworks are more versatile, holistic and comprehensive than unitary theories while compensating for the explanatory weaknesses and blind spots inherent within realist, liberal and constructivist nuclear arms scholarship. Furthermore, research originality will be reinforced by the analysis of shared characteristics such as interdependence or counter interdependence, norms and leadership that apply across all three theories in these interlinked tripartite frameworks.

1.2 Research Findings Supporting the Tripartite Theory Model

In the subsequent chapters to follow, this dissertation will prove:

(i) That even though eventual relinquishment of inherited nuclear arms was assured for both Belarus and Kazakhstan, realist, liberal and constructivist influences still played noteworthy roles in the denuclearisation process.

(ii) That the interlinked eclectic realist, liberalist and constructivist tripartite framework displays efficacy in substantiating the nuclear arms development and decommissioning decisions of South Africa, the arguments for nuclear munitions retention and reasons for eventual nuclear weapons abnegation in Ukraine, and both the pro and counter nuclear proliferation rationales espoused by or influencing the North Korean government.

(iii) That shared interdependence or counter interdependence, norms and leadership traits permeate the realist, liberal and constructivist analysis performed for the principal South African, Ukrainian and North Korea case studies.

(iv) Lastly, that it is possible to amalgamate all the tripartite frameworks across all the key case study nations to derive eclectic templates utilising realism, liberalism and constructivism that can both assess the strength of nuclear proliferation imperatives, as well as evaluate the likelihood that any proliferator might agree to disarm. This will be applied to the North Korean exemplar to gauge the extent of its desire for nuclear arms retention and suggest disarmament incentives which Pyongyang would be most receptive to. Furthermore, the applicability of a realist-liberalist-constructivist framework for explaining Iran's willingness to negotiate away its Uranium enrichment capabilities in July 2015 will be elaborated.

1.3 Dissertation Structure

Next, in order to set the stage for methodological nuclear proliferation studies, chapter 2 will establish the theoretical foundations, flesh out the eclectic

conceptual model, conduct initial validating case study analysis and clarify the exclusive research parameters (e.g. why certain case studies or proliferation causational routes are not considered.) for this dissertation.

Thereafter, to more thoroughly understand why nations seek nuclear weapons and why there exists a global norm against nuclear weapons and in support of nuclear disarmament, the third chapter of this dissertation will begin by analysing the writings of pioneer nuclear weapons scholars like Albert Wohlstetter, Bernard Brodie and P.M.S. Blackett. After the base arguments for and against nuclear weapons possession are established, detailed works addressing the realist, liberalist and constructivist interpretations of nuclear arms scholarship by T. V. Paul, Etel Solingen and Maria Rost Rublee respectively will be reviewed and evaluated for their relevance to this dissertation. Lastly, chapter 3 will critically evaluate works which cover all the case studies selected, employ multiple theories to examine nuclear armaments policy and even provide an alternative explanatory theory potentially competing with my hypothesis. These works are: 1) Mitchell Reiss's *"Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities"* which concurrently analyses Belarus, Kazakhstan, South Africa, Ukraine and North Korea as case studies, 2) Peter Liberman's *"The Rise and Fall of the South African Bomb"* which employs a tripartite security needs, organisational politics and international pressure analytical framework for deconstructing South African nuclear weapons policy, 3) Scott Sagan's "*Why Do States Build Nuclear Weapons?: Three Models in Search of a Bomb*" which highlights security seeking, domestic politics and pro-nuclear norms models as drivers for nuclear proliferation, and 4) Jacques Hyman's "*The Psychology of Nuclear Proliferation*"

which posits that it is the nationalist identity of leaders that accounts for nuclear weapons development decisions. Reviewing these analytical works, I will establish their merits and shortcomings which substantiate their use as reference materials and justify the originality of this dissertation.

Subsequently, chapter 4 will analyse the strongest case for endogenous nuclear disarmament, South Africa, by establishing the historical background of the South African nuclear weapons programme, analysing the strategic impetus and decisional frameworks promoting nuclear weapons development, and explaining the security based realist, economic liberalist and moral constructivist reasons for President de Klerk to decommission the clandestine nuclear arms programme in 1989. Hence, chapter 4 should provide a pre and post disarmament examination of the motivations driving South African nuclear arms policy along with all relevant content analysis supporting the aforementioned tripartite theory framework.

Turning to Ukraine, chapter 5 will cover analysis considering realist, liberalist and constructivist factors in the debates between those supporting nuclear disarmament and those who advocated the retention of nuclear arms, and elaborate on what the leadership in Kiev successfully obtained through negotiations, to satisfy the security based realist and economics based liberalist requirements of the Ukrainian parliament such that it would approve total disarmament. As with the chapter on South Africa, content analysis will be provided to support the tripartite theory framework.

Chapter 6 examines the final case, the DPRK. As with chapter 4 and 5, the realist, economic liberalist and constructivist reasons paving the road to atomic arms development, from the Korean War to the 21st Century, will be

discussed. Thereafter, North Korea's role as a split outcome disarmament/rearmament case will surface as the realist, liberalist economic interdependence and moral constructivist factors behind the steps towards nuclear disarmament during the 2007 – 2008 period will be explored. After deconstructing the nuclear armaments policy decisions made by Pyongyang, explanatory models supporting both arms building and nascent arms decommissioning, using the trilateral theoretical framework will be derived.

Lastly, chapter 7 will consolidate all the findings of the South African, Ukrainian and North Korean exemplars, to identify common and unifying frameworks accounting for nuclear arms development/retention and disarmament/relinquishment. To validate the arms development model, it will be used to evaluate contemporary realities concerning the North Korean nuclear munitions programme in order to assess how entrenched the DPRK's nuclear weapons building efforts really are. Thereafter, factoring in disarmament intransigence or inertia on Pyongyang's part, disarmament model efficacy will be tested by using it to formulate a disarmament compensation package which can best meet the Kim regime's realist, liberalist and constructivist needs, leading to eventual North Korean military denuclearisation. Finally, the relinquishment of most of Iran's uranium enrichment capabilities as part of a deal that Tehran signed with the West in July 2015, will be used as a contemporary test case validating the realist-liberalist-constructivist framework accounting for nuclear non-proliferation policy.

Chapter Two – Theories, Conceptual Model, Initial Case Analysis and Excluded Considerations

2.1 Hypothesis of Nuclear Armament and Disarmament Motivations

Research suggests that nuclear armament and disarmament decisions cannot be fully explained by parsimonious use of singular IR theories. Rather, complex national considerations which must be responded to given evolving conditions, requires a comprehensive and eclectic analytical approach incorporating realism, liberalism and constructivism. Conversely, my null hypothesis would be that security interests matter overwhelmingly in the minds of decision makers indicating that they have only embraced a realist national security paradigm. Alternatively overwhelming consideration of ideational norms or interdependence/counter interdependence based economic factors point to constructivist or liberal null hypotheses respectively.

2.1.1 Realism

Due to classical realism's central beliefs about the darker and more self-serving side of humanity, the worldview that international relations are conflictual[1], the prime value of national survival[2] and pessimism about progress towards international peace and stability, realism stresses the importance of power for upholding national security. These principles are expressed in reality where states pursue power in order to serve domestically determined perceptions of national interests with the corresponding outlook that

[1] English philosopher Thomas Hobbes in his work, *The Leviathan*, characterized the life of man in the state of nature as being "solitary, poor, nasty, brutish, and short". In the similar way, international relations without supranational governance exists in a state of real or possible war without certain peace between nations.

[2] The importance of national survival has been emphasized by strategists such as Niccolo Machiavelli but the concept is much older and can be traced to the writings of Thucydides in *The Peloponnesian War,* Book 5, Ch. 89, Sect 1 where is quoted that "while the strong do what they can and the weak suffer what they must". Hence, strong powers acquire nuclear weapons as they can afford them while weak powers sacrifice dearly to build limited nuclear capabilities for existential security.

international politics is a struggle for power[3]. Hence, the prime objective is to maximise the share of international power, gaining it at the expense of others if necessary.[4] This imperative is driven by the realities of the international system, based on earlier classical realist paradigms, where survival may require an aggressive foreign policy because of, 1) the lack of supranational authority enforcing inter-state security, 2) the ownership of offensive military power by many states and 3) the inability to be assured of other's intentions.[5] Consequently, the more the power balance favours a state, the likelier it is to survive.

However, despite the competitive implications stated above, absolute and unending power competition is not inescapable. A distinction has to be made between defensive realism and offensive realism even as both sub-theories rely on the same three aforementioned conditions. With respect to the former, states seek essential self-preservation and to preserve the status quo as a more moderate approach to power accumulation avoids mutually reinforcing arms races from the destabilising effects of the security dilemma, while the latter posits that states seek to maximise power and assume a hegemonic position because it is perceived that only the strongest will survive[6]. For this dissertation, defensive realism is selected for scrutiny because the states chosen for the case studies, South Africa, Ukraine, North Korea, Belarus and Kazakhstan are middle or developing nations for which status quo preservation would be more relevant. They are not hegemonic powers which would be likelier to pursue

[3] Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace (7th Edition)*, revised by Kenneth W. Thompson and W. David Clinton, McGraw Hill/Irwin, 2006, pp. 5 and 29.
[4] John J. Mearsheimer, *The Tragedy of Great Power Politics*, W. W. Norton & Company, 2001, pp. 2.
[5] Ibid, pp. 3.
[6] Jeffrey W. Taliaferro, *Security Seeking under Anarchy: Defensive Realism Revisited*, International Security, Vol. 25, No. 3 (Winter, 2000-2001), pp. 128-161, pp. 128-129.

offensive realism. Additionally, when these states developed or inherited nuclear weapons, their putative adversaries or immediate neighbours were either nuclear armed great powers (the cases of Ukraine, Belarus and Kazakhstan) or client states of nuclear great powers (South Africa and North Korea) and thus, offensive realist strategies by the former against the latter are inconceivable. Concerning the chosen case studies, their political strategies vis-à-vis their nuclear weapons appear to be geared towards the defensive realist objectives of keeping power (preserving the status quo) and/or demonstrating power (gaining prestige while projecting deterrence).[7]

In relation to status quo preservation, both the South African and Ukrainian decisions to conclusively relinquish nuclear weapons were aimed at preventing the deterioration of their economies and for Ukraine, the erosion of national security. Neither South Africa nor Ukraine would have been welcomed into the international economy if they had insisted on retaining nuclear arms while Ukraine agreed to disarm only after receiving security guarantees from the US and Russia. As for Belarus, Russia was its principal trading partner and this gave Moscow *de facto* economic control over Minsk which could partially account for Belarusian pliability over nuclear weapon relinquishment as Minsk sought to preserve the economic status quo and prevent economic decline.

The North Korean case illustrates prestige seeking tendencies as its ideology of *Juche* emphasises not only national self-reliance but also a Democratic Peoples Republic of Korea (DPRK) centric nationalism. Hence, a large conventional military and the development of nuclear weapons is aimed at projecting an image of national power and state prestige vis-à-vis South Korea.

[7] Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace (7th Edition)*, revised by Kenneth W. Thompson and W. David Clinton, McGraw Hill/Irwin, 2006, pp. 50-51.

Pyongyang's nascent warheads serve to bolster its sense of legitimacy and claim to pre-eminence throughout Korea. Additionally, military aggrandisement is often used to bolster national prestige or as a foreign policy aid.[8] For instance, Pyongyang's nuclear weapons programme serves to establish a reputation that the DPRK must be taken seriously and that deterring any perceived U.S.-Republic of Korea (ROK) expansionism is a crucial national security pillar. Specifically, the successful launch of a long range rocket bearing a supposed "earth observation" satellite in December 2012[9] along with low yield nuclear tests in 2006, 2009 and 2013 serve to impress upon North Korea's adversaries that it might be capable of launching long ranged nuclear tipped missiles if provoked.

Next, in the field of military power where military assets are used by states to impress, deter and/or coerce each other[10], nuclear weapons deterrence becomes clear as the nuclear armed state can threaten others with catastrophic destruction if the former's security or vital interests are jeopardised. Similarly, nuclear states can hold each other's survival to ransom if each has enough warheads to destroy the other. This is the basis of Mutual Assured Destruction (MAD).

When examining disarmament, armament elimination will end arms accumulation competition and lessen the harmful effects of international anarchy and war.[11] In my case studies, it is reasoned that arms accumulation worsens the fears between belligerent parties and aggravates the struggle for

[8] Ibid, pp. 90.
[9] *North Korea Defies Warnings in Rocket Launch Success*, BBC News Asia, 12 December 2012, at http://www.bbc.co.uk/news/world-asia-20690338.
[10] Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace (7th Edition)*, revised by Kenneth W. Thompson and W. David Clinton, McGraw Hill/Irwin, 2006, pp. 31.
[11] Ibid, pp. 403.

power. Hence, disarmament should weaken the security dilemma while removing another tool of violence.[12] Applying this to nuclear weapons, we can see why disarmament should be pursued.

2.1.2 Why some strains of realism were not considered

Inasmuch as this dissertation focuses on classical and defensive realism, an explanation why neorealism was excluded as an analytical lens despite its complementary nature is required.[13] While it is obvious that nuclear weapons possessors have to interact with other states and neorealism examines state behaviour in the international system, accounting for inter-state outcomes between two or more actors[14], neorealism creates analytical redundancy. For instance, neorealism will assess the proliferant's power position in the international system, deduce the extent to which the nuclear great powers will tolerate the proliferant's nuclear arsenal, and serve as a basis for predicting possible sanctions on the newcomer to coerce nuclear weapons relinquishment. However, subsequent employment of constructivism and liberalism provide a more detailed and thorough examination of why nuclear arms proliferation is morally resisted and whether sanctions can hurt targeted economies in our interdependent world.

As for other realist strains, they have unique drawbacks that render them unsuitable for this dissertation. For instance, strategic realism covers the use and threat of force in order to achieve foreign policy objectives by preying upon

[12] Ibid, pp. 419, 422.

[13] Although defensive realism is a subsidiary concept in neorealism, the latter's broader principles are not considered here due to analytical redundancy.

[14] Jeffrey W. Taliaferro, *Security Seeking under Anarchy: Defensive Realism Revisited*, International Security, Vol. 25, No. 3 (Winter, 2000-2001), pp. 128-161, pp. 133-134.

adversary fears so as to coerce their compliance.[15] However, while the use of a nuclear arsenal for coercion might factor into a state's strategic calculus when deciding to acquire nuclear weapons, the international community does not condone nuclear blackmail. As nuclear powers like China and India have implemented "no first use" policies and others show restraint against non-nuclear powers, the reality is that nuclear arms acquisition and disarmament cannot be entirely technically analysed and divorced from normative influences.

2.1.3 Realism's relevance and the applicability of interdependence, norms and leadership

With all that has been explained regarding the chosen sub-theories of realism, the analysis below will attempt to show their relevance for two of the selected case studies, South Africa and Ukraine.

In the South African case, the October 1978 decision, guided by then Prime Minister P.W. Botha to build 7 nuclear bombs[16] was due to the threat from Soviet backed and Cuban reinforced Angola which sheltered anti-South African Namibian rebels opposed to Pretoria's rule of Namibia[17], as well as a hostile pro-Soviet Mozambique[18] which sheltered rebels from South Africa's main black resistance movement, the African National Congress. As such, since white ruled South Africa was numerically outnumbered by its black adversaries and the USSR was helping the latter with military aid, Pretoria feared the existential threat that a black onslaught would pose. Hence, self-preservation pressure became a classical realist imperative for nuclear arms acquisition.

[15] Thomas Schelling, *The Diplomacy of Violence*, in R. Art and r. Jervis (eds), *International Politics*, 4th Edition, Harper Collins, pp. 169.
[16] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 9.
[17] Richardt Van Der Walt, Hannes Steyn and Jan Van Loggerenberg, *Armament and Disarmament: South Africa's Nuclear Experience (Second Edition)*, iUniverse Inc, 2005, pp. 3, 5.
[18] Ibid, pp. 5.

Subsequently, it was only after Soviet weakening in the late 1980s and its associated declining support for client states like Cuba, Angola and Mozambique, that led to a favourable shift in the military balance of power towards South Africa, made Pretoria's nuclear deterrent redundant, and allowed then South African President F.W. de Klerk to order the complete dismantlement of the South African nuclear weapons programme[19]. As for proof that Pretoria adopted a defensive realist mindset, only 7 nuclear weapons were planned when many more could have been built.

For Ukraine, there was resistance to unconditional disposal of all nuclear arms that it inherited from the Soviet Union, because of the threat of Russian political domination or worse still, re-annexation of Ukraine as Russian territory. The Ukrainian leadership feared for their national survival due to historical atrocities such as the Soviet induced famine of the 1930s[20] along with recent developments like then Russian President Yeltsin calling for Russian peacekeeping intervention throughout the Commonwealth of Independent States (to which Ukraine belonged), and then Russian Foreign Minister Andrei Kozyrev referring to Ukraine as a mythical state[21] in 1993. These created concerns about Russia's propensity to disregard Ukrainian independence and reinforced the role of Ukraine's nuclear weapons as potential sovereignty guardians. Therefore, classical realist logic would argue that pressure for nuclear weapons retention was due to their being symbolic guarantees of newfound Ukrainian independence. Eventually, parliamentary resistance to total

[19] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 17 – 18.
[20] Robert Conquest, *The Harvest of Sorrow: Soviet Collectivization and the Terror Famine*, Oxford University Press, 1986, pp. 299 – 307.
[21] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 54.

Ukrainian nuclear disarmament was only overcome when both the U.S. and Russia agreed to provide Ukraine with security guarantees in January 1994, which led to the Ukrainian parliament approving total disarmament in February of the same year[22]. Essentially, the resolution of the Russian threat to Ukrainian sovereignty via a binding security guarantee allowed Kiev to discount Moscow as a realist concern and relinquish the ultimate military equalizer, while Ukrainian defensive realist intent can be inferred due to the power disparity favouring Russia over Ukraine (under ideal conditions, the latter could at best only hope to maintain the status quo vis-à-vis the former).

However, it is worth noting that even a realism pioneer like Hans Morgenthau championed the need to "speak truth to power".[23] The pursuit of nuclear weapons also represents attempts to accumulate both power *and* prestige, hence nuclear arms motivations speaks to the moral influence moderating realism. I will elaborate on moral considerations in the later section on constructivism. Indeed, constructivism justifies nuclear weapons acquisition as a shared desire for prestige, influence and/or national security and "speaking truth to power" helps unmask any legitimising veneer that politicians use to obscure these desires. (i.e. it is the "national destiny" to become a nuclear power)

Moreover, since the acquisition or abnegation of nuclear weapons involves mixed motives over time against a complex calculation of national security priorities, we need to also account for non-military temptations and inducements to disarm. For example, South Africa's initial lack of interdependent security relationships with other states, state self-defence norms and the role of pro-

[22] Ibid, pp. 42 – 43.
[23] Murielle Cozette, *Reclaiming the critical dimension of realism: Hans J. Morgenthau on the ethics of Scholarship*, Review of International Studies, 34, no.1 (2008), pp. 5-27, pp. 9.

nuclear acquisition political figures can be used to dissect Pretoria's nuclear armament motivations. Conversely, the emerging self-awareness of the costs of diplomatic isolation, the recognition of nuclear non-proliferation norms and a new non-proliferation advocating president helps substantiate the decision to decommission all South African nuclear warheads. This of course justifies the additional resort to both liberal and constructivist explanations. These other two theories ultimately help explain nuclear policy U-turns where realism cannot do so alone.

2.1.4 Liberalism

Liberal theorists assume that humanity possesses reason and rationality and that these qualities play a central role in international relations[24]. Liberals posit that individuals and their nations share common interests and can cooperate to achieve mutually beneficial outcomes[25]. Using interdependence liberalism as a theoretical lens and under conditions of complex interdependence, interaction between nation states is not limited to inter-government contact but also extends to unofficial relations between commercial entities and even private individuals.[26] Concerning the latter two groups, these relationships are mutually beneficial as valued goods and services are traded and business capital pooled for greater investment and productive efficiency. Thus, interdependent economies are able to reap significant economic welfare,

[24] 19th century British politicians Richard Cobden and John Bright posited that humanity was ultimately rational as seen from Lucian M. Ashworth, *Creating International Studies: Angell, Mitrany and the Liberal Tradition*, Ashgate Publishing, 1999, pp. 31.

[25] In the early 20th century, noted political thinker Norman Angell theorised that cooperation was more efficient that violence in achieving societal goals and that in time, the desire to kill would be replaced with the want for more wealth or comforts. Hence, violent passion would give way to materialist rationality, increasing the flow of international finance and free trade rooted in the wealth and aptitudes of various populations. These mutually beneficial relations were mentioned in Angell's work, *The Great Illusion* and are paraphrased in Lucian M. Ashworth, *Creating International Studies: Angell, Mitrany and the Liberal Tradition*, Ashgate Publishing, 1999, pp. 50.

[26] Robert O. Keohane and Jospeh S. Nye Jr, *Power and Interdependence (4th Edition)*, Longman, 2012, pp. 20.

and such welfare would be denied to autarkic economies or states ostracised as international pariahs. Nuclear weapons proliferation is one of the reasons why states might be subject to international commercial sanctions.

Liberalism mostly regards military force as anathema. Any state which uses force to resolve a specific issue with another state, risks jeopardising all other mutually beneficial links with the latter.[27] Thus, the use of military force under conditions of complex interdependence is counter-productive. Concerning the related issue of nuclear proliferation, the underground nuclear tests conducted by the DPRK in 2006, 2009 and 2013 have discouraged many would-be investors who might otherwise be keen on exploiting North Korea's cheap labour and mining sector.

Unlike realists who assess their neighbours in terms of the threat they pose, liberals see those same neighbours as profitable trading partners or allies whose cooperation is essential to address common problems. Indeed, economic considerations of increasing one's dependence on external economic linkages matter or are reflected in the South African, Ukrainian and North Korean discourse, as can be seen in later chapters. With the increasingly interdependent international system where a vibrant economy and healthy diplomatic relations outweigh military strength and antagonistic international relations[28], nuclear weapons are becoming irrelevant due to the suspicion and hostility that they generate.

[27] Ibid, pp. 24.

[28] Under complex interdependence, military power is a weaker policy tool as it is superseded by other power sources such as economic competitiveness. Thus, states tend to focus on material welfare rather than national security as paraphrased from Keohane, R. O. and Nye, J. S., *Power and Interdependence: World Politics in Transition*, Little, Brown and Company, 1977, pp. 24 – 26.

2.1.5 Why some strains of liberalism were not considered

There are some liberal theories which have lesser relevance for the states examined, such as institutional liberalism and republican liberalism. Concerning the former, it manifests in the beneficial effects derived from international institutions where international organisations oversee inter-state rules governing national action in selective fields. For instance, the International Atomic Energy Agency (IAEA) is the UN administered organisation enforcing the mandate of the Nuclear Non-Proliferation Treaty (NPT) while facilitating the transfer of peaceful nuclear technology. Insofar as NPT signatories willingly practice nuclear non-proliferation, the IAEA serves to confirm their nuclear weapon free status through inspections and reassure all NPT states that no illicit nuclear weapons programmes exist. Thus, institutional liberalism circulates information amongst institution adherents so that policy transparency is enhanced and suspicion amongst organisational members is curtailed, reducing the potential for conflict.[29] However, in the cases of South Africa and Ukraine, the IAEA and NPT did not factor into Pretoria's decision to build nuclear weapons as it had been earlier expelled from the IAEA's board of governors, while Ukraine was in no hurry to sign the NPT until its national security was guaranteed. As for North Korea, analysis regarding the NPT is subsumed under norms based constructivism, with the IAEA only seen as the NPT's enforcing arm. This will be elaborated on in chapter 6.

Thus, since institutional liberalism does not influence developing state nuclear arms policies when proliferation is doggedly pursued or weapons

[29] Robert O. Keohane, *International Institutions and State Power: Essays in International Relations Theory*, Boulder: Westview Press, 1989, pp. 2.

retention is politically valued, and whose practical effects can be covered under constructivism analysis, it will not be considered as a key explanation.

Next, it is apparent that republican liberalism, which is the theory that liberal democracies will not go to war with one another[30] due to shared moralities and democratic codes of non-violent conflict resolution, would predict confrontations between the nations in my case study and their immediate neighbours, since none of the selected case studies form liberal democracy dyads with their neighbours. For instance, Ukraine, Belarus and Kazakhstan were at best nominal democracies with re-packaged Soviet era leaderships while Russia became a nationalist oligarchy lacking liberal institutions. As for South Africa and North Korea, the former only had a liberal democracy for its minority whites while facing socialist African adversaries and the DPRK is a totalitarian dictatorship facing democratic enemies in the form of the U.S. and ROK. Thus, the possibility of conflict is ever present (indeed, South African fought with Angola and Mozambique) and the conclusions of the "democratic peace theory" would support nuclear disarmament amongst the chosen case studies to avoid atomically triggered mass slaughter.

However, since none of the states in the selected case studies nor their neighbours/adversaries experienced a major shift towards liberal democratic governance when total or tentative nuclear disarmament took place, republican liberalism and its democratic peace theory will not be considered for analysis. Specifically, the political cultures of Ukraine, Belarus, Kazakhstan and Russia

[30] Immanuel Kant, *Perpetual Peace*, 1795 in H. Reiss (Ed), *Kant's Political Writing*, Cambridge University Press, 1992, pp. 93-131. Kant's original assertion was that republican states do not fight one another. This was subsequently interpreted by others like B. Russett to mean that democracies are pacific towards one another as paraphrased from B. M. Russett, *Democracy and Peace* in Bruce Russett, Harvey Starr and Richard J. Stoll (editor), *Choices in World Politics: Sovereignty and Interdependence*, Freeman, 1989, pp. 245-261.

did not undergo liberal transformations during the nuclear disarmament of the first three states from 1991 – 1996, North Korea still remained a totalitarian dictatorship during tentative disarmament from 2007 to 2008, and both South Africa along with its Southern African enemies had unchanged political cultures during the former's unilateral disarmament from 1989 to 1991. Hence, republican liberalism does not have a causational effect on nuclear disarmament.

2.1.6 Liberalism's relevance and the applicability of interdependence, norms and leadership

Considering this, it can be seen that there was an interdependence liberalism facet to South Africa's nuclear disarmament motivations. Due to South Africa's racist *apartheid* policies and resultant human rights abuses, many states enacted laws enforcing economic sanctions on South Africa which prohibited their companies from dealing with South African businesses[31]. This hurt the South African economy and by President De Klerk's own admission, resulted in a 1.5 per cent decline in annual economic growth during the eighties and early nineties."[32] Along with the drain on South Africa's economy from militarily opposing a hostile Angola and Mozambique which only ended in the late 1980s, it can be seen that the removal of economic sanctions against South Africa upon the effective abolition of apartheid, the reintegration of South Africa's economy back into the international trade system, the attraction of foreign investment, and South Africa's right to export uranium ore for access to peaceful nuclear technology, became top priorities. Inasmuch as these liberal

[31] As an example of national laws enforcing business and commercial isolation on South Africa, the *Comprehensive Anti-apartheid Act of 1986* as passed by the U.S. Congress can be accessed at http://www.gpo.gov/fdsys/pkg/STATUTE-100/pdf/STATUTE-100-Pg1086.pdf.

[32] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 70.

objectives based on global economic interdependence could not be jeopardised by a nuclear weapons programme, the De Klerk government liquidated it by July 1991[33].

In the Ukrainian case, having emerged from Soviet poverty in 1991, economic progress and citizen welfare was a priority. Hence, emphasis was given to acquiring Low Enriched Uranium (LEU) suitable for civilian power generation either as compensation for nuclear disarmament or by processing the weapons grade Highly Enriched Uranium (HEU) from dismantled weapons[34]. Because energy security is economically important, obtaining returns from Ukrainian based nuclear weapons to sustain energy generation for vital export industries must have been a crucial motivation for Kiev. Also, the essential commitment to denuclearisation was linked to financial assistance. As Ukraine was being overhauled from a centrally planned to a market economy with significant economic dislocations, it could not afford to spend costly resources on nuclear weapons dismantlement. Hence, Kiev requested disarmament aid from the US and even contacted the G7 nations for economic restructuring assistance.[35] These concerns were eventually addressed via the tripartite denuclearisation agreement signed between Ukraine, the U.S. and Russia in Moscow in January 1994 where Russia agreed to compensate Kiev for the HEU in the disposed warheads with 100 tons of LEU for Ukraine's power generation.[36] Additionally, Washington pledged significant financial assistance to Kiev if the latter's parliament approved the January 1994 tripartite

[33] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 18.
[34] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 20.
[35] Ibid, pp. 19.
[36] Ibid, pp. 67.

agreement[37]. When analysed via liberal economic interdependence, we can see that the compensation for nuclear disarmament in terms of nuclear fuel and financial aid provided affordable utilities for crucial export industries like agriculture and defence equipment[38] while subsidising tourism infrastructure. It should be noted that Ukraine is the world's largest sunflower oil producer[39] and attracted 24.671 million tourists in 2013[40].

For both South Africa and Ukraine, the benefits from participation in the international economy and disarmament compensation which facilitated domestic industrial competitiveness in international trade, clearly outweighed any strategic advantage from nuclear arms retention. Hence, the only route for national development was immersion in the international economy of interdependent trade and cooperation.

But as with realism, interdependence liberalism is not infallible and is arguably inversely dependent on the regional state of anarchy or conflict (the more anarchy or conflict, the less applicable interdependence is). Moreover the narrative of nuclear disarmament is linked to moral constructivist imperatives as explained in the next sub-section.

Referencing the examination of interdependence, norms and leadership factors as tools to uncover a more detailed understanding of counter-liberalist and liberalist motivations behind nuclear weapons policy, chapter 4 should explain that the South African economy was strong enough to weather

[37] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 119.
[38] *Ukraine May Become World Sixth Biggest Arms Trader*, Kyiv Post, 27 February 2010, at http://www.kyivpost.com/news/nation/detail/60596/.
[39] *Ukraine Becomes World's Largest Sunflower Oil Exporter*, PR Newswire, 14 October 2011, at http://www.prnewswire.com/news-releases/ukraine-becomes-worlds-largest-sunflower-oil-exporter-131844438.html.
[40] *UNWTO Tourism Highlights 2014 Edition*, World Tourism Organization UNWTO, pp. 8, at http://www.e-unwto.org/content/r13521/fulltext.pdf.

economic losses from the withdrawal of trade privileges, upon discovery of nuclear proliferation, thereby being of lesser concern to Pretoria during the early years of its nuclear arms programme. As for norms and leadership, evidence supporting autarkic normative mindsets being championed by the South Africa president or his inner circle will be mentioned. Conversely, the election of President De Klerk ushered in a pro-economic interdependence worldview and normative outlook, along with leadership proclivities compatible with nuclear weapons decommissioning. This suggests that leadership attitudes help construct the moral reasons for nuclear counter proliferation.

2.1.7 Constructivism

Constructivism posits that international relations can be understood from a social rather than material standpoint. Rather than being fixated on military threats emanating from the armed forces of one's neighbours (realism) or even perceiving mutual benefit from free trade (liberalism), international relations can be analysed from an ideational and belief based standpoint. According to constructivism, its two key pillars are that the frameworks of human interaction are controlled by shared ideas and beliefs and that the identities and interests of all concerned actors are constructed by these shared ideas/beliefs rather than dictated by nature.[41] Therefore, it is a cognitively driven theory of motivation, intent and behaviour. Correspondingly, since states interact on the basis of shared knowledge and ideas, international relations would be influenced by the beliefs and expectations that states have towards each other. Hence, material

[41] Alexander Wendt, *Social Theory of International Politics*, Cambridge University Press, 1999, pp. 1.

power and national interests are perceived and reacted to using social and ideological lenses.[42]

Practically speaking, the constructivist sharing of ideas and beliefs could lead to commonalities across national identities, manifesting in shared national interests. With respect to nuclear proliferation and disarmament, it can be argued that since an extensive psychological footprint has been established with the Hiroshima and Nagasaki bombings in 1945, the Cuban Missile Crisis in 1962, and the various arms control treaties like the Strategic Arms Limitation Talks (SALT) and Strategic Arms Reduction Treaty (START), there exists a global cognisance of the horror of mass nuclear weapon casualties, along with the general consensus that nuclear proliferation is abhorrent and disarmament most laudable. Thus, the responsible international norm is to renounce nuclear weapons. However, amongst states which perceive acute security threats, and are unable to draw upon superiority in conventional weapons and/or are unable to rely on defence alliances with great power patron states, there also exists the shared belief that nuclear weapons are necessary tools of state preservation and even status symbols heralding potential major power status. This creates a pro-nuclear proliferation norm amongst such states which is applicable to Pakistan, India, *apartheid* era South Africa and even Ukraine in the early 1990s amongst others. But since nations see themselves as ethical entities, and anti-nuclear weapons norms predominate after some degree of domestic debate, most states become signatories to the Nuclear non-Proliferation Treaty which seeks to outlaw nuclear weapons proliferation while committing present nuclear armed states to eventual disarmament. Consequently, global nuclear non-

[42] Ibid, pp. 20.

proliferation norms are reinforced and it is understood that those who flout it are subject to political, economic and even military censure.

Essentially, ideas and beliefs shape the mindsets and decisional frameworks of international actors along with the shared understandings between them.[43] Therefore, the international system is a body of ideas and thought[44] and, as illustrated above, even a code of norms agreed upon by international actors[45].

2.1.8 Constructivism does not compete with realism or liberalism

With regards to the position that constructivism renders realism or liberalism redundant since shared ideas and beliefs can influence national identities leading to national interests which support either realist or liberalist policies, it must be clarified that ideas, beliefs and shared understandings are by themselves *not* more important than power and interdependent progress or other realist/liberalist factors. Rather, it is that power and interdependence act as policy drivers based on the ideas and understandings that interact with them. In as much as power and interdependence are perceived through ideas/beliefs, constructivism does not displace realism and liberalism in this dissertation but instead serves as an interpretational base from which material influences from the latter two theories can be understood. (i.e. that a conflictual shared culture

[43] "Social structures are defined, in part, by shared understandings, expectations, or knowledge. These constitute the actors in a situation and the nature of their relationships, whether cooperative or conflictual." Quoted from Alexander Wendt, *Anarchy is What States Make of It*, International Organization, 46, No. 2 (Spring 1992), pp. 391-425, pp. 394-419.

[44] "Ideas are mental constructs held by individuals, sets of distinctive beliefs, principles and attitudes that provide broad orientations for behavior and policy." Quoted from Nina Tannenwald, *Ideas and Explanation: Advancing the Theoretical Agenda*, Journal of Cold War Studies, 7/2, 2005, pp. 13 – 42, pp. 15. Hence, as state leaderships are aggregations of elite individuals, ideas and thought do influence the global system.

[45] Global norms consist of values and attitudes which decide criteria for distinguishing right from wrong and imply associated standards of behavior, as paraphrased from Nina Tannenwald, *Ideas and Explanation: Advancing the Theoretical Agenda*, Journal of Cold War Studies, 7/2, 2005, pp. 13 – 42, pp. 15 – 16.

makes anarchy more influential or that a shared belief in interdependent cooperation assists liberalism) Additionally, it should be mentioned that material and ideational factors can mutually influence each other such that military, economic and even political changes can lead to adjustments in ideational perceptions while modifications to ideas, beliefs and shared understandings can promote policy shifts regarding material concerns. For instance, the weakening of the military threat from Angola and Mozambique towards South Africa in the late 1980s convinced Pretoria to abandon its long nurtured siege mentality and supporting nuclear weapons programme, while it can be argued that a change in ideational culture from a communist to a nationalist-democratic identity led Ukraine to declare its intention not to possess nuclear weapons upon independence in 1991.

Constructivism's unique contribution to this dissertation, will be explained in subsequent chapters that the ideational and belief based explanations behind moral justifications for and against nuclear armament are well suited to constructivist analysis. As for the use of biographies and first person perspectives as a tool for investigating constructivist motivations and moral leadership, it must be clarified that their use in the latter pages has been sifted for self-serving justifications, via triangulation using other primary or secondary research sources to corroborate their accuracy. In this way, constructed moral security policies are credibly factored in.

2.1.9 Constructivism's relevance and the application of interdependence, norms and leadership

Examining South Africa, one of the nuclear disarmament motivations was a desire to conform to international norms. Upon assuming the Presidency,

F.W. de Klerk told the top leadership of the Atomic Energy Corporation of South Africa (AEC), one of the three key agencies responsible for building Pretoria's atomic arsenal, that the nuclear weapons programme had to be terminated in order for South Africa to regain international respectability[46]. It can be argued that the leadership in Pretoria was motivated by the prestige to be gained from conforming to nuclear disarmament norms. By renouncing nuclear weapons through Nuclear Non-Proliferation Treaty (NPT) accession, being readmitted to the International Atomic Energy Agency (IAEA), where South Africa once sat on its board of governors, before being expelled in 1977 due to the former's apartheid policies[47], and winning international praise[48], Pretoria reaped a substantial diplomatic payoff.

Through constructivism, we can infer that De Klerk accepted and was able to secure elite South African agreement with international nuclear non-proliferation beliefs, ideals and understandings, while subsequently convincing Pretoria's policymakers to institutionalise a nuclear weapons free South African identity through prestige based rewards.

Concerning Ukraine, evidence shows that Ukraine started and finished the disarmament process because its parliament made a moral and norms based commitment to giving up nuclear munitions upon achieving independence in 1991[49]. Whatever Kiev's ultimate objectives vis-à-vis its inherited nuclear weapons, there was at least a statutory acceptance of the desirability of nuclear disarmament, and a willingness to adopt a non-nuclear armed national identity

[46] Helen E. Purkitt and Stephen F. Burgess, *South Africa's Weapons of Mass Destruction*, Indiana University Press, 2005, pp. 124.
[47] Ibid, pp. 11.
[48] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 274.
[49] Quoted from section IX, External and Internal Security, *Declaration of State Sovereignty of Ukraine*, Verkhovna Rada of Ukraine, 16 July 1990, Ukrainian parliamentary website, at http://gska2.rada.gov.ua/site/postanova_eng/Declaration_of_State_Sovereignty_of_Ukraine_rev1.htm.

which served as a baseline for its nuclear disarmament efforts over the next 5 years.

Turning to more detailed analysis of constructivist motivations, chapter 4 investigates the role that international interdependence played in encouraging pro and anti-nuclear proliferation norms. For instance, did other nuclear weapons powers or foreign actors influence Pretoria along the path to military nuclearisation or nuclear disarmament? As for the essential nature of normative influence, the issue of structure and agency will be explored in that the effect of the international environment (structure) upon the perceptions and decisions (agency) of Pretoria will be investigated. For example, did the conflictual cold war environment and Israel's nuclear armaments programme contribute to South African moral approval of atomic arms given close South African-Israeli relations, along with the hawkish proclivities of President Botha? Did the winding down of the cold war reinforce the non-nuclear proliferation tendencies of President De Klerk? Referencing the role of leadership, the influence of the respective South African presidents as a factor in driving the nuclear weaponisation and relinquishment phases will also be covered.

Analysing South Africa and Ukraine, both can be explained by a combination of realist, liberal and constructivist factors with each theoretical perspective showing unique efficacy for uncovering different facets of the nuclear armament and disarmament puzzle. With this dissertation as an interpretative endeavour that seeks to investigate all available evidence supporting nuclear munitions development/retention and disarmament/relinquishment motivations, the next sub-section will clarify how each theory complements the others in a tripartite framework.

2.1.10 Why the need for tripartite theoretical analysis?

While some scholars emphasise a realist analysis of nuclear arms,[50] others promote a liberal analysis[51], and some cover constructivist arguments[52]. Each approach has its shortcomings and fails to provide an all-encompassing explanation for the disarmament and arms retention patterns in the cases examined. Simply put, individual theories have drawbacks and cannot aspire to unassailable parsimony. Even as mono-theoretical research generates useful results, conceptual blind spots about causational routes which violate the theory's internal logic, do arise.[53] Thus, a systems based approach wedding realism, constructivism and liberalism to compensate for each other's weaknesses and explain different facets of the armament/disarmament conundrum, comes closest to realistically analysing nuclear arms policies and operationalising analytical eclecticism.[54] Essentially, each theory becomes a complementary leg in an interlocking explanatory tripod. Despite lacking some rigor, this tripartite approach stresses pragmatism, focusing on policy relevant diversity of causal paths leading to nuclear arms development/retention and disposal[55]. This tripartite framework also privileges a dynamic explanation accounting for both linear policy changes as well as rethinking and reversals.

Also, when discussing nuclear arms, it should be noted that:

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[50] T. V. Paul, *Power Versus Prudence: Why Nations Forgo Nuclear Weapons*, McGill-Queen's University Press, 2000.
[51] Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East,* Princeton University Press, 2007.
[52] Maria Rost Rublee, *Nonproliferation Norms: Why States Choose Nuclear Restraint*, The University of Georgia Press, 2009.
[53] Katzenstein, P.J., and N. Okawara, *Japan, Asian-Pacific Security, and the Case of Analytic Eclecticism*, International Security, 26 (3), 2001/2002, pp. 153-185, pp. 184.
[54] Rudra Sil and Peter J. Katzenstein, *Beyond Paradigms: Analytical Eclecticism in the Study of World Politics*, Palgrave Macmillian, 2011, pp. 1-19.
[55] Daniel W. Drezner, *An analytically eclectic approach to sanctions* from Etel Solingen (editor), *Sanctions, Statecraft and Nuclear Proliferation*, Cambridge University Press, 2012, pp. 163.

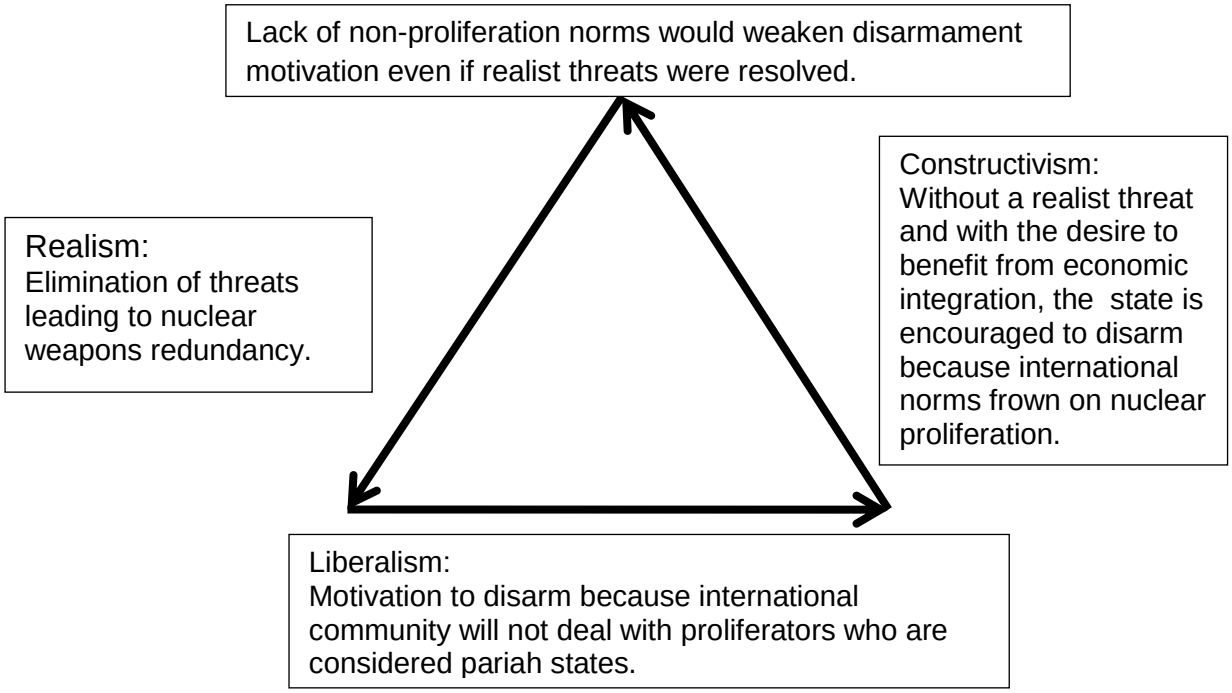
1) nuclear arms programmes evolve through cycles and reversals of ideational frames or assumptions by political leaders,
2) nuclear weapons, because of sheer destructiveness, induce caution through various stages of construction to actual deployment, and;
3) nuclear munitions are ***political***. The survival of the state and its economic vitality depends on nuclear armament or disarmament.

Hence, since 1), 2) and 3) privilege constructivist, realist and liberalist examination respectively, analytical eclecticism is needed.

Correspondingly, in the South African case, the decreased threat from Soviet supported Angola and Mozambique after the weakening of the USSR, would be championed by defensive realists as the only relevant driver of South African nuclear disarmament. However, this ignores economic interdependence liberalism, which offered the potential of mutually beneficial trade and investment with the global community. With the desire to realise material prosperity for the South African people as an objective, President De Klerk would have known that the commercial world would refuse to deal with a nuclear weapons proliferator since nuclear proliferation is unacceptable and the aforesaid state would be accorded pariah status. This logically leads to moral constructivism as a disarmament driver, since international non-proliferation norms hold that civilised nations do not maintain nuclear weapons which are abhorrent, ensuring that most nascent nuclear arms developers are punished with economic isolation. Therefore, with the resolution of the realist threat, and the desire for full participation in international economics, coupled with the constructivist non-proliferation norm backed certainty of commercial opprobrium if nuclear weapons were retained, the De Klerk administration decommissioned

the entire nuclear munitions programme. Lastly, if anti-nuclear norms were absent, there would be no imperative for disarmament, even if the realist threat was diminished. This is illustrated by Diagram 1, the “Disarmament Flow Triad”.

Diagram 1: Disarmament Flow Triad



Referencing Ukraine, it can be argued that a similar but not identical “disarmament triad” using realism, liberalism and constructivism in an interrelated system, also applies because while nationalists in parliament might have pushed for nuclear weapons retention in order to ward off Russian expansionism, the nuclear disarmament norms agreed to by Russia and the US along with security guarantees to Ukraine, placed moral pressure on Kiev to disarm and alleviated Kiev’s fear of Moscow. Subsequently, the financial and nuclear fuel aid given for disarmament promoted Ukrainian recovery from Soviet era poverty, and helped it grow a healthy internationally interdependent economy, which was worth more than an unproductive realist inspired nuclear deterrent. Lastly, none of these realist and economic liberalist benefits would

have accrued to Ukraine if it was weighed down by constructivist norm-induced pariah status from nuclear retention.

2.2 Explanatory Framework and Conceptual Model

As it has been explained that realism, liberalism and constructivism all play complementary and mutually supportive roles in accounting for nuclear weapons policy, this dissertation will substantiate that security, economic interdependence and moral/ethical based factors were responsible for the case study states' decisions to acquire/retain nuclear weapons and subsequently renounce nuclear arms or take concrete nuclear disarmament measures. Essentially, security based indicators like open conflict with strong adversaries or threatening behaviour from the latter; economic traits like low but sustained growth based on industrial autarky and moral stances promoting nationalism or nuclear weapons as status symbols; all act as proxies for security based realist, economic counter liberalist and pro-nuclear moral constructivist independent variables contributing to the dependant variable of whether or not a state builds nuclear arms or chooses to retain inherited nuclear weapons. Conversely, the lack of national security threats, economic weakness which can be remedied by interstate cooperation or an already internationally integrated economy, and enunciated policy promoting nuclear disarmament as ethical, serves as manifestations of realist, liberalist and constructivist independent variables supporting the nuclear disarmament dependant variable.

Accordingly, later chapters addressing the South African, Ukrainian and North Korean cases studies will attempt to prove that the realist-liberalist-constructivist tripartite framework accounts for independent variables in the form of policy inputs and environmental changes over time, even if they are complete

policy reversals, large paradigm shifts and changes of viewpoint. Hence, nuclear disarmament and acquisition as outcomes of the nuclear arms policy dependent variable are very much contingent decisions. This validates the explanatory efficacy of the proposed tripartite framework.

To build the case for a complementary tripartite theory analysis of nuclear armament and disarmament, the case study states selected will be arranged in order of disarmament difficulty from those where denuclearisation was almost inevitable (Belarus and Kazakhstan), voluntary (South Africa), intensely negotiated (Ukraine), and that which formerly made concrete disarmament concessions but has now resumed nuclear weapons accumulation (North Korea). While Belarus and Kazakhstan will be addressed below as strong cases[56] (and hence less convincing examples) for tripartite theory driven disarmament, South Africa, Ukraine and North Korea will then be briefly examined to better outline the workings of the realist, liberalist and constructivist independent variables on the armament/disarmament outcome dependant variable.

2.2.1 Cases of inevitable denuclearisation

Belarus and Kazakhstan also inherited former Soviet nuclear arsenals but both have characteristics predisposing nuclear arms relinquishment. For Belarus, it suffered more from the 1986 Chernobyl nuclear disaster than Ukraine, which was home to the ill-fated power plant. The accident spread nuclear fallout over less than 1% of Russia and 4% of Ukraine, but contaminated 20% of Belarus and affected hundreds of thousands of

[56] Strong cases refer to exemplars whose causational independent variables lead to unavoidable nuclear disarmament as a dependent variable. The outcome is biased in favour of military denuclearisation and there is little merit to studying such cases where nuclear relinquishment is a foregone conclusion.

Belarusians.[57] This created anti-nuclear revulsion and was a monumental obstacle to nuclear arms retention. Additionally, 70% of Belarusian exports went to Russia and Russia provided most of Belarus's energy[58], while much of Belarus still fell under Russian military jurisdiction[59]. Hence, Minsk was economically and militarily dependent on Moscow, and had to follow the latter's wishes for the former's nuclear weapons relinquishment.

However, even as Belarusian denuclearisation was certain, realist, liberalist and constructivist factors in Minsk's nuclear relinquishment decision can be identified. For instance, to lessen the potential realist threat to national security and independence from Russian troops stationed on its soil, Minsk supported nuclear weapons repatriation to Russia, since Russian troops would leave with the warheads. As for economic liberalist influences, Minsk was cognisant of the fact that denuclearisation would bring foreign economic aid which would help re-tool the economy for international trade. This was indirectly given by American aid which defrayed the cost of denuclearisation (which would otherwise have been a burden on economic restructuring funds) and direct economic assistance.[60] Lastly, moral constructivist influence can be seen in the 1990 Belarusian Declaration of State Sovereignty which established that it would be nuclear free, and was reinforced in 1991 when Belarusian Prime

[57] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 129-130.
[58] Ibid, pp. 136.
[59] Kathleen Mihalisko, *The Belarusian National Dilemma and Its Implications for U.S. Policy-Makers*, Demokratizatsiya: The Journal of Post-Soviet Democratization, 2, no. 1, 1994, pp. 108-119, pp. 112.
[60] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 135-136.

Minister Vyachevslav Kebich declared that his government planned to denuclearise Belarus[61].

Kazakhstan too has a similar albeit more tragic nuclear history which made nuclear arms retention difficult to justify. Since 1949, Northeastern Kazakhstan had been the site of about 500 nuclear tests and these have released immeasurable amounts of radiological pollution which Kazakhs have to live with.[62] This national trauma prevented Almaty from considering a nuclear deterrent but realist, liberalist and constructivist factors still played important parts facilitating Kazakh denuclearisation.

Realist national security calculations played a significant part in Kazakh President Nursultan Nazarbayev's denuclearisation strategy. Basically, nuclear missiles in Kazakhstan turned a former Soviet republic with a weak economy into a state actor that had to be respected by its two nuclear armed neighbours, China and Russia while endowing Almaty's requests for international security assurances with more clout.[63] It can be seen that it was only after, (1) the U.S. had agreed to recognise Kazakhstan as one of the successors to the USSR for the purposes of START administration, thereby giving Almaty diplomatic recognition, (2) Kazakhstan had signed a collective security treaty with Russia, and other countries of the Commonwealth of Independent States, which provided de facto realist security against China, and (3) Almaty had received a letter from Beijing stating that the latter renounced all claims to Kazakh territory[64], did Nazarbayev perceive that Kazakhstan possessed enough

[61] Quoted from the Japanese newspaper, *Asahi Shimbun,* on 8 October 1991 via a translation provided by the Foreign Broadcast Information Service, FBIS-SOV-91-198-A, 11 October 1991, pp. 9.
[62] Max Eastman, *Mutant Children of a Failed God*, The Spectator, 3 April 1993, pp. 11-12.
[63] Oumirserik Kasenov and Kairat Abuseitov, *The Future of Nuclear Weapons in the Kazakh Republic's National Security* (Mclean, VA: Potomac Foundation, 1993), pp. 7-11.
[64] Don Oberdorfer, *Kazakhstan Agrees to Give Up A-Arms*, Washington Post, 20 May 1992.

national security to be confident of relinquishing its nuclear crutch. Thereafter, in May 1992, Nazarbayev pledged to ratify START, join the NPT and eliminate all inherited nuclear weapons within 7 years.[65] Additionally, other crucial motivators behind the Kazakh parliament's December 1993 unanimous vote to join the NPT were American security assurances, and Beijing's late 1993 pledge of a "no first use" of nuclear weapons policy against Kazakhstan, along with Chinese promises of non-aggression.[66]

Turning to liberal economic interdependence motivations, Kazakhstan had a weak post-Soviet economy and needed help with restructuring it for international sustainability. According to a senior Kazakh Foreign Ministry official, one of the effective inducements that persuaded Nazarbayev to pledge NPT ascension in May 1992 were U.S. promises of economic aid, when Nazarbayev and U.S. President Bush inked a raft of economic and trade agreements after the above mentioned pledges.[67] Thereafter, upon Kazakh parliamentary ratification of the NPT in December 1993, the U.S. promised to invest about $200 million in Kazakhstan and its central Asian neighbours,[68] and in the following February, Washington tripled its Kazakh bound foreign aid.[69] These economic inducements helped to prepare the Kazakh economy for global interdependent trade, and when seen as effective denuclearisation rewards, speak to the importance of liberalist motivations for Almaty.

[65] The White House, Office of the Press Secretary, *Declaration by President Bush and President Nazarbayev on Relations between the United States and Kazakhstan*, 19 May 1992.
[66] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 148.
[67] Ibid, pp. 146.
[68] R. Jeffrey Smith, *Kazakhstan Ratifies Nuclear Control Pact, Will Get U.S. Aid, Washington Post*, 14 December 1993.
[69] Gwen Ifill, *U.S. Will Triple Its Foreign Aid to Kazakhstan*, New York Times, 15 February 1994.

Lastly, moral constructivism also influenced Kazakh denuclearisation. While Almaty did not use moralistic language to support nuclear weapons policy, it can be inferred that the nuclear tests on Kazakh soil convinced Nazarbayev of the undesirability of nuclear weapons. Indeed, he called them "death-bearing tests" and talked of the Kazakh people suffering "hundreds of tragedies similar to Hiroshima". Thus, if the Japanese have a moral aversion to nuclear weapons, so should the Kazakh body politic. This moral nuclear "allergy" contributed to Nazarbayev deciding, that Kazakhstan's inherited nuclear weapons had to be returned to Russia.[70]

Hence, it can be seen that both Belarus and Kazakhstan have suffered extensively from radioactive pollution and Minsk had to contend with Russian economic and military dominance. Correspondingly, nuclear revulsion for both states, and need to preserve national sovereignty in Belarus, would have meant that Minsk and Almaty would never have been able to convince their electorates to support nuclear weapons retention, thereby making these cases strong denuclearisation examples, and poor choices to validate the tripartite realist-liberalist-constructivist nuclear weapons policy model. However, both display realist, liberalist and constructivist denuclearisation influences and thus support this dissertation.

2.2.2 Voluntary and intensely negotiated disarmament

Turning to South Africa, while the weakening Angolan and Mozambican threat due to waning Soviet power, provides a compelling counter defensive realist reason to abandon nuclear weapons, the moral constructivist argument that nuclear weapons proliferation is unacceptable is required to exert

[70] This is taken from a personal interview with a Kazakh presidential adviser by the name of Kasenov in Washington on 17 March 1994. Paraphrased from Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 150.

disarmament pressure on Pretoria, and link the benefits of global economic interdependence to nuclear weapons free status. Thus, it will be substantiated in a later chapter that realist, liberalist and constructivist factors have to be applied concurrently in order for South Africa to abandon its atomic bombs.

Concerning Ukraine, high importance has been assigned to Russian security guarantees, reliving Kiev's classical realist fears of Moscow's domination, and making nuclear relinquishment politically palatable. However, this misses out on important liberal and constructivist motivations whose absence could have complicated disarmament. Particularly, if the European Union and/or international community were willing to trade and invest in Ukraine *regardless* of its nuclear weapons status, or if Kiev did *not* enunciate nuclear disarmament as a goal in its declaration of independence, the pro-nuclear weapons factions in the Ukrainian parliament would have been emboldened to press for partial or full nuclear arms retention. Thus, successful disarmament could have been impeded without liberal economic interdependence and moral constructivist reinforcement of realist threat reduction.

2.2.3 Preliminary substantiation of proposed hypothesis

Regarding North Korea, its split outcome case characterised by nuclear arms accumulation (2002-2006), disarmament (2007-2008) and re-acquisition/escalation (2009-present) can provide useful insights into the realist, liberalist and constructivist considerations influencing Pyongyang. These can be compared to factors influencing South Africa and Ukraine, in order to synthesise a generic template for predicting nuclear weapons proliferation and nuclear disarmament, which will be done in chapter 6. The following proves that the North Korean case yields useful analysis.

2002 – 2006

North Korea's motivations can be described as a combination of realist, liberal economic interdependence and constructivist concerns. Due to the U.S. non-fulfilment of the 1994 Agreed Framework[71] which stated that nuclear proliferation resistant Light Water Nuclear Reactors (LWRs) would be provided but were never delivered[72], and that US-North Korean relations would be normalised but remained in limbo[73], Pyongyang initiated a uranium weapons programme (Pyongyang's original weapons programme was plutonium based) to improve its negotiating position since the U.S. disregarded the freezing, and promise to eventually scrap the DPRK's plutonium programme.

While Pyongyang's uranium weapons programme was subsequently judged to be inconsequential up until 2007[74], the effect of the programme's disclosure was deteriorated relations between North Korea and the U.S. lead regional alliance, as DPRK bound oil shipments were stopped, Pyongyang expelled all IAEA inspectors and regulatory equipment by Dec 2002, withdrew from the NPT and declared itself a nuclear weapons state[75].

[71] The Agreed Framework was signed between the U.S. and DPRK where the latter agreed to remain a non-nuclear armed state under the NPT and give up its proliferation prone nuclear programme in return for nuclear power generating facilities, fuel aid, economic benefits, security assurances and normalized relations.
[72] Korean Peninsula Energy Development Organisation, *KEDO Marks "First Concrete" Pouring Milestone*, 8/7/2002, at http://www.kedo.org/news_detail.asp?NewsID=22.
[73] Discontent with Agreed Framework paraphrased from Victor D. Cha and David C. Kang, *Nuclear North Korea: A Debate on Engagement Strategies*, Columbia University Press, 2003, pp. 137.
[74] Carol Giacomo, *N.Korean Uranium Enrichment Programme Fades as Issue*, Reuters, 10 February 2007, at http://uk.reuters.com/article/2007/02/10/korea-north-uranium-idUKN0930259320070210.
[75] The Agreed Framework collapsing from Pyongyang's HEU programme and the heightening of nuclear tensions is paraphrased from Victor D. Cha and David C. Kang, *Nuclear North Korea: A Debate on Engagement Strategies*, Columbia University Press, 2003, pp. 131 – 133.

However, Pyongyang eventually joined the Six Party Denuclearisation Talks[76] and it was during the fourth round of talks in September 2005 where it signed a Joint Statement of Principles pledging nuclear disarmament in return for energy assistance, the possibility of normalised relations with the U.S. and Japan, negotiations for a peace treaty ending the Korean War and future discussions on LWR provision[77]. Despite such progress, the DPRK insisted on being given the reactors *before* nuclear disarmament implementation, and the U.S. placed restrictions on the Macanese Bank, Banco Delta Asia which froze US$25 million in DPRK funds due to money laundering allegations[78]. In response, Pyongyang tested a nuclear device on 9 October 2006[79].

When examined dispassionately, North Korea values LWR provision and normalised U.S.-DPRK relations because of its decrepit economy and the fact that peace since the cessation of Korean War hostilities is maintained by an armistice and not a peace treaty. Thus, Pyongyang manages an energy starved, crumbling economy which would benefit from LWR provided electricity, and continues to perceive a state of war which would finally end if Washington concludes a peace treaty and establishes diplomatic relations with it. Hence, the classical realist requirement for DPRK nuclear disarmament is the removal of the U.S. threat while liberal economic integration would be promoted by nuclear power reactors and the energy security they provide for North Korean export industries earning foreign exchange for vital imports.

[76] The Six-Party-Talks involved the main stakeholders in the North Korean nuclear crisis, the PRC, Russia, the DPRK, Japan, the ROK and the U.S. in joint negotiations so as to find a peaceful solution to the above crisis.
[77] *Joint Statement of the Fourth Round of the Six Party Talks*, Ministry of Foreign Affairs of the People's Republic of China, 19 September 2005, at http://www.nukestrat.com/korea/JointStatement091905.pdf.
[78] Jayshree Bajoria and Carin Zissis, *The Six Party Talks on North Korea's Nuclear Program*, Council on Foreign Relations, 1 July 2009, at http://www.cfr.org/publication/13593/.
[79] Jeff Bliss, *North Korea Nuclear Test Confirmed by U.S. Intelligence Agency*, Bloomberg.com, 16 October 2006, at http://www.bloomberg.com/apps/news?pid=20601101&sid=aO7kW.RjqqaE&refer=japan.

Referencing constructivism, the DPRK could have looked upon the nuclear weapons programmes of its socialist patrons, the USSR and China as morally legitimate models to emulate, and was able to find nationalist ideological justification for nuclear arms development. Accordingly, failure to achieve realist and liberalist goals, along with legitimising constructivist support, led to Pyongyang detonating its first nuclear device.

2007 – 2008

Though denuclearisation prospects seemed bleak, a breakthrough occurred on 13 February 2007 during the Six Party Talks where Pyongyang accepted 50,000 tons of fuel and U.S. moves towards normalised relations in exchange for the disablement of its Yongbyon reactor[80] and the re-admission of IAEA inspectors[81].

Upon the U.S. allowing the release of most of the DPRK's frozen US$25 million on 25 June 2007[82], Pyongyang shut down the Yongbyon reactor and received 6200 tons of fuel aid[83] with 7500 additional tons of fuel sent after the IAEA confirmed the shutdown on 16 July[84]. Encouragingly, reciprocal concessions continued into 2008 with Pyongyang surrendering approximately 18,000 papers concerning its nuclear programme to the U.S. state department on 10 May 2008[85], the submission of a 60 page declaration about DPRK nuclear capabilities to the chairman of the Six Party Talks on 26 June and the

[80] The principal nuclear reactor of the DPRK's weapons programme is located in Yongbyon, North Korea.
[81] *N Korea Agrees Disarmament Steps*, BBC News, 13 February 2007, at http://news.bbc.co.uk/2/hi/asia-pacific/6356481.stm.
[82] Edward Cody, *N. Korea says Funds Issue is Resolved*, Washington Post Foreign Service, 26 June 2007, at http://www.washingtonpost.com/wp-dyn/content/article/2007/06/25/AR2007062500126.html.
[83] Edward Cody, *N. Korea Shutters Nuclear Facility*, Washington Post Foreign Service, 15 July 2007, at http://www.washingtonpost.com/wp-dyn/content/article/2007/07/14/AR2007071400293.html.
[84] *UN Confirms N.Korea Nuclear Halt*, BBC News, 16 July 2007, at http://news.bbc.co.uk/2/hi/asia-pacific/6900184.stm.
[85] *U.S. Diplomat Returns from North Korea with Boxes of Nuclear Records*, Associated Press, 10 May 2008, at http://www.foxnews.com/story/0,2933,354850,00.html.

destruction of a cooling tower at the Yongbyon nuclear reactor[86]. In response, the U.S. removed North Korea from the former's State Sponsors of Terrorism list on 11 October[87], eliminating a significant barrier to U.S.-DPRK trade.

During this phase, realist and liberalist economic influences can be seen. Excluding the US$25 million which was rumoured to be the personal funds of Pyongyang's leadership rather than state money, liberal motivations are apparent as the fuel aid enabled North Korea to sustain electrical supply to vital export industries. Concerning the declassification of North Korea as a terrorism sponsor, it opened the door to Pyongyang securing international economic development loans to rehabilitate the economy into one better suited to benefit from international trade. As for realism, delisting North Korea as a terrorism sponsor hints at a less hostile perception of North Korea and a lessened U.S. threat. Also, surrendering documents, declaring nuclear capabilities and demolishing a reactor cooling tower all pointed towards disarmament progress.

Lastly, the DPRK has always been subject to moral constructivist nuclear non-proliferation pressure from the NPT, and could not have ignored the constructivist disarmament momentum generated by massive U.S.-Russian nuclear munitions cuts implemented from 1991. This would have impacted Pyongyang's nuclear policy calculus from 2007 to 2008.

2009 – Present Day

However, disarmament progress ceased when Pyongyang launched a satellite bearing rocket on 5 April 2009[88]. Suspecting it to be an intercontinental

[86] Norimitsu Onishi and Edward Wong, *U.S. to Remove North Korea from Terror List*, New York Times, 26 June 2008, at http://www.nytimes.com/2008/06/26/world/asia/26iht-nuclear.3.14018130.html.
[87] Paul Richter, *U.S. drops North Korea from Terrorism List after New Deal*, Los Angeles Times, 12 October 2008, at http://articles.latimes.com/2008/oct/12/world/fg-norkor12.
[88] *North Korea Space Launch "Fails"*, BBC News, 5 April 2009, at http://news.bbc.co.uk/2/hi/asia-pacific/7984254.stm.

ballistic missile (ICBM) test, the United Nations Security Council (UNSC) condemned the launch and demanded a halt to North Korean missile testing[89]. This started a vicious cycle where Pyongyang withdrew from the Six Party Talks, disavowed previous obligations, expelled IAEA inspectors and resumed nuclear armaments development[90] which was confirmed with the DPRK's second and third nuclear tests on 25 May 2009[91] and 12 February 2013[92] respectively. Since then, nuclear disarmament has stalled. However, these events can still be analysed to gain insights into Pyongyang's decisional frameworks.

According to informed analysis, the abrupt change in North Korean behaviour can be explained by realist domestic politics and foreign policy. The event that supposedly precipitated the suspected ICBM test was Kim Jong Il's stroke in the summer of 2008. As absolute dictator, his incapacitation caused a secession planning panic because Kim's successor, his son Kim Jong Un, was inexperienced and lacked leadership credentials. Hence, the rocket and subsequent nuclear test were conducted to rally national pride around Pyongyang through demonstrations of technological success, which provided a more stable moral platform for Jong Un to assume leadership[93]. Additionally, the reintroduction of the U.S. and UN as enemies allowed the Kim regime to re-

[89] *U.N. condemns North Korean rocket launch*, CNN International, 13 April 2009, at http://edition.cnn.com/2009/WORLD/asiapcf/04/13/north.korea.un/index.html.
[90] Mark Landler, North *Korea Says It Will Halt Talks and Restart Its Nuclear Program*, New York Times, 15 April 2009, at http://www.nytimes.com/2009/04/15/world/asia/15korea.html?_r=0.
[91] *North Korea conducts Nuclear Tests*, BBC News, 25 May 2009, at http://news.bbc.co.uk/2/hi/asia-pacific/8066615.stm.
[92] Austin Ramzy, *North Korea Confirms "Successful" Nuclear Test*, Time World, 12 February 2013, at http://world.time.com/2013/02/12/north-korea-confirms-successful-nuclear-test/?xid=rss-topstories.
[93] Evans J. R. Revere, *The North Korea Nuclear Problem: Sailing into Uncharted Waters*, American Foreign Policy Interests, Vol. 32, 2010, pp. 183 – 190, pp. 186 – 187.

focus their people's attention away from economic hardship towards an external threat, providing a leadership objective for Jong Un.

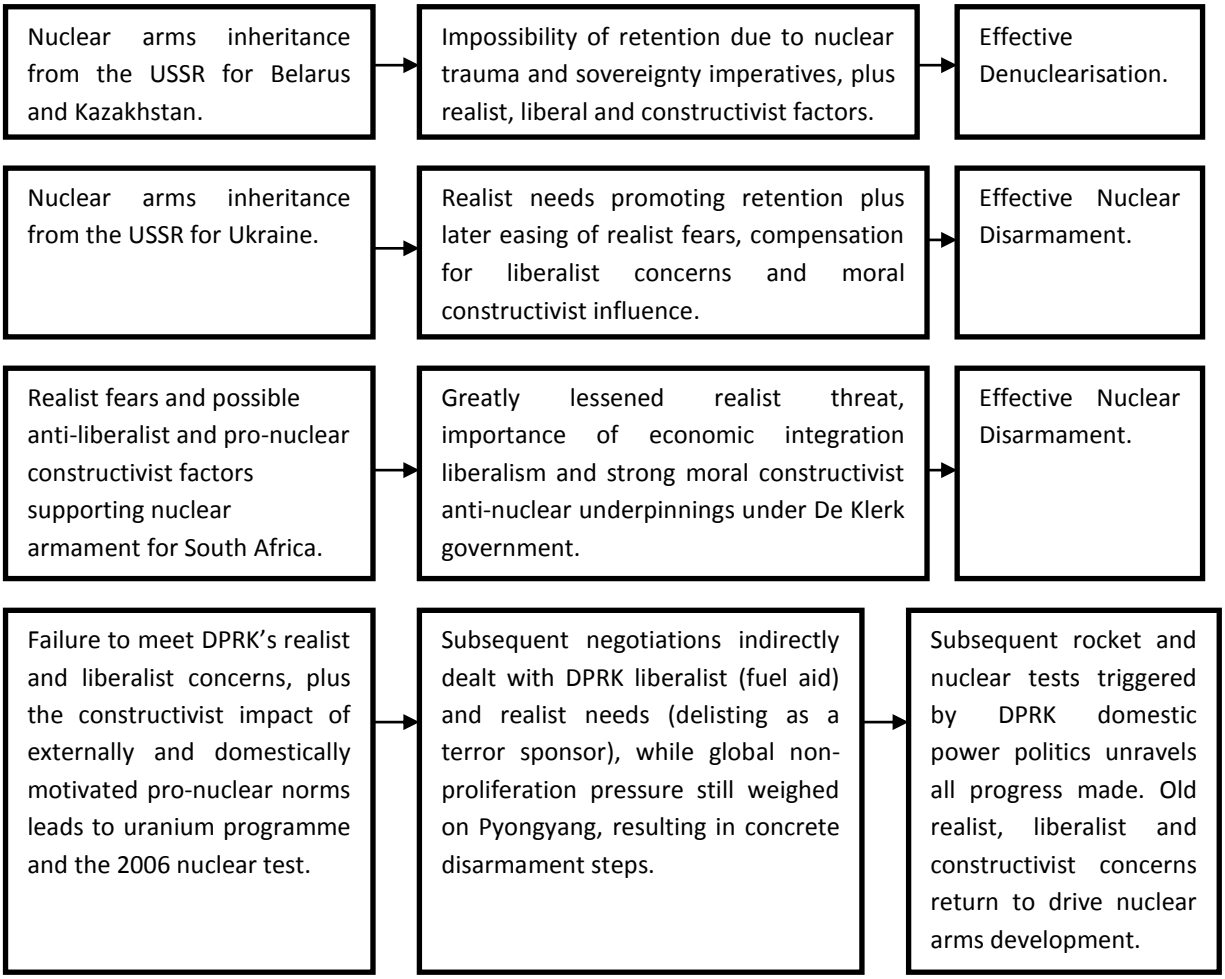
According to realism where only the strongest rule, the rocket and nuclear tests were expressions of military prowess implying that Jong Un will have the same strength as his father. When analysing Pyongyang's realist foreign policy through these tests, we see a reversion to conflictual foreign relations because Jong Un has to be framed as his father's successor within a demonstration of power and *not* reconciliation and implied weakness, which harms Pyongyang's international self-image. Also, regardless of any jingoistic aggrandisement accompanying the Kim regime's nuclear tests in 2009 and 2013, the North Korean leadership recognised the threat from U.S. nuclear weapons, as Washington has never declared a "no first use" of nuclear arms policy. When coupled with the concern that South Korean military modernisation is outpacing any DPRK military upgrades, the defensive realist value of Pyongyang's nuclear weapons is emphasised. Therefore, UNSC alarm at a North Korean technology demonstration, sparked by a succession crisis in Pyongyang, lead to the Kim regime's nuclear escalation, highlighting the DPRK's rogue status and the importance of nuclear warheads as realist security assurance, considering Pyongyang's siege mentality.

Next, economic concessions from 2007 to 2008 were helpful but insufficient to completely overhaul the North Korean economy to survive liberally competitive conditions. Even if subsequent investments from China, as the DPRK's only major ally are considered, the latter's economy was and is still weak as evinced by its perennial inability to feed its own population. Thus, as the only thing that the U.S. and its allies want from Pyongyang is the DPRK's

nuclear disarmament, it is actually in the latter's interest to continue nuclear arsenal development with an eye towards disarmament economic concession bargaining.

Finally, nuclear munitions retention is substantiated by moral constructivist pro-nuclear norms based on North Korean nationalism, stressing Pyongyang's moral superiority vis-à-vis Seoul and the importance of national security. As nuclear arms are the ultimate deterrent, they are thus compatible with the DPRK's perception of national identity and derive their moral constructivist legitimacy as such. However, the moral justification for nuclear militarisation rests on the realist threat from the U.S. and would be greatly diminished if relations with the former were ever normalised.

Diagram 2: Tripartite Theory Drivers behind Nuclear Weapons Policy



With all that has been examined regarding these 5 cases, the armament and disarmament motivation schematic can best be represented by Diagram 2 above, which shows that 4 out of 5 of the selected cases display initial nuclear arms retention/development positions and total nuclear disarmament/relinquishment outcomes, which can be explained by a tripartite model incorporating realism, liberalism and constructivism. But when the final North Korean case is analysed, it can be argued that despite the failure to completely disarm, the DPRK's nuclear weapons accumulation motivations can be analysed via an eclectic realist-liberalist-constructivist model, while the most tangible nuclear disarmament measures implemented by Pyongyang from 2007 to 2008 can be examined using a similar tripartite theoretical framework. Hence, the aforementioned tri-theoretical explanatory model for nuclear arms policy is largely valid, and only encounters dissonance when confronted with idiosyncratic domestic political paradigms, necessitating outwardly illogical actions such as alarming long range rocket testing, to shore up domestic political support. Inasmuch as local political imperatives are difficult to forecast, the proposed conceptual model should be sound.

2.3 Ruled Out Cases and the Inapplicability of the Null Hypothesis

At this point, it would be prudent to explain why established and semi-established nuclear powers along with former nuclear weapons aspirants were ruled out as case studies. Also, the rationale for excluding the null hypothesis will be provided.

Nuclear pioneers like the U.S. and the Soviet Union/Russia will not be considered because even though both sides have dismantled thousands of nuclear warheads through the Strategic Arms Limitation Treaty (SALT) and

Strategic Arms Reduction Treaty (START), they still retain about 2400 – 4600 nuclear warheads each[94] and show no signs of completely disarming. Hence, U.S.-Russian disarmament is only aimed at eventual minimal deterrence (the preservation of an effective second strike capability)[95]. Also, even as they own smaller nuclear arsenals, Britain, France, China, Israel, Pakistan and India appear to practice minimal deterrence and display no inclination for total disarmament.

Regarding states like Iraq, Syria, Argentina and Brazil, none of them successfully assembled a workable nuclear weapon and thus the issue of nuclear disarmament is inapplicable.

Turning to the null hypothesis where evidence or data falsifies the claims made in this dissertation, such an outcome would only occur when a state consistently pursues only one or at most two theoretical and/or ideological frameworks. (i.e. exclusively realism, liberalism or constructivism) For example, a good case would be a state that only expresses national security based realist and pro-proliferation constructivist pride substantiated reasons for acquiring atomic arms. There should be a complete absence of economic or liberalist justifications.

Since the earlier elucidated point in sub-section 2.1.10 from page 28-29 already clarified that leadership mindsets regarding nuclear arms change over time, profoundly affect the balance of threat or power leading to much caution in nuclear munitions policy, and deeply influence a state's political and economic prospects, it is obvious that constructivist, realist and liberalist factors are

[94] Christopher P. Twomey, *Asia's Complex Strategic Environment: Nuclear Multipolarity and Other Dangers*, Asia Policy, 11 (January 2011), pp. 51 – 78, pp. 58.
[95] Tom Sauer, *A Second Nuclear Revolution: From Nuclear Primacy to Post-Existential Deterrence,* The Journal of Strategic Studies, Vol. 32, No. 5, October 2009, pp. 745–767, pp. 749.

unavoidable considerations for this dissertation. As such, the null hypothesis's relevance for this dissertation is weakened. Moreover, since the proposed tripartite theory framework does display efficacy in accounting for the nuclear weapons policy decisions taken across all five states which have met the selection criteria from page 45-46, the null hypothesis is a practical non-issue *for this dissertation*.

However, even as it has been earlier mentioned that Pakistan has been excluded from consideration as it shows no inclination to disarm, hence rendering inapplicable the disarmament phase of the tripartite theory framework, its role as a possible null hypothesis case for the acquisition of nuclear armament will be analysed. In 1965, Zulfikar Ali Bhutto, the architect of the Pakistani nuclear programme remarked that if India built nuclear arms, "we will eat grass, even go hungry, but we will get one of our own."[96] This stated desire for military nuclearisation in response to an atomic threat from India, can be seen as evidence of both national security based realist and national pride based moral constructivist arguments for nuclear proliferation, while seemingly abandoning economic liberal interdependence as a nuclear acquisition motivator, since Bhutto was prepared to pay a disproportionately high economic cost for a nuclear deterrent.

Yet, upon closer examination, the desire to resort to "grass eating" can be perceived as an expression of counter liberalism and evidence of political will to enforce a condition of depravation based effective autarky on the population. Arguably, this is no different from the imposition of counter liberalist "self-reliant" austerity on the North Korean population by Pyongyang in the latter's quest for

[96] Maleeha Lodhi, *'We'll eat grass but build the bomb'*, The Sunday Guardian, sourced from http://www.sunday-guardian.com/analysis/well-eat-grass-but-build-the-bomb.

nuclear munitions. Hence, Islamabad's nuclear armaments acquisition process does have a counter liberalist dimension and can be substantiated by the realist-liberalist-constructivist explanatory framework. This incorporates a realist Indian military threat, which is supported by Pakistani elite leadership determination to endure any amount of isolative counter liberalist economic censure, which is in turn buttressed by pro-nuclear moral constructivist nationalist norms not to play second fiddle to India. These norms are in turn sustained by the ostensible realist Indian threat. Additionally, it should be mentioned that like Ukraine and South Africa, Pakistan does have autarkic capability in the form of a healthy agricultural sector which can sustain the population in the face of economic sanctions. Lastly, even as Pakistan might not be a good null hypothesis exemplar, it would be fair to qualify the exclusion of the null hypothesis from this dissertation, with the caveat that there might well be a future nuclear arms proliferation case study that supports a mono or bi-causal/theoretical explanation.

2.4 The Exclusion of Domestic and Bureaucratic Politics as a Direct Explanatory Factor

Inasmuch as domestic and bureaucratic politics is negotiation, debate and pressure exertion amongst influential groups in order to determine national policy, this process is excluded from direct analysis because pro or anti-nuclear weapons politics amongst national lawmakers, government sectors like the military, pro-business lobbies and even morally principled politicians, is already subsumed under the examination of realist, liberalist and constructivist drivers of nuclear weapons development/retention or decommissioning. For example, 1) pro-nuclear proliferation politics by national lawmakers has already been

subsumed under the examination of realist leadership, 2) anti-nuclear arms advocating politicians backed by pro-business supporters, in opposition to insular militarist factions, will be studied as part of economic liberalist integration motivations, and 3) the impact of moralistic politicians are analysed under moral constructivist counter proliferation leadership. Even though other scholarly works might treat domestic and bureaucratic politics as a key analytical lens, doing so here will result in much cumbersome redundancy.

Moreover, even if there is residual evidence pointing to bureaucratic pressure from groups with a vested interest in nuclear arms development, such as armament scientists and/or the defence industrial complex, this is discounted for the main case studies selected because (1) pressure from South African nuclear scientists to weaponise nuclear explosives research presupposes a realist threat from Soviet supported client states in Southern Africa, (2) the nuclear weapons technology sector in Ukraine was miniscule and thus not influential since the USSR would have concentrated this sector in Russia for strategic reasons, and (3) the totalitarian nature of North Korea, where power is concentrated amongst only a few groups (the Kim family, the military and some selected politburo members), relegates the nuclear weapons sector to the role of obedient component in Pyongyang's survival strategy. Additionally, the fact that the South African nuclear weapons programme was dismantled without any protest from Pretoria's scientific establishment speaks to the powerlessness of the aforementioned.

It bears repeating that this work does not rule out the bureaucratic influence of the nuclear arms development or manufacturing sector *for all cases*, only that they carry little weight for the aforementioned case studies.

Referencing the earlier cited work by Sil and Katzenstein[97] supporting paradigm/causational eclecticism, such bureaucratic lobbying might well provide complementary analysis for *other* research endeavours.

2.5 Research Methodology

The chief research vehicle is the small-n case study since only the Belarusian, Kazakh, Ukrainian, South African and North Korean cases are analysed. As earlier stated, they will be presented in order of certainty of disarmament from Belarus and Kazakhstan, which would have faced immense electoral resistance if nuclear arms retention was seriously considered (and which have already been analysed in this chapter), to South Africa which willingly disarmed, Ukraine which strongly negotiated for nuclear arms relinquishment *quid pro quos* and North Korea which needs concrete rewards before steps *towards* nuclear disarmament are taken.

I have conduct a detailed study of all five cases using historical texts, content analysis of secondary research materials where both manifest and latent content were examined[98], together with primary research consisting of interviews of authoritative persons associated with the latter three cases. Thus, coverage included the manifest content from official speeches, private comments and statements that policymakers have made, autobiographies of key figures, government documents and other materials in order to link what has been enunciated with concrete policy actions. As for latent content referring to the implied or inferred motives and/or strategies of policymakers, hidden messages, suggested actions or subtly communicated intentions that have

[97] Rudra Sil and Peter J. Katzenstein, *Beyond Paradigms: Analytical Eclecticism in the Study of World Politics*, Palgrave Macmillian, 2011, pp. 1-19.
[98] Earl Babbie, *The Basics of Social Research (Fourth Edition)*, Thomson Wadsworth, 2008, pp. 350-361.

been imbedded in the research materials[99] were investigated. Inasmuch as the latent content can be linked to concrete policy actions, this serves as another route for understanding the motivations and decisional frameworks of the examined leadership elites. Lastly, concrete policy actions and secondary research materials to deduce the mental frameworks of leaders based on their circumstances[100] were analysed. With the examination of motivational and ideational drivers, it is hoped that they support common patterns of realist, liberal and constructivist nuclear policy factors.

Regarding research sources, I will extensively utilise secondary sources. Works of note which I will employ include authoritative books by authors such as F.W. de Klerk (last apartheid South African president), Roman Popadiuk (the first U.S. ambassador to Ukraine) and Selig Harrison (noted expert on North Korea). As for primary research, interviews with key South African and knowledgeable Ukrainian figures along with ex-diplomats and academics who have dealt with Pyongyang or are experts on North Korean nuclear policy, have been conducted. These include former deputy head of the Atomic Energy Corporation of South Africa, Professor Waldo Stumpf, the Ukrainian Ambassador to Singapore, Ambassador Pavlo Sultansky, and former chief U.S. nuclear negotiator with North Korea, Ambassador Robert Gallucci.

[99] The DPRK routinely threatens to "incinerate" her enemies in a nuclear onslaught while a communiqué issued a week later might mention that "flexibility" could be exercised provided that "respect" for the DPRK is accorded. If Pyongyang subsequently softens its stance and agrees to denuclearization measures then latent content like the communiqué would have been more valid rather than manifest content like the earlier threat.

[100] For instance, the willingness of President Kravchuk of Ukraine to discuss and implement nuclear missile dismantlement on a small scale pilot basis even as his parliament did not approve of unconditional large scale disarmament can be taken as a sign that he has a pro-disarmament mindset.

2.5.1 Reliability and validity of sources and methods

While there might be bias in primary research as disarmament participants like ex-policymakers, diplomats and government officials will attempt to project the best image of themselves and their nations, I will compensate for this by cross-referencing interview details with respectable nuclear weapons related journals like the *Bulletin of the Atomic Scientists* or other authoritative written materials/books. Hence, this might ensure that my primary research is reliable and valid.

As for the reliability and validity of secondary research, only books which have been peer reviewed and praised for their accuracy and depth of content will be used (all the previously mentioned works including that by Popadiuk for Ukraine and Harrison for North Korea have met these criteria), articles consulted only from reputable journals and news reports sourced from established news agencies like the New York Times, British Broadcasting Corporation (BBC) and Cable News Network (CNN). Government documents, press releases, and other state sources of information need not have to be independently verified as I will only be using them as links to subsequent state policies.

In response to critics who dispute the predictive efficacy of employing these disparate case studies to develop a nuclear disarmament formula or template on the grounds that these few instances are insufficient to form generalisations, my response is that these five cases serve as a good start for a predictive research endeavour because across the Belarusian, Kazakh, South African, Ukrainian and even North Korean cases, a degree of congruence and explanatory reliability is exhibited. Congruence is consistency in the application

of the hypothesis in predicting the outcome and we can see that realist, liberal and constructivist factors play fairly predictable roles in explaining nuclear disarmament for the latter three cases as shown in Table 1.

Table 1

State	Applicable Theories Explaining Disarmament		
South Africa	End of Soviet backed Angolan/Cuban and Mozambique threat. (realist factor)	Unimpeded international trade and investment. (liberalist factor)	Moral prestige from self-disarmament and personal convictions of de Klerk. (constructivist factor mentioned in official documents and personal memoirs)
Ukraine	Security guarantees from Russia and the US. (realist reason)	Economically helpful energy compensation and financial aid. (liberal disarmament aspect)	Disarmament as national sovereignty principle. (constructivist norms based justification)
DPRK	Lowered threat from the US. (realism)	Energy aid and possible international loans. (liberal factor)	Pyongyang has enunciated disarmament norms and has acted on them from 2007 – 2008. (applicability of constructivism)

Having established the feasibility and validity of this dissertation's hypothesis and research endeavour, the next chapter is a thorough literature review covering a comprehensive selection of relevant texts which would both justify this dissertation's topic and the originality of its contribution to nuclear non-proliferation studies.

Chapter Three – A Review of Current Nuclear Armament related Literature

3.1 Nuclear Weapons as a Game Changer and Disarmament Rationales

Early nuclear weapons scholarship such as "The Absolute Weapon", "Studies of War: Nuclear and Conventional" and "The Delicate Balance of Terror" by Bernard Brodie, P. M. S. Blackett and Albert Wohlstetter respectively, did not address nuclear arms proliferation but deserve mention because they cover relevant topics like Ballistic Missile Defence (BMD), nuclear arms cost effectiveness, nuclear miniaturisation technology, Mutual Assured Destruction (MAD) and the ineffectiveness of counter-proliferation institutions. These explain the attractiveness and feasibility of nuclear weapons which establish *why* nuclear proliferation and disarmament are studied.

Both Brodie and Blackett enunciated the power of nuclear arms, stressing their cross-generational lethality and nation crippling capability, which promotes their deterrent capability since all of a nuclear proliferant's arsenal would have to be pre-emptively destroyed or a defender's BMD system be 100% effective in order to prevent unacceptable casualties. Since these outcomes are improbable, nuclear weapons become attractive deterrents. Even if an enemy were to deliver its nuclear arsenal solely via the less sophisticated means of bomber aircraft, there could never be a 100% assurance that the nuclear bite would not be felt, as "the sky is much too big to permit one side, however superior, to shut out enemy aircraft completely from the air above its territories".[101]

[101] Bernard Brodie, *War in the Atomic Age* in *The Absolute Weapon – Atomic Power and World Order*, Frederick S. Dunn, Bernard Brodie, Arnold Wolfers, Percy E. Corbett and William T. R. Fox, (Editors), Institute of International Studies (Yale University), Harcourt, Brace and Company, 1946, pp. 45.

Next, nuclear warheads boost the cost effectiveness of delivery platforms. For missiles bearing nuclear warheads, the cost of development and production would be justified by the destructive impact while nuclear bombs carried by aircraft drastically reduce the ordnance load needed for efficient sorties, freeing up space for fuel and extending range. Hence, the lethality, cost justifying and air asset enhancement effects of nuclear weapons make them attractive to "second rank" powers. As for asymmetric warfare, nuclear warheads can be delivered via commercial shipping or land based smuggling.[102] This is worrying since nuclear warheads have been significantly miniaturised since 1945 and there exist portable "backpack nukes" weighing 150 pounds[103] which could be used to critically disrupt the operation of industrial centres and sow panic. This is feared if *Al Qaeda* or similar terrorist groups obtain a miniaturised nuclear device.

Turning to the strategic use of nuclear weapons, their desirability is underpinned by the possibility of MAD whereby any nuclear attack would be answered in kind thereby negating the advantages of any pre-emptive nuclear attack. For "second rank" powers, the ability to maintain even half a dozen nuclear warheads which could be delivered with certainty insures against massive conventional attack or a nuclear strike, because the aggressor would be deterred due to the destructive capability of even a few nuclear warheads. Also, pre-emptive attackers would need to factor in the ability to locate ALL the defenders' missiles and launchers along with every long range bomber loaded with a nuclear payload. If the defender is diligent with deception efforts, this may result in even more of the defender's force escaping and being available as a

[102] Ibid, pp. 49.
[103] Mk-54 Special Atomic Demolition Munition, *Complete List of all US Nuclear Weapons*, Nuclear Weapon Archive, at http://nuclearweaponarchive.org/Usa/Weapons/Allbombs.html.

second strike force. Lastly, attack preparations would be noticed by the intended victim's intelligence agents based in the would-be pre-empter.[104]

Thus, the threat of nuclear proliferation, underpinned by its attractiveness for both states and even terrorist organisations, makes it an international issue of serious concern, as to how it can be controlled and rolled back so as to lessen the risk of nuclear annihilation. Hence, one of the most poignant words written about the nuclear age is that,

> "Thus far the chief purpose of our military establishment has been to win wars. From now on (as it has nuclear weapons) its chief purpose must be to avert them. It can have almost no other useful purpose."[105]

3.1.1 The difficulties of counter proliferation and proliferation's hazards

As for other reasons *why* nuclear arms acquisition and relinquishment should be studied, the relative technical feasibility of proliferation, legal justification for the aforementioned and hazards to the world upon successful atomic weapons development are pertinent.

Concerning the technical difficulties of proliferation, it must be noted that the nuclear bomb is more than 69 years old and knowledge of its construction is commonplace. Instead, as Brodie identified them, key proliferation hurdles remain the technical and engineering problems of processing sufficient fissionable materials for the warhead's explosive core and the design of the

[104] P. M. S. Blackett, *Studies of War: Nuclear and Conventional*, Hill and Wang, 1962, pp. 133.
[105] Bernard Brodie, *Implications for Military Policy* in *The Absolute Weapon – Atomic Power and World Order*, Frederick S. Dunn, Bernard Brodie, Arnold Wolfers, Percy E. Corbett and William T. R. Fox (Editor), Institute of International Studies (Yale University), Harcourt, Brace and Company, 1946, pp. 76.

warhead.[106] Additionally, costs are no longer insurmountable since current proliferators need not be burdened by inflated wartime costs, wasteful research and redundant manufacturing processes which confronted the U.S.'s Manhattan Project in World War 2. Instead, the former can benefit from previous nuclear research while focusing resources on the most cost efficient manufacturing methods. It is certain that India's "Smiling Buddha" nuclear device in 1974 cost far less than the U.S. "Trinity" device in 1945.

Consequently, since nuclear weapons are no longer the sole preserve of wealthy states, and bearing in mind their threat to humanity's existence, we currently have a supranational means of controlling the spread of nuclear weapons via the Nuclear Non-Proliferation Treaty (NPT) and the International Atomic Energy Agency (IAEA). The NPT which was first signed in 1968 obliges all signatory states to desist from transferring nuclear weapons or nuclear weapons technology to non-nuclear weapons states and to strictly refrain from developing nuclear weapons, submitting to safeguards and inspections by the IAEA if they are non-nuclear armed states. In return, nuclear weapons states have pledged to share civilian nuclear technology.[107] However, the NPT still allows signatory states to withdraw under pressing circumstances,

> "Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty and to the

[106] Bernard Brodie, *War in the Atomic Age* in *The Absolute Weapon – Atomic Power and World Order*, Frederick S. Dunn, Bernard Brodie, Arnold Wolfers, Percy E. Corbett and William T. R. Fox (Editor), Institute of International Studies (Yale University), Harcourt, Brace and Company, 1946, pp. 64.
[107] *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)*, United Nations Office for Disarmament Affairs (UNODA), at http://www.un.org/disarmament/WMD/Nuclear/NPTtext.shtml.

> United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests."

Thus, if any state perceives an existential threat necessitating a nuclear deterrent, which India, Pakistan and Israel perceive, thereby refusing to accede to the NPT in the present day, and North Korea has made nuclear arms a national priority due to the ostensible threat from the U.S., withdrawing from the NPT in 2003, the NPT is NOT an ironclad means of freezing the nuclear status quo.

Above all, one should remember that Article 51 of the UN Charter (and it is pertinent to note that the NPT and IAEA are both instruments of the UN) establishes the principle that states have a right to self-defence. Thus, as the onus is on states to protect themselves, and with the knowledge that some states might be threatened by permanent members of the UNSC who can veto UNSC motions, or even adversary states supported by UNSC permanent members[108], it can be understood why states like South Africa and North Korea would resort to indigenous nuclear armament. Hence, states which are desperate and prepared to accept pariah status for defying nuclear proliferation norms will be able to amass nascent nuclear arsenals. Correspondingly, a more fruitful avenue for limiting proliferation is not through legalistic regulation but via ameliorating the realist security threats faced by states, thereby eliminating their proliferation motivations.

[108] Percy E. Corbett, *Effect on International Organization*, in *The Absolute Weapon – Atomic Power and World Order*, Frederick S. Dunn, Bernard Brodie, Arnold Wolfers, Percy E. Corbett and William T. R. Fox (Editor), Institute of International Studies (Yale University), Harcourt, Brace and Company, 1946, pp. 154 – 155.

Turning to the work of Wohlstetter, he addresses the perils of nuclear proliferation and is a useful resource for justifying the analysis of nuclear disarmament. He explains several major points why nuclear arms could be an acute cause of unintended annihilation, malicious slaughter or catastrophic accidents while being less effective at deterrence enforcement.

Even if the world were a safer place if more states possessed nuclear weapons, due to the deterrence that each nation would exert on others, this viewpoint subjects humanity's survival to much risk. Wohlstetter provides tangible substantiation against nuclear proliferation and serves as a springboard for this dissertation. The main arguments are as follows:

- Firstly, more nuclear armed powers increases the chance that some country could miscalculate and launch warheads, thereby kicking off a nuclear war.[109] During the Cold War, there were several false alerts of suspected ballistic missile launches which turned out to be misinterpreted training exercises, the result of faulty equipment or even misinterpreted natural phenomena caused by sunlight.[110] Fortunately, both the Soviets and the Americans had sophisticated early warning systems along with well-trained missile operations personnel, enabling either side to verify the benign nature of the alert. Additionally, the distance between the USSR and U.S. afforded them the luxury of enough time to verify perceptions and prevent inappropriate nuclear missile launches. However, with the latest nuclear proliferants like India, Pakistan and North Korea, they have neither

[109] Albert Wohlstetter, *NATO and the N + 1 Country*, in *Nuclear Heuristics: Selected Writings of Albert and Roberta Wohlstetter*, Robert Zarate and Henry Sokolski (Editors), Nonproliferation Policy Education Centre, Strategic Studies Institute, 2009, pp. 275. (Originally from Foreign Affairs, April 1961, pp. 355 – 387.)

[110] Geoffrey Forden, *False Alarms in the Nuclear Age*, 6th November 2001, at http://www.pbs.org/wgbh/nova/military/nuclear-false-alarms.html.

similarly developed early warning systems nor personnel who are as well trained, while being much closer to their adversaries. Hence, not only is there a weaker probability of correctly verifying false attack alerts, but the time given to decide the correct course of action is shortened from half an hour to mere minutes. Hence, the possibility of an inadvertent missile launch is more likely with widespread nuclear proliferation, and even though proliferation apologists may argue that this can be averted by storing warheads and delivery systems separately, the fact remains that states might maintain hair-trigger alertness and this maximises the risk of inadvertent nuclear weapons use.

- Secondly, more nuclear weapons states raises the number of nuclear weapons storage sites, and since new proliferators are likely to be developing countries, they might not be able to afford or develop security technology for preventing unauthorised nuclear warhead use. As for the human element of security, the relative poverty of new proliferants implies that personnel guarding nuclear weapons might be vulnerable to temptation, heightening the possibility that enough guards might be bribed to facilitate warhead theft. This reinforces the concern that terrorists could obtain a nuclear weapon.
- Thirdly, the processing of fissile material for nuclear bombs is risky. Since it can be seen that the operation of civilian power plants can result in meltdowns (the Chernobyl nuclear disaster in 1986) and even serious leaks of radioactive contaminants due to natural disasters (the Fukushima nuclear disaster in 2011), the operation of multiple nuclear reactors, which are not immune to accidents or damage from mother nature, for the

purpose of generating nuclear waste from which weapons grade plutonium can be processed, is a frightening prospect.

Next, the deterrence efficacy of nuclear weapons, which developing world nuclear proliferants use as defensive realist substantiation for their arsenals, is debunked by Wohlstetter. Other than being able to survive the initial enemy strike, he explains that an effective nuclear deterrent force needs to be able to, 1) receive the order to attack even as the communications system might be degraded, 2) have enough range to reach hostile territory, 3) be able to surmount enemy defences and 4) cause enough damage despite civil defence measures.[111] Hence, deterrence only becomes effective when enough nuclear weapons of sufficient quality are accumulated to guarantee the survivability of a 2nd strike force capable of penetrating enemy defences. Accordingly, Wohlstetter makes the argument that nascent nuclear powers will be unable to maintain a non-escalatory nuclear deterrent. For instance, 12 or more nuclear weapons[112] might not constitute sufficient deterrence in Pyongyang's mind and the DPRK will strive for more warheads.

Another issue is the possibility that nuclear proliferants might not be satisfied with simple fission atomic weapons, opting instead to climb the nuclear munitions development ladder and produce thermonuclear weapons which have a much higher yield[113]. If thermonuclear aspirants are prepared to devote the

[111] Albert Wohlstetter, *The Delicate Balance of Terror*, in *Nuclear Heuristics: Selected Writings of Albert and Roberta Wohlstetter*, Robert Zarate and Henry Sokolski (Editors), Nonproliferation Policy Education Centre, Strategic Studies Institute, 2009, pp. 182. (Originally from RAND Corporation, 6th November 1958.)

[112] Current estimates place the North Korean nuclear arsenal at 6 – 18 warheads. The 12 warhead figure was derived by averaging the lower and upper limits. (i.e. 6 + 18/2 = 12) The latest estimate is obtained from: Julian Ryall, *North Korea could have fuel for 48 Nuclear Weapons by 2015*, The Telegraph, 20th August 2012, at http://www.telegraph.co.uk/news/worldnews/asia/northkorea/9487574/North-Korea-could-have-fuel-for-48-nuclear-weapons-by-2015.html.

[113] Fission type warheads rely on a process of splitting atoms in order to generate explosive power. On the other hand, thermonuclear warheads use fission devices as explosive triggers to initiate a secondary

resources to and surmount the technological challenges, the potential destructive power of a single warhead could increase many times over[114] and according to Wohlstetter, act as an enhanced equaliser by bestowing upon small states, the power to cripple larger nations.[115] Correspondingly, thermonuclear arms also magnify the consequences of inadvertent or fraudulent missile launches and theft or sale to third parties. Therefore, it would exacerbate concern if North Korea managed to build thermonuclear bombs and efforts for North Korean nuclear disarmament should be stepped up.

Basically, both Brodie and Blackett present inferred rationales why a state might desire a nuclear arsenal while Wohlstetter provides reasoning supporting disarmament efforts, which have particular salience since contemporary nuclear aspirants tend to be small developing nations. Diagram 3 on the next page helps to condense all major points made thus far. In a nutshell, Brodie, Blackett and Wohlstetter help address the question of *WHY* this dissertation examines nuclear weapons acquisition and disarmament.

At this point, what has been reviewed so far has only been of strategic or tactical significance. Substantial content directly addressing realist, liberalist or constructivist triggers for proliferation or disarmament by T. V. Paul, Ethel Solingen and Maria Rost Rublee will subsequently be evaluated and cases will be made for how this dissertation adds value to current discourse.

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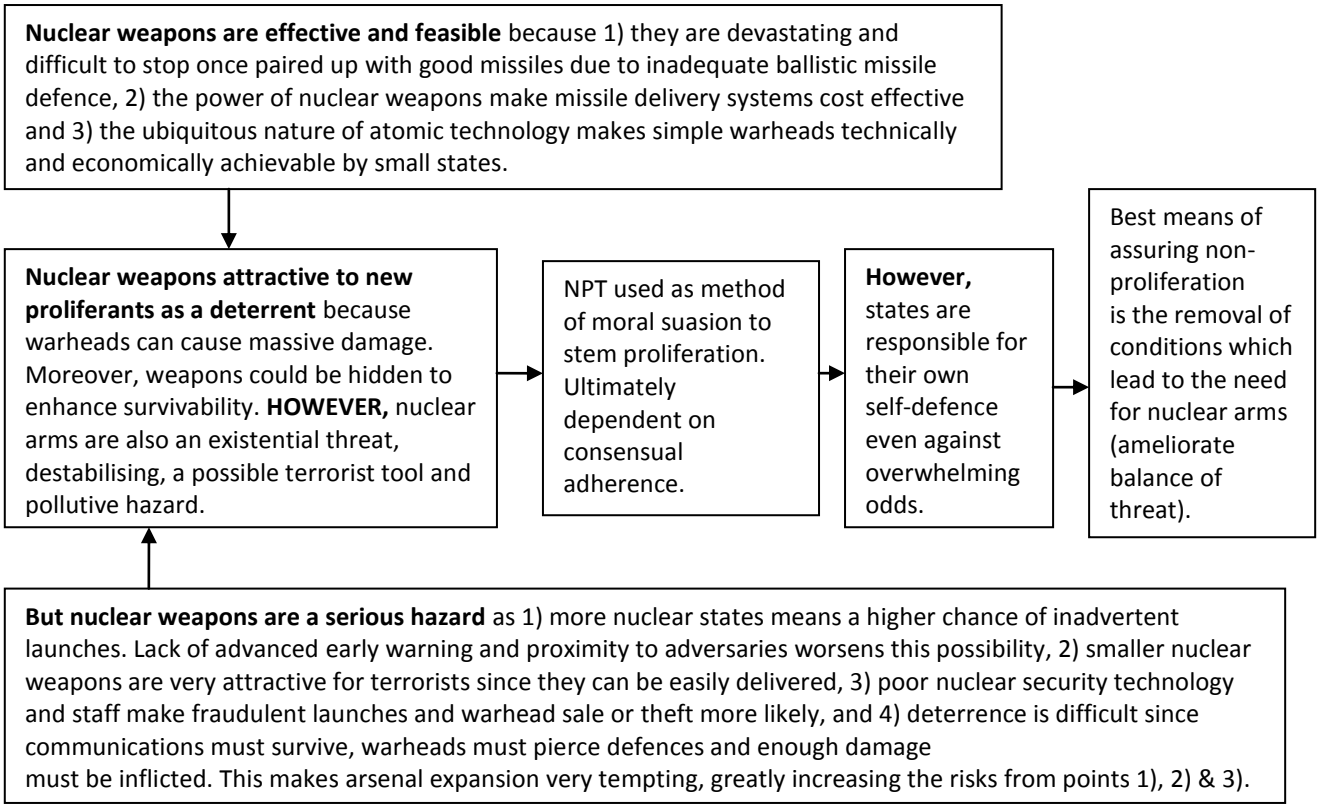
fusion (atom joining) and fission combination explosion which can generate far more power than standalone fission warheads.

[114] An example of a fission type bomb was the U.S.'s first nuclear test in 1945 which had a yield of 20 thousand tons of TNT. In contrast, the U.S.'s first thermonuclear test in 1952 produced a yield of 10 **million** tons of TNT.

[115] Albert Wohlstetter, *NATO and the N + 1 Country*, in *Nuclear Heuristics: Selected Writings of Albert and Roberta Wohlstetter*, Robert Zarate and Henry Sokolski (Editors), Nonproliferation Policy Education Centre, Strategic Studies Institute, 2009, pp. 273. (Originally from Foreign Affairs, April 1961, pp. 355 – 387.)

Diagram 3: The Brodie-Blackett-Wohlstetter Armament/Disarmament Dynamic



3.2 A Primary Realist and Secondary Liberalist Examination of Nuclear Forbearance

Paul's argument in "Power versus Prudence: Why Nations Forgo Nuclear Weapons" is that the extent to which a state's region is conflictual, like whether it exists within a high, moderate or low conflict zone, chiefly determines its decision to acquire nuclear weapons. In highly conflictual zones, where states face nuclear adversaries and lack powerful patrons, they may develop nuclear deterrents as a defensive realist response. Conversely, states in moderate and low conflict areas are likelier to exhibit nuclear forbearance since they cannot afford the unease and fear that nuclear arms create. However, states in violent regions might decide not to acquire the absolute weapon due to great power security guarantees or alternative deterrence from non-nuclear weapons capabilities.

According to Paul's definition of realism, nuclear weapons are an excellent deterrent when states fear inter-state predation. The principle of self-help applies in that states take all necessary security precautions to deal with military contingencies. In an age where nuclear weapons technology is no longer secret, non-proliferation would be difficult because, states can never be sure that others which do not already have nuclear arsenals, intend to practice nuclear weapons forbearance. Thus, factors such as relative conventional capabilities, participation in alliances and international status as valued client states or unpopular pariahs, influence the decision to "go nuclear".

Regarding Paul's perception of liberalist economic interdependence, interlocking commercial relations amongst states make military conquest obsolete as a means of resource acquisition. Above all, the mere possession of nuclear weapons hurts economic considerations due to international ostracism and sanctions. Hence, states valuing economic progress would abstain from nuclear proliferation.

But in reality, strict application of hard realist theory and economic liberalism both fall short because the former predicts a spike in the number of nuclear armed powers while the latter foresees nearly complete nuclear forbearance, of which neither has happened. To better account for nuclear proliferation, Paul explains that whether or not a state arms itself with nuclear weapons depends on its regional security situation, thus determining whether realist (highly conflictual region) or liberalist (area of moderate to low conflict) imperatives apply.[116] Specifically, the crucial variables are the level of conflict or cooperation and the political-security interdependence of a geographical zone.

[116] T. V. Paul, *Power Versus Prudence: Why Nations Forgo Nuclear Weapons*, McGill-Queen's University Press, 2000, pp. 14 – 15.

If nuclear abstention is to occur, states should be interested in avoiding security dilemmas[117] and tensions between neighbours. Such a zone is usually one of low conflict and high political and economic interdependence such that nuclear acquisition would disrupt beneficial political and trade relations. East Asia with the exclusion of North Korea fits this bill.

As earlier stated, there are regions of high, moderate and low conflict determined by severity, duration and scope of conflicts amongst key states.[118] High threat regions contain serious and lasting disputes between two or more of the major states present with violence, conflictual histories and intense competition over territorial, ideological, ethnic and other issues. Additionally, there is also a lack of membership in common alliances, weak or negligible economic interdependence and 5 or more militarised disputes within 20 years. In such regions, states follow hard realist policies while not being afraid of increasing military capabilities and incurring security dilemmas. Inter-state economic relations are minimalized for fear of exposing commercial vulnerabilities. Such regions include Southern Africa from the mid-1970s to late 1980s and the Korean peninsula today.

As for zones of moderate conflict, states tend to pay equal emphasis to security and economic objectives. Even though militarised disputes occur, their scope, intensity and frequency are lower than in a high threat region and such disputes are not enduring. Also, the region's states are likely to be members of regional security and economic co-operation organisations while there should

[117] Security dilemmas occur when one state's attempt to enhance its own security by upgrading defence capabilities arouses suspicion amongst its neighbours that it is expansionistic. Thus, the neighbouring states enhance their military capabilities to reassure themselves and this in turn causes the first state to perceive a threat and the reactionary need to improve its defences. Hence, a competitive military growth cycle is seen.

[118] T. V. Paul, *Power Versus Prudence: Why Nations Forgo Nuclear Weapons*, McGill-Queen's University Press, 2000, pp. 19 – 20.

exist moderate levels of economic interdependence.[119] Moderate conflict zones include ASEAN and post-apartheid Southern Africa.

Turning to nuclear proliferation, states in high conflict zones are the most probable nuclear weapons development candidates while those in low to moderate conflict regions will probably abstain from nuclear arms acquisition.[120] The risk is high for high conflict region states engaged in a long rivalry with a nuclear weapons state, multiple heavily armed adversaries, enemies backed by a belligerent nuclear power and/or if the beleaguered state is weaker in conventional military capability vis-à-vis its enemies. Reasons why moderate conflict area states would not acquire atomic arms include the fact that nuclear weapons would jeopardise growing economic interdependence in the region and hamper efforts to achieve prosperity.[121] Therefore, nuclear arms proliferation is positively related to the balance of threat and extent of hostile anarchy. This is effectively covered by Paul's eclectic primary realist and secondary economic liberal interdependence model.

With reference to the decision to denuclearise even if the state is in a high conflict region, the decision could be motivated by security guarantees or because conflicts show signs of concluding. This prescription matches the situations faced by Ukraine and South Africa, in that the Russians gave the Ukrainians a security guarantee in order to convince the latter to surrender their inherited nuclear weapons in the 1990s, and that South Africa perceived that hostile African adversaries were becoming less belligerent with weakening Soviet assistance in the late 1980s. Hence, nuclear disarmament is promoted when the balance of threat no longer generates existential fear.

[119] Ibid, pp. 21.
[120] Ibid, pp. 22.
[121] Ibid, pp. 23, 25.

3.2.1 Analysing South Africa and Ukraine

Other than paying scant attention to North Korea as Asia's chief nuclear proliferator, a major criticism of Paul's South African and Ukrainian analysis is that insufficient detail and depth are accorded to realist, economic liberalist and moral constructivist drivers of disarmament. While Paul does a commendable job of explaining that:

- enduring rivalries between South Africa and its northern enemies provided the impetus for the former's nuclear weapons while the subsequent political accommodation with these enemies made nuclear weapons redundant,[122] and;
- the reality of Ukraine being in a region of moderate conflict meant that defensive realist military balancing using nuclear arms was discarded in favour of greater international economic interdependence and political acceptance into the fellowship of nations,[123]

his "zones of conflict" analysis needs to be fleshed out by pertinent security, economic and moral details in order to provide a more effective understanding of South African and Ukrainian nuclear decisions. In effect, the skeleton needs more flesh to accurately perceive the organism.

Specifically, while the apartheid regime in Pretoria felt an acute existential threat from its Soviet supported enemies to the North and the African National Congress resistance movement within South Africa proper, there is no discussion of how these conflicts were straining both the financial and human resources of the white minority lead state, leading to the acquisition of nuclear arms as a security guarantor of last resort. Additionally, details about the

[122] Ibid, pp. 115 – 117.
[123] Ibid, pp. 118 – 120.

stagnation of the South African economy and of President F. W. de Klerk's personal moral stand against nuclear arms are missing.

Regarding Ukraine, the classification of the former USSR as a region of moderate conflict is arguably misleading since the Ukrainians had tangible fears of Russian political domination in the aftermath of the USSR's dissolution, and this was substantiated by the opinions of factions within Russia's leadership which considered Ukraine, Russian territory. Thus, nuclear weapons could have been effective defensive realist guarantors of nascent Ukrainian statehood. Additionally, there was no mention in Paul's work of moral constructivist backing for Ukrainian nuclear disarmament, which was concretely manifested in the Ukrainian declaration of statehood in 1990 and in the Ukrainian signing of the Alma Ata Declaration in 1991, which will be further elaborated in chapter 5.

3.3 Nuclear Arms Policy Analysis via a Liberalist Lens

According to Solingen in "Nuclear Logics: Contrasting Paths in East Asia and the Middle East", states whose leaders promote the international integration of their economies are less likely to develop nuclear weapons than states whose leaderships are insular and autarkic. This is because the former is motivated to avoid the political, reputational and economic costs of acquiring nuclear weapons as such costs disadvantage a national strategy promoting globally interdependent development, while state leaderships opposed to globalisation care much less about economically interdependent trade benefits and gain more from nuclear arms as national prestige and political legitimacy projects.[124] Indeed, there is proof that both South Africa and Ukraine valued the benefits of international trade, foreign investment and non-pariah political status

[124] Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia & the Middle East*, Princeton University Press, 2007, pp. 5.

over the nationalist prestige of nuclear weapons such that the former relinquished its nascent atomic arsenal while the latter surrendered its inherited one. On the other hand, North Korea is attracted by the benefits of global economic integration but is more strongly drawn to the allure of being a nuclear power. Hence, Solingen's approach can be used to analyse both globalising and insular trends during the periods when Ukraine was debating nuclear disarmament (1991 – 1996), when South Africa built nuclear arms to when it dismantled them (1970s – 1991) and throughout the various nuclear crises on the Korean peninsula (1992 – present day).

As for why only nuclear weapons possessors have been studied, this is based on research establishing that leaders have great reluctance to lose what they possess than potential future gains.[125] Studying states which abandoned their nuclear weapons programmes *before* actual weapons were produced would be a weaker analysis of disarmament motivations than studying cases of countries relinquishing functional nuclear arsenals since the latter would be decommissioning tangible rather than potential capabilities.

3.3.1 Domestic nuclear weapons politics in detail

Free exposure to the international system affects some groups positively and others negatively. Internationally competitive industries would favour more openness while uncompetitive or unproductive sectors would favour an insular government. In this milieu, intra-state actors seeking market access overseas, capital and technology transfers would dread being deprived of these due to the government's violation of NPT commitments, which would incur sanctions and weaken investor confidence. Conversely, sanctions and isolation from pariah status would strengthen native monopolies, government linked companies and

[125] Ibid, pp. 19.

institutions which see outsiders as a threat, like the military and conservative religion. Thus, domestic actors would certainly be interested in their leader's nuclear decisions.[126]

As leaders seek the backing of domestic coalitions to facilitate governance, the former adopts policies amenable to the state and societal coalitions targeted. These policies impact nuclear proliferation differently and can be described as internationalising, inward-orientated and compromise-hybrid.[127] Concerning inward-orientated governments, support for nuclear weapons from the military and other groups benefitting from a closed society would be easy to obtain because it allows the development of well-funded technological, industrial, military and administrative systems that can support the pride of insular groups. Hence, nuclear arms development tends to be politicised due to financial, technological, military and social implications.

Alternatively, governments supported by internationalising coalitions will have leaders who stake their futures on economic liberalisation and export led industrialisation requiring private sector economic growth, foreign investment and reduced trade barriers. These will be jeopardised by nuclear weapons development, and the government will either surrender all nuclear weapons, or scrap current atomic arms programmes as the supporting coalition of export industries, highly skilled labour and venture capitalists will not tolerate economic ostracism.

Lastly, the compromise-hybrid model of government policy requires leaders to assemble compromise coalitions in states fractionalised by different blocs championing globalisation, economic reform and foreign investment, while

[126] Ibid, pp. 41.
[127] Ibid, pp. 41 – 43.

others promote nationalism, sovereignty and military power. When this occurs, the factions seek to dominate chosen state agencies to promote their agenda, creating an unstable foreign policy swinging between nuclear compromise and intransigence. For instance, one could argue that the 2002 – 2006 period of nuclear antagonism on the part of North Korea (culminating in a nuclear test in 2006) signalled that inward looking factions were dominant, while the 2007 – 2008 period of compromise (where a cooling tower at North Korea's main nuclear reactor was demolished) revealed the strengthening of a more internationalising faction. Thus, nuclear disarmament is directly tied to the relative strength of economically liberalist versus insular anti-liberalist factions with non-proliferation succeeding where the former is stronger.

3.3.2 Applications for North Korea

While Solingen's book does not cover South Africa and Ukraine, her analytical framework will no doubt prove useful for deconstructing the nuclear disarmament/relinquishment motivations for these two nations. As for North Korea, she succeeds in providing a secondary realist justification for the DPRK nuclear weapons programme even as she bases most of her analysis of Pyongyang's nuclear policies on the compromise-hybrid model. However, her analysis does not account for the period from 2007 onwards and this will be addressed in chapter 6.

For a quick summary of the DPRK pertinent parts of Solingen's book, it is seen that the realist justification for the North Korean nuclear weapons programme as a balance of power equaliser was based on the need to confront the U.S. and ROK as threats, while depending on security treaties with both Beijing and Moscow which might prove unreliable, since a conventionally fought

inter-Korean war would still lay waste to the DPRK. Also, the value of extended nuclear deterrence would be dubious as both the Soviets and China might not be willing to risk the nuclear levelling of Moscow and/or Beijing in order to avenge Pyongyang.

Turning to the compromise-hybrid model, North Korean internationalising-insular duality can be seen as early as the 1970s with the initiation of trade with the West, the communicated desire for US-DPRK diplomatic contacts and the beginning of ROK-DPRK dialogue. Conversely, there were also requests made of the Chinese for help with the North Korean nuclear programme and even for the supply of tactical nuclear weapons in 1974. Thereafter, Pyongyang's insular facet made itself clear when construction began on a plutonium producing nuclear reactor in 1979 and the reactor and a plutonium reprocessing facility was completed in 1986 and 1989 respectively.[128]

With the 1990s, we can see the internationalists and liberals of Pyongyang exerting some influence as the Rajin-Songbong free trade zone was established, the legal system was prepared for foreign investment and reformist elements confronted their opponents over nuclear policy at the Korean Workers Party (KWP) central committee.[129] Consequently, IAEA inspections of North Korean nuclear facilities was approved and both Koreas signed the "Joint Declaration for the Denuclearisation of the Korean Peninsula" in 1991. However, the insular and isolationist factions of North Korea re-exerted themselves via the *Songun Chongchi* or military first policy of Kim Jong Il implemented in 1994. This elevated the military to the forefront of all national

[128] Ibid, pp. 128 – 130.
[129] Ibid, pp. 131.

decisions and gave them room to promote prestige bolstering nuclear weapons.[130]

As the 21st century dawned, it is posited that Kim balanced the insular and internationalist factions against each other. In as much as he admitted that, "my power comes from the military" and that an open economy was anathema to *Songun Chongchi,* he promoted military officers who were favourable to economic reforms.[131] Hence, the struggle between the factions could be seen in the revelation of a Highly Enriched Uranium programme in 2002, the nuclear test in 2006 and subsequent nuclear compromise with the U.S. from 2007 – 2008.

3.4 Constructivism, Norms and Nuclear Weapons Policy

In "Nonproliferation Norms: Why States Choose Nuclear Restraint", Rublee explains why some states abstain from nuclear arms development because they have been converted to the thinking behind non-proliferation, while others comply with demands for nuclear weapons forbearance in order to satisfy national interests. Hence, moral constructivism impacts nuclear policy both by creating norm solidarity and indirectly influencing norm compliance. Though she does not examine the nuclear weapons policies of apartheid era South Africa, Ukraine and North Korea, her norms based framework is useful for analysing the decisions made by these states.

Rublee proposes that international behaviour is affected by changes in preferences leading to changes in policy and/or a cost/benefit calculation leading to changes in behaviour.[132] To constructivists, changes in preferences

[130] Ibid, pp. 133.
[131] Ibid, pp. 136.
[132] Maria Rost Rublee, *Nonproliferation Norms: Why States Choose Nuclear Restraint*, The University of Georgia Press, 2009, pp. 17.

and the effects of social costs/benefits are relevant as these are linked to norms. Additionally, another term for preference changing is persuasion while being subject to social costs and benefits is termed being subject to social conformity. The difference between the two is that for the former, one nation is convinced about a particular course of action while for the latter, a nation is going along with international norms because it seeks prestige (social benefits) or wishes to avoid pariah status (social costs) while privately disagreeing with the aforementioned norms. Additionally, a form of social influence exerted by international norms is that of identification. This lies between persuasion and social conformity and occurs when a state actor is not entirely convinced of a particular policy stance but goes along with it nonetheless because it wants to identify with the policies of an admired group.[133] A case might be made that South Africa, Ukraine and North Korea exhibit characteristics of persuasion, social conformity and identification to different extents but that North Korea espouses pro rather than counter nuclear proliferation norms.

Regarding norms processing, how an actor connects a norm with its value system and decides that norm adherence would serve its values, is the chief means by which norms influence the nations in the case studies selected.[134] For instance, due to the overwhelming majority of the UN's nations being members of the NPT, the norm against proliferation is very strong and proliferators end up becoming pariah states. For South Africa, the value based desire to be part of the international community led it to conform to the NPT's norms by giving up nuclear weapons. For Ukraine, the desire to express an original national identity different from its former Soviet one (which was linked to nuclear arms) won out

[133] Ibid, pp. 18.
[134] Ibid, pp. 44 – 45.

over right-wing sentiments for the retention of inherited nuclear weapons, which lead to full nuclear disarmament by 1996. Additionally, linking plays some role in North Korea's moral constructivist norms based statements in that it has enunciated Korean denuclearisation as a goal, because the worldwide norms for disarmament have become so strong that Pyongyang arguably has to link some of its policies with these norms in order not to become more of a pariah than it already is.

Rublee's analytical concepts of persuasion, social conformity and identification, along with how norms are linked to state value systems, will be applied to the subsequent case studies.

3.5 Examining the South African, Ukrainian and North Korean Nuclear Weapons Policies

Mitchell Reiss's "Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities" admirably covers nuclear armament in all the 5 case study states selected and is a valuable factual resource. However, it does not interpret the nuclear disarmament processes using realist, liberalist and constructivist lenses and lacks some of the content analysis found in focused country studies. As Belarus and Kazakhstan have been discussed, this book's shortcomings regarding South Africa, Ukraine and North Korea will be examined.

3.5.1 South Africa

Reiss covers the history of the South African nuclear programme along with the nuclear strategy and motivations of Pretoria using a layman style narrative. His work is commendable in that a chronology of the South African nuclear programme is provided beginning with 1) feasibility studies into nuclear explosives and the initiated construction of a uranium enrichment plant in 1971,

2) nuclear explosives development authorization given by Prime Minister Vorster in 1974, 3) the initial production of highly enriched uranium, and formulation of South African nuclear strategy in 1978, through to 4) President de Klerk's executive decision to shut down the nuclear weapons programme.[135] This provides a timeline for South African nuclear armament and disarmament motivations which began with South Africa's policy of racial discrimination, *apartheid*, turning South Africa into an international pariah from the non-white 3rd world's perspective, and subjected it to a UN arms embargo from 1963. Subsequently, the post-1974 liquidation of Portugal's Southern African colonial holdings brought black self-rule to Angola and Mozambique along with governments which were pro-Soviet and anti-Pretoria. Additionally, South African military intervention in Angola in 1975 cemented the latter's hostility.

Domestically, the white regime in Pretoria was also threatened as serious anti-apartheid riots broke out in 1976, leading to further international pressure due to brutal riot suppression.[136] On its part, the IAEA kicked South Africa off its board of directors in 1977, the U.S., UK, France, Germany and Canada pushed for South African relinquishment of Namibia which it controlled as a *de facto* colony, and the voluntary arms embargo from 1963 was made mandatory. Since the pressure about Namibia, IAEA expulsion and arms cut off all occurred in 1977, Pretoria's leadership perceived acute vulnerability, and political content analysis bears this out as the military was doubled along with a tripling of the defence budget. With Soviet supported threats on its northern borders, foreign support for pro-independence insurgents in Namibia, and a festering black

[135] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 33 – 34.
[136] Ibid, pp. 9.

resistance movement at home, South Africa had its proverbial “back to the wall” and decided to manufacture 7 nuclear warheads in 1979.

However, even as the pressures on Pretoria are succinctly elaborated, they still need to be interpreted from an international relations framework to better understand South African nuclear motivations. For instance, defensive realism would posit that the paradigm in Southern Africa grew more anarchic and hostile with the fall of Portuguese rule, skewing the balance of threat against South Africa, and weakening the balance of military power to Pretoria’s detriment, as the latter could no longer import arms from 1977 onwards, and could not get allied military support due to its pariah status, thus necessitating a nuclear equaliser. As for liberalism and in particular liberal economic interdependence, Pretoria’s *apartheid* policies already made her *persona non grata* amongst the 3rd world as a trading partner, while Western foreign investment would have been far less forthcoming from 1976 onwards, weakening the value of economic progress as a factor against nuclear arms acquisition. Correspondingly, a siege mentality arose fostering constructivist norms favouring national security preservation at all costs. The mindset could have been that abiding by nuclear non-proliferation norms was pointless, as the international system did not understand South Africa, and was prepared to isolate it.

3.5.2 The end of Pretoria’s nuclear weapons

The narrative of South Africa’s nuclear arms relinquishment is also detailed but lacks framing according to international relations perspectives. Reiss narrates that President de Klerk ordered a study of nuclear disarmament feasibility and approved the decommissioning of the South African nuclear

weapons programme in 1989. Subsequently, the entire programme was dismantled by 1991, and South Africa joined the NPT and resumed IAEA membership in the same year.[137]

Additionally, other disarmament motivations were stated:

- That the threat of a black onslaught on South Africa's northern borders had abated, since a ceasefire with Angola and its Soviet backed Cuban ally which had troops in Angola had been agreed to in 1988, with an agreement for the withdrawal of Cuban troops. Also, in 1989 Pretoria agreed to the independence of Namibia and it was clear that the Cold War was ending.
- That de Klerk wanted global legitimacy for South Africa with the abolition of *apartheid,* non-interference in neighbouring state's affairs and normalisation of all interstate relations. Nuclear weapons impeded this aim.
- Thirdly, economics was a supporting reason. Nuclear weapons retention precluded joining the NPT, depriving South Africa of access to nuclear energy generating technology to support local industries, and eliminated profitable uranium exports.

However, as with the previous section on nuclear arms drivers, these factors need to be interpreted through realist, constructivist and liberalist lenses. Hence, we can see that the balance of threat was no longer stacked against South Africa with the weakening of the USSR and the resultant willingness of South Africa's adversaries to come to terms. Concerning denuclearisation norms, there is evidence not present in Reiss's book that De Klerk was actually

[137] Ibid, pp. 17 – 19.

a reformist and personally disagreed with nuclear arms. Evidence of De Klerk's views about the moral desirability of a nuclear weapons free South Africa will be presented in chapter 4. Lastly, economic degradation from South Africa's period as a global pariah was not adequately emphasised. The economic losses from the *apartheid* years, industrial benefits from global economic integration and De Klerk's remarks championing South Africa's international economic reintegration will be elaborated later.

3.5.3 Ukraine

With the Soviet Union's demise, Ukraine inherited numerous strategic nuclear warheads and thousands of tactical nuclear weapons.[138] This created a monumental nuclear proliferation problem for the U.S. as Kiev's leadership and nuclear weapons policy were largely unknown. Thus, understanding Ukrainian national security, economic and norms based motivations would have been crucial for disarmament negotiations.

Beginning with Ukrainian survival imperatives, the future in 1991 upon the USSR's dissolution seemed uncertain as Ukrainian territory had been under Russian domination since the mid-1600s. Even as it tried to exert independence in 1917 with the fall of imperial Russia, communist forces invaded soon after. With independence in 1991, Russian mismanagement (especially of the Chernobyl nuclear disaster), discrimination, abuse and even an ethnocentric perception that Ukraine was Russian land created such distrust that nuclear weapons disposal from Ukraine was hindered.[139]

Despite the Lisbon protocol of 23 May 1992 obliging Ukraine to surrender all nuclear weapons and join the NPT, Kiev had essential interests that needed

[138] Ibid, pp. 91.
[139] Ibid, pp. 91.

to be addressed and one of two principal considerations was realist national security concerns born of tempestuous Ukrainian-Russian relations. As will be elaborated in chapter 5, Kiev feared being violently re-absorbed by Russia as it was in the early 20th century. Also, Kiev's officials perceived that the West was only interested in Ukraine as long as it retained nuclear weapons and would abandon it to Russian depredation after disarmament, while peripheral issues such as Ukrainian vulnerability to Russian energy supply blackmail, and the lack of alliance opportunities, emphasised precarious Ukrainian sovereignty. Thus, there existed national security motivation to retain nuclear arms.

However, even as Reiss enunciates Ukrainian fears of Russia as an existential threat, he fails to further build on the classical realist flavour of this threat by assessing the balance of Ukrainian conventional military forces vis-à-vis that of Russia. Thus, a viable balance of power evaluation is absent.

Next, Ukraine's economic sustainability needed to be addressed in order to sweeten Kiev's nuclear disarmament proclivities. Like all ex-Soviet republics, it emerged from communist poverty and as such, economic aid and financial compensation from nuclear disarmament efforts could reinforce governmental legitimacy, supress nationalist dissent and create much needed jobs. Particularly, compensation took the form of nuclear weapons dismantlement aid, reimbursements for warhead transportation to Russia and warhead plutonium and uranium compensation.

But while Reiss does touch on economic denuclearisation drivers, his book does not adequately analyse officially or privately expressed discourse which would reveal the importance of economic integration and cooperation

with the west, thus highlighting liberalist interdependence based reasons for precluding nuclear weapons retention.

As for nuclear disarmament norms influencing Kiev, this can be seen in the Ukrainian parliament or *Rada* declaring state sovereignty on July 16, 1990, where Ukraine pledged: "not to accept, not to produce, and not to acquire nuclear weapons".[140] However, Reiss does not explore the significance of this statement, or give sufficient attention to other expressions of Ukrainian anti-nuclear weapons policy, which can be used to evaluate the effects of nuclear disarmament norms. The enunciation of an anti-nuclear armaments policy at a state's inception carries weight when it is faced with a large, potentially hostile neighbour (Ukraine vis-à-vis Russia) while constructivist nuclear disarmament norms cannot be discounted as they substantiate nuclear weapons forbearance.

3.5.4 The January 1994 trilateral accord

Subsequently, Ukraine's realist security, liberalist economic, and even moral constructivist objectives would be achieved when it signed the January 1994 trilateral accord in Moscow with the US and Russia as co-signatories. Firstly, Washington and Moscow would provide security assurances to Ukraine once START was implemented and the latter joined the NPT. Specifically, the latter's territory would be respected, it would be assured against the threat or use of military and economic coercion and nuclear weapons would not be employed against it.[141]

Next, Ukraine's economy would be assisted via financial compensation for all nuclear weapons dismantled and surrendered. In this regard, Russia would

[140] Ibid, pp. 92.
[141] Ibid, pp. 116.

provide Ukraine with uranium fuel rods for civilian power generation, and the debt from previously shipped oil and gas from Russia to Ukraine would be forgiven, while the U.S. eventually supplied $900 million in economic assistance for Ukrainian disarmament compliance.[142]

Lastly, signing such an accord with the two cold war superpowers in the presence of the international media would have allowed Ukraine to bolster its legitimacy and prestige, while allowing Ukraine to occupy the moral high ground and proclaim its compliance with nuclear disarmament norms, thereby earning the international community's respect.

Honestly assessing Reiss's work, it can be seen that he has clarified the factual mechanics of how Ukraine's essential needs have been met, but insufficient discourse analysis was conducted to investigate whether Kiev's leaders truly believed that their nation's realist security, liberalist economic and constructivist moral needs were met. Also, further explanations linking the trilateral accord to the aforementioned theoretical needs was not clarified. For instance, the legally binding security assurances could have placed moral restrictions on Russian coercion of Ukraine, thereby removing it from Kiev's balance of threat calculus, while nuclear fuel compensation and U.S. financial aid would have helped Ukraine subsidise its export industries with cheap energy, and aided economic restructuring for better integration into the interdependent world economy. In closing, benefits from the trilateral accord convinced Kiev to ratify START in February 1994 and approve NPT ascension in November 1994, facilitating the exit of the last nuclear warhead from Ukraine in 1996.

[142] Ibid, pp. 117, 129.

3.5.5 North Korea

With the establishment of ties with South Korea by the USSR and People's Republic of China (PRC), North Korea was increasingly marginalised. Once the USSR disintegrated, the DPRK was left without communist bloc military and economic support. Accordingly, it can be posited that Pyongyang emphasised the development of nuclear weapons to ensure state survival as the ultimate deterrent, or to be exchanged for economic benefits and security assurances. As the DPRK's military capabilities were outmatched by the U.S.-ROK alliance and its economy crumbled, its nuclear weapons programme became increasingly vital.

Firstly, Reiss touches on the DPRK's economic weakness in the immediate aftermath of the USSR's collapse, and points out that its 3-5% annual economic shrinkage from 1990 to 1992 and halving of trade volume could have contributed to a more open attitude towards its nuclear programme, to attract economic assistance.[143] This hints at liberal economic interdependence as a reason for nuclear armament flexibility even if Reiss does not describe it as such. However, since his book was published in 1995, it does not cover the floods, tidal waves and other crop failure inducing natural disasters from 1995 – 1998 that killed hundreds of thousands of North Koreans, thereby weakening the DPRK's workforce. Also, subsequent developments from 2000 to 2006 which hobbled the economy, and which are important for explaining North Korean nuclear developments are absent. These will be analysed in chapter 6.

[143] Ibid, pp. 241.

Next, Reiss mentions Pyongyang's unease over U.S.-ROK military exercises which it describes as "invasion rehearsals". While this describes a defensive realist based reason for North Korean nuclear policy as a guarantor of national security, he does not explain the balance of power rationale behind Pyongyang's anxiety. Hence, chapter 6 will explain why the technological edge of North Korea's immediate adversaries unnerves it, and reinforces the balance of threat to Pyongyang, even as it has a quantifiably burgeoning military.

Additionally, Reiss mentions North Korea's processing of plutonium for bomb making purposes in 1989, 1990 and 1991.[144] This corresponds to the fall of the Berlin wall in 1989, the declaration between Presidents Reagan and Gorbachev in December of the same year that the Cold War was over, cooling relations between the USSR and DPRK in 1990 and the USSR's ultimate demise in 1991. Even if Reiss does not mention it, Pyongyang's initial plutonium processing attempts could have been related to anxiety over pending patron abandonment leading to a shift in the balance of power against it.

Regarding Pyongyang's possible underlying motives for pursuing nuclear weapons in the 1990s and beyond, Reiss offers a good interpretation in that the DPRK had been unable to normalise relations with either the US or Japan, it had little success in attracting foreign investments and loans, and that Pyongyang feared that other than the U.S., Japan and South Korea making diplomatic recognition and serious financial assistance conditional upon being certified disarmed of all nuclear weapons by the IAEA, this "anti-DPRK alliance" might include ballistic missile proliferation, human rights and chemical weapons

[144] Ibid, pp. 246.

as supplementary conditions.[145] Therefore, a strident nuclear weapons policy makes sense as Pyongyang seeks to convince its adversaries not to take its willingness to negotiate for granted. However, as usual, Reiss does not interpret his work using international relations theory lenses. For instance, the failure to normalise relations with the U.S. is also a failure to lessen the classical realist balance of threat against the DPRK, while inability to establish full relations with Japan implies an economic liberalist integration failure to get the assistance of Tokyo to join the world economy. Similarly, failure to attract investments and loans implies rejection by the interdependent world economy.

Subsequently, due to extensive U.S.-ROK military exercises beginning on 9 March 1993 and IAEA demands in February for special inspections of DPRK nuclear facilities, Pyongyang announced North Korea's withdrawal from the NPT on 12 March. As the actual withdrawal could only take place after 3 months and in an effort to keep the DPRK within the NPT, the U.S. agreed to meet directly with DPRK representatives in New York on 2 June. Thereafter, both parties agreed on 11 June that North Korea would suspend its NPT withdrawal in return for "assurances against the threat or use of force" and that the DPRK agreed to "impartial application of full-scope safeguards".[146] However, even though history tells us that Pyongyang would not fully cooperate with the IAEA, the significance of this meeting and issued statement that Reiss seems to miss is that the DPRK takes its national security very seriously. The attempt to get American agreement against the use of force implies a lasting desire to rule out the U.S. as an enemy since North Korea knows that it will

[145] Ibid, pp. 248.
[146] Ibid, pp. 253 – 254.

never prevail in the balance of power calculus as long as the U.S. is in the equation.

However, the volatility of Korean politics was emphasised nine months later in March 1994 when DPRK-ROK talks went poorly and Pyongyang prevented IAEA inspectors from completing their work, leading to uncertainties about whether North Korea had diverted nuclear material for bomb making. This led to it being referred to the United Nations Security Council for possible sanctions, the U.S. cancelling the next meeting with North Korean negotiators, and Washington taking steps to beef up U.S. military strength in South Korea. In response, Pyongyang aggravated the situation by unloading its nuclear reactor's spent fuel rods in May, from which enough plutonium to construct 4-6 bombs could be extracted.[147]

Eventually, cooler heads prevailed as former U.S. President Jimmy Carter negotiated with then President Kim Il Sung, who agreed to freeze the North Korean nuclear programme pending formal negotiations. Though President Kim passed away in July 1994, his successor Kim Jong Il approved an "Agreed Framework" on 17 October 1994 in which the DPRK would freeze its nuclear programme, comply fully with IAEA safeguards obligations, ship all spent nuclear fuel rods out of the country and eventually decommission all weapons proliferation prone nuclear infrastructure. In return, North Korea would receive externally funded and proliferation resistant Light Water nuclear Reactors (LWRs) designed for electrical power generation, fuel oil aid whilst the LWRs were being constructed and improved diplomatic relations with the U.S.[148]. This

[147] Ibid, pp. 266, 268 – 269.
[148] Ibid, pp. 276 – 277.

de facto treaty would have met U.S. non-proliferation goals and satisfied DPRK national interests.

Even as Reiss's work is dated and needs to be supplemented with analysis from later years as will be attempted in chapter 6, he deserves praise for a detailed elaboration of the North Korean nuclear weapons crisis. But for this dissertation, Reiss's coverage needs to be reinterpreted according to realist, liberalist and constructivist lenses. For instance, the terms of the "Agreed Framework" can be clearly divided into those which reduce the defensive realist balance of threat against North Korea such as normalised diplomatic relations with the U.S., those which improve the DPRK's ability to benefit from a liberally interdependent world economy such as LWRs which could supply affordable energy to export industries, and those which mandate North Korean conformance to moral constructivist disarmament norms, such as complying with IAEA safeguards and dismantling all nuclear proliferation prone facilities. Lastly, Reiss's work could be enhanced by quoting from North Korean media or leadership statements which provide evidence of realist security, liberal economic and constructivist moral interests.

3.6 A Multi-causal Deconstruction of South African Nuclear Arms Policy

Turning to works that have attempted a multi-faceted analysis of the nuclear armament and disarmament issue, one of the few concerning the case study states selected is Peter Liberman's *"The Rise and Fall of the South African Bomb"*. Liberman touches on security, organisational politics and international pressure based reasons for the development and decommissioning of the South African nuclear weapons programme, and writes extensively about 1) the Soviet supported Angolan and Cuban threat to South

African forces and the subsequent irrelevance of this threat, 2) the Atomic Energy Board (AEB) of South Africa and its role as a key driver of the commercial/mining nuclear explosives project in the early 1970s and 3) the effectiveness of international sanctions/censure on Pretoria.

Firstly, Liberman argues against a defensive realist national security based explanation for the weaponisation of the South African nuclear explosives research programme, positing that the military threat to South Africa from the 1970s to the 1980s was not existentially threatening, as the Soviet Union lacked the logistical capacity to support a required 80,000 strong expeditionary force in the region and that even if it could do so, such a force, in concert with allied Cuban and Socialist African forces would find it hard to defeat the SADF.[149]

But irrespective of technical threat calculations, decisions are often made based on subjective perceptions rather than objective assessment. In fact, even Pik Botha, the then South African foreign minister stated that "we did not have a clinical, sober analysis of what the Soviet Union could do in Africa."[150] Thus, factoring the emotive impact of a Soviet supported threat, even a 30-40,000 strong Soviet force, backed up by Cuban, Angolan or Mozambican forces, primed and ready to invade South African occupied Namibia or even South Africa proper, would have seemed a worrisome security threat necessitating a decisive technological balancer in the absence of any external alliances (which South Africa could not have maintained due to apartheid based pariah status). Additionally, there existed intelligence provided by South African backed UNITA

[149] Directorate of Intelligence, U.S. Central Intelligence Agency, *Trends in South Africa's Nuclear Policies and Programs*, 4 October 1984, sourced from www.foia.ucia.gov.
[150] Margot Light and Philip Nel, *South African Research on Soviet Foreign Policy*, Politikon, Vol. 17, No. 1 (June 1990), pp. 66-72.

rebels in Angola that the soviets had chemical and nuclear weapons deployed in Angola.[151]

To substantiate my disagreement with Liberman that the realist threat was important to Pretoria and substantially influenced its drive for nuclear arms, I will in chapter 4, 1) cover content analysis which serves as evidence that senior South African national security figures feared external threats, 2) lay out the conventional military balance of power between white South Africa and its northern Soviet backed adversaries, thereby proving that the threat was substantial and 3) highlight the extent to which international arms embargoes deprived South Africa of affordable weapons which forced it to build its own at far greater cost, thus stressing the cost effectiveness of nuclear arms. As for the author's criticism that South African nuclear weapons could not serve a deterrent purpose because Pretoria lacked the ability to threaten the USSR, this can be countered by the argument that this technicality has not stopped the DPRK or even the USSR in the late 1940s from acquiring nuclear arms, because a nuclear deterrent has to start at some point and its horrific use on Soviet expeditionary forces should restrain aggression.

Next, Liberman's work does serve as a reference for the genesis of South African nuclear research in that it details the 1971 decision to develop nuclear explosives as being grounded in the desire to utilise atomic explosives for construction and mining. This had some legitimacy as both the U.S. and Soviets then had similar research programmes.[152] For the AEB, the South African Peaceful Nuclear Explosion (PNE) effort started as a way to prevent

[151] Peter Liberman, *The Rise and Fall of the South African Bomb* in *Going Nuclear: Nuclear Proliferation and International Security in the 21st Century*, Michael E. Brown, Owen R. Cote Jr., Sean M. Lynn-Jones and Steven E. Miller (Eds), Massachusetts Institute of Technology Press, 2010, pp. 271.
[152] Ibid, pp. 260.

unemployment amongst South African nuclear scientists[153], while certain senior civil servants and politicians were infatuated with nuclear weapons for their own reasons. Subsequently, the resources allocated to the nuclear weapons programme became so substantial that the AEB wanted to sustain the programme to preserve research capability, even as they later lost control to the Armaments Corporation of South Africa (ARMSCOR).[154]

However, I am inclined to exclude organisational politics as a driving factor for nuclear weapons programme initiation and sustainability in the developing nations that I am examining, and in particular for South Africa because of two reasons. Firstly, even as the nuclear weapons establishment might benefit from the funding received, it first needs to justify its existence via the countering of a grave national threat. Once this threat no longer exists, the global nuclear weapons taboo makes it increasingly difficult to maintain a nuclear deterrence. Thus, the organisational political drive for nuclear arms depends on a defensive realist threat. Basically, studying the realist root helps account for the growth of the organisational politics plant. Also, as can be seen in South Africa and Ukraine, their small nuclear weapons establishments or lack thereof respectively, mean that they are unable to exert the same magnitude of political influence that their larger brethren in the U.S., Britain, France and Russia can muster. Thus, when President De Klerk of South Africa made the decision to decommission the nuclear weapons programme, the nuclear arms infrastructure did not put up any resistance.

Concerning South African receptiveness to foreign pressure, Liberman's article does have relevant points, especially with respect to anti-economic

[153] Ibid, pp. 274.
[154] Ibid, pp. 275-276.

interdependence or counter liberalist and pro-nuclear constructivist norms arguments for nuclear weapons development. Specifically, even as the U.S., France and West Germany ceased trade and nuclear energy cooperation with South Africa in the late 1970s,[155] Pretoria had the resources and was prepared to not only accept any economic slowdowns, but also enrich and assemble its own uranium fuel cells (at considerable cost) in order to maintain nuclear energy self-sufficiency.[156] Basically, Liberman pointed out that South Africa had a nationalist-statist government that adopted autarkic import substitution policies and stressed strategic economic autonomy via nuclear energy and the military industrial complex.[157] Such a counter liberalist state would be resistant to external economic pressure whilst stressing norms that saw nuclear capabilities as bolstering national pride and earning international prestige. Indeed, President P. W. Botha himself enunciated that the nuclear arsenal enabled South Africa to "maintain its self-respect".[158] Hence, in as far as other nuclear proliferators also maintain pro-nuclear normative standards, this forms a constructivist argument *favouring* nuclear arms. With this in mind, I will compare Liberman's counter-liberalist and proliferation-constructivist examples with my other case studies to see if similar state behaviours characterise support for nuclear arms retention in Ukraine or nuclear aggrandisement in North Korea.

[155] Ibid, pp. 279.
[156] Frank V. Pabian, *South Africa's Nuclear Weapons Program: Lessons for U.S. Nonproliferation Policy*, The Nonproliferation Review, Fall 1995, pp. 1-19.
[157] Neta C. Crawford, *Oil Sanctions against Apartheid* in *How Sanctions Work: Lessons from South Africa*, Neta C. Crawford and Audie Klotz (Eds), St. Martin's Press, 1999, pp. 103-126.
[158] Peter Liberman, *The Rise and Fall of the South African Bomb* in *Going Nuclear: Nuclear Proliferation and International Security in the 21st Century*, Michael E. Brown, Owen R. Cote Jr., Sean M. Lynn-Jones and Steven E. Miller (Eds), Massachusetts Institute of Technology Press, 2010, pp. 280.

Lastly, while Liberman acknowledges the popular belief in the abatement of the Soviet supported security threat[159] and the greater receptivity of the De Klerk government to international economic and political pressure,[160] as being key to South African nuclear disarmament, this dissertation still retains a value adding role as it contributes explanatory content analysis expressed by De Klerk himself, concerning the greatly weakened realist threat of world communism in the late 1980s, and the stagnated South African economy, along with the need for liberalist economic interaction which would be incompatible with nuclear weapons. Additionally, the moral constructivist angle is not well addressed and will be remedied in chapter 4 by analysing South African statements affirming nuclear disarmament ethics.

3.7 Varied Pathways Substantiating Nuclear Arms Policy

Liberman evaluates different causal routes to understanding South African nuclear development policy, but since this dissertation aims to derive generalizable frameworks accounting for both nuclear weapons acquisition/retention and disarmament/relinquishment across multiple case studies, it would help to review works introducing different explanatory mechanisms which cover a range of cases.

One such work is the article, *"Why Do States Build Nuclear Weapons?: Three Models in Search of a Bomb"* by Scott Sagan. In it, Sagan argues that there are three models which substantiate nuclear arms development or abstinence policies. These are the "security model" where nuclear weapons decisions depend on the extent of threats to national security, the "domestic politics model" which describes nuclear munitions as tools to promote domestic

[159] Ibid, pp. 284-285.
[160] Ibid, pp. 288, 290-291.

or bureaucratic interests, and the "norms model" where nuclear armaments building or forbearance becomes an expression of national identity.[161] These causational routes are then used to derive alternative U.S. nuclear non-proliferation policies while being compared to one another. When appraising Sagan's article, it is apparent that he has analytically stove piped or compartmentalised his chosen nuclear weapons policy drivers, thereby creating a clearly separated list of nuclear arms motivations.

Referencing Sagan's article with the theories employed here, it is seen that his security model[162] is covered by the use of classical and defensive realism, and the role of the norms model is fulfilled via pro and counter-proliferation norms within moral constructivism. Concerning Sagan's domestic politics model, the use of organisational politics as a lobbying mechanism by the nuclear arms establishment to gain governmental support has already been discounted as part of the critical analysis of Liberman's work, while Solingen's thesis involving either insular-nationalist groups or pro-economic interdependence internationalising coalitions influencing governmental nuclear policy, adequately accounts for the local political dimension. Therefore, Sagan's causational bases are covered by their equivalents.

However, this dissertation goes further and adds value by justifying the eclectic incorporation of motivations involving realism, economic interdependence liberalism, and moral constructivism into an interrelated tripartite nuclear arms policy framework to improve explanatory efficacy, which is something that Sagan's analytical compartmentalisation does not do.

[161] Scott D. Sagan, *Why Do States Build Nuclear Weapons?: Three Models in Search of a Bomb*, International Security, Vol. 21, No. 3 (Winter 1996 – 1997), pp. 54-86, pp. 55.
[162] Sagan references neorealist motivations in his security model and a prime text for this theory is Kenneth N. Waltz, *Theory of International Politics*, Random House, 1979.

Additionally, originality is preserved since common analytical characteristics like interdependence and leadership are used across these theories.

Finally, apart from articles addressing the case study nations selected here (Reiss) or examining heterogeneous justifications for nuclear munitions possession or relinquishment over one or more case studies (Liberman and Sagan), there exist works which propose compelling alternative approaches explaining nuclear arms development. A good example is Jacques Hymans's "The Psychology of Nuclear Proliferation".

3.8 A Competing Psychology based Understanding of Nuclear Proliferation

In his book, Hymans makes the assertion that the "National Identity Conception" (NIC) of a state's principal political leader is responsible for the nuclear weapons acquisition decision.[163] Hymans makes his case that a leader possessing an "oppositional nationalist" NIC will define his/her state as being naturally at odds with and equal or superior to national adversaries. Accordingly, such a leader would be inclined to fear any adversary and place emphasis on national pride. Inasmuch as nuclear arms ameliorate fear of enemies and bolster national self-worth, such leaders would champion nuclear munitions development. In support of his thesis, Hymans uses France, Australia, Argentina and India as case studies.

However, though Hymans's makes a compelling argument in support of his case studies, the fact remains that his research hypothesis has not been applied to any of the case study nations in this dissertation and thus, it is uncertain whether his "oppositional nationalist" NIC decisional driver will be

[163] Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy*, Cambridge University Press, 2006, pp. 13.

relevant here. But if the potential applicability of Hymans's thesis for South Africa, Ukraine and North Korea is set aside as a future research endeavour, the more important shortcoming of Hymans's work is that "oppositional nationalist" leaders still need to be confronted by realist threats in order to contextualise their nationalistic sentiments, evaluate economic prospects for dealing with counter liberalist non-proliferation sanctions, and overcome global nuclear counter-proliferation norms. Hence, Hymans's work broadens the study of nuclear arms policy but does not render irrelevant the realist-liberalist-constructivist framework proposed herewith. Additionally, leadership characteristics are examined as part of realist, liberalist and constructivist analysis across all three main case studies in this dissertation.

Lastly, it can be argued that Hymans's case studies do not capture the security based realist motivation driving nuclear arms policy. Fundamentally, Australia and France have never been seriously threatened since World War Two, Mainland Argentina has not been invaded in recent history, and India is a regional great power with nothing to fear from the pre-nuclear armed Pakistan. Hence, these states do not confront mortal strategic danger and are not as suitable as case studies compared to the countries selected in this dissertation.

3.9 Summary of Literature Review and the Argument Ahead

While Brodie and Blackett speak from a war fighting perspective and highlight the attractiveness of nuclear weapons for proliferants, Wohlstetter warns us about the destabilising nature of nuclear arms and the difficulty of deterrence creation. Thus, these scholars help address the issue of *why* this dissertation focuses on nuclear weapons policy.

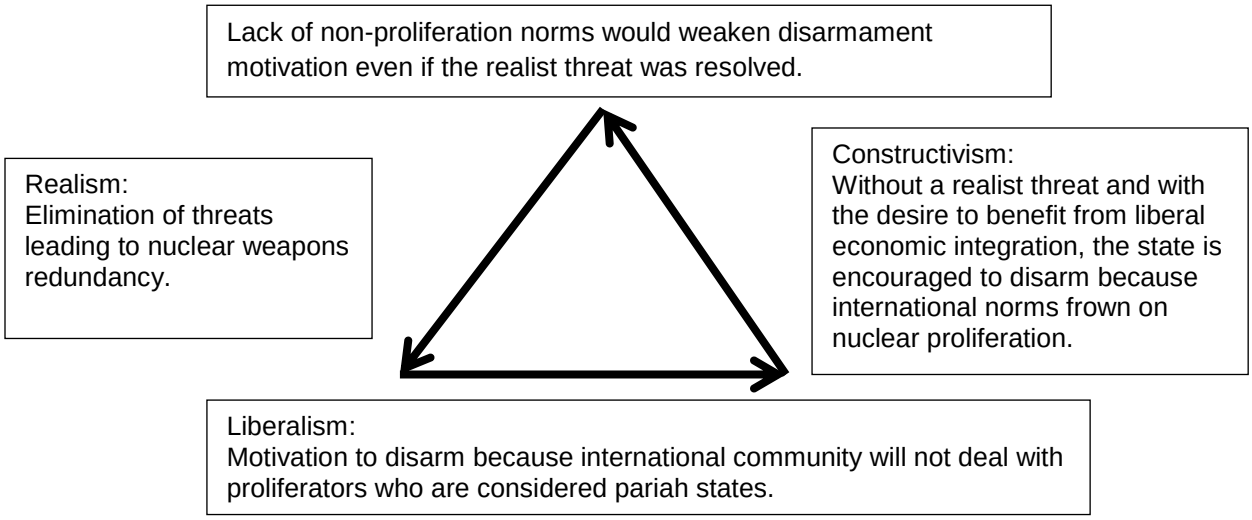
Next, the trio of Paul, Solingen and Rublee present the vital theoretical foundations for analysis while Reiss showcases an example of recent nuclear weapons forbearance scholarship. Thereafter, two works analyzing multi-causal drivers of nuclear proliferation and counter proliferation are featured, with Liberman examining the South African route to nuclear armament and disarmament, and Sagan adopting security, organisational politics and norms based models as lenses to interpret nuclear weapons policies across many varied cases. Lastly, a leadership psychology based approach for understanding nuclear proliferation by Hymans is evaluated as a possible competitor to the interdependent realist-liberalist-constructivist research hypothesis proposed by this dissertation.

However, the studies by Paul, Solingen and Rublee have coverage deficiencies (complete lack of analysis on any or all of the three case studies), out of date North Korean analysis, and/or are missing pertinent material or content analysis based realist, liberal and constructivist details about South Africa, Ukraine and North Korea, while Reiss's work lacks theoretical rigour. As for Liberman's article, 1) his downplaying of the security threat against apartheid era South African can be subjectively disputed, 2) the organisational politics argument as a nuclear policy driver can be superseded by realist concerns or regarded as relatively minor for developing nations and, 3) his analysis of the De Klerk government's receptivity to external influence can be supplemented by additional South African specific realist, liberalist and constructivist content analysis found in this dissertation. Turning to Sagan's article, his explanatory models have either been covered by equivalent theoretical bases proposed within this dissertation, or by borrowed concepts which will be applied to my

case studies (Solingen's insular and internationalising coalition approach). Additionally, the interlinked tripartite theoretical framework found here supersedes Sagan's compartmentalised theoretical investigation where his models do not interact. Finally, setting aside the fact that Hymans's thesis has not been applied to the case study states here, and that his case study exemplars are less applicable for security based analysis, his leadership psychology approach does not render irrelevant the realist, economic interdependence liberalist and norms based influences that any leader must consider. Thus, Hymans's work does not invalidate my hypothesis.

In view of the inspirations and shortcomings of the literature reviewed, the upcoming chapters will address the national security facets, counter and pro-economic interdependence factors, and moral considerations in the tripartite theory framework (revisited in Diagram 1 below) through the principal selected case studies, the first of which is the nuclear arms development and disarmament of South Africa.

Diagram 1: Disarmament Flow Triad



Chapter Four – The South African Case as a Classic Nuclear Armament and Disarmament Exemplar

4.1 A Triad based Analysis of South African Nuclear Weapons Policy

South Africa is unique amongst all states that have indigenously developed operational nuclear arms in that it is the only one which has autonomously decommissioned its nuclear weapons programme and destroyed its stock of deployable nuclear armaments without direct foreign pressure. In contrast, Ukraine which will be examined in the next chapter, inherited its nuclear weapons and was motivated by extensive external incentives including compensation for surrendered weapons and security assurances. South Africa is arguably the most successful nuclear disarmament exemplar.

Whether or not South Africa's leaders made a conscious effort to obtain nuclear armaments at that exact time, the fact is that the technical genesis of the nuclear research programme occurred in 1971 when construction was initiated on a small uranium enrichment plant which was built at Valindaba next to the headquarters of the Atomic Energy Corporation (AEC), located outside the capital, Pretoria. Thereafter in 1974, the AEC informed then Prime Minister John Vorster that South Africa had the capability to construct nuclear explosives and he authorised development of the aforesaid explosives together with funding for a testing location[164]. Subsequently, from January 1978 when the Valindaba enrichment plant, also known as the Y plant produced a small maiden batch of highly enriched uranium (HEU) all the way until the latter end of 1979, this plant continued to produce enriched uranium hexafluoride which was then converted to uranium metal. This accumulated enriched uranium was then

[164] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 8.

used as the active component of South Africa's first nuclear bomb in November 1979[165].

However, mere chronological facts alone do little to aid an understanding of why Pretoria ordered the militarisation of its nuclear research programme, and later carried out the decommissioning of all atomic warheads and their manufacturing facilities. In order to holistically investigate the motivations behind South African nuclear weapons policy, this chapter will thoroughly analyse the security based realist, economic interdependence liberalist, and moral constructivist norms based drivers behind the genesis and retirement of Pretoria's atomic bombs. It will also be shown that the realist, liberalist and constructivist drivers identified work together as a tripartite explanatory collective, interacting with and depending upon each other. Additionally, irrespective of whether realism, liberalism or constructivism is used to account for South African nuclear developments, it will be illustrated that each theoretical factor displays interdependence, norms and leadership characteristics, thereby providing common frames of reference despite the seemingly disparate nature of this tripartite model. For example, in relation to South African atomic arms acquisition, Pretoria's leadership had to provide realist security justifications, counter liberalist interdependence arguments and pro-proliferation norms advocacy in order to legitimise the nuclear arms programme.

[165] Ibid, pp. 8.

4.2 Realist Security based Justifications for South African Atomic Weapons

Pretoria's decision to arm itself with atomic bombs can be understood via the effects that international pressures, which were induced by domestic policies, had on the decisional psyche of Pretoria's leaders. Regarding domestic policy, this was the practice of *apartheid*, an institutionalised system of racial discrimination enforcing white minority rule over the majority Black, Coloured and Asian population from 1948 to 1994. Consequently, the non-White population was subjected to abuses such as racial segregation, lesser quality of essential services, vastly poorer education and deprivation of employment opportunities. In response to apartheid's injustices, there was much opposition mounted against the white government but the two most serious incidents that might indirectly account for Prime Minister (1966 – 1978) and subsequently President (1978 – 1979) John Vorster's support for the assembly of South Africa's first nuclear bomb was the 1960 Sharpeville massacre and June 1976 Soweto riots. In the Sharpeville massacre, South African police used live ammunition on black protesters, killing 69 people[166] while more than 500 fatalities occurred[167] as a result of the Soweto riots. This led to international condemnation including strategic sanctions ranging from: (1) the UK restricting armaments sales to South Africa in 1962, (2) the U.S. announcing a unilateral weapons embargo in 1963[168], (3) American refusal to export enriched uranium to South Africa for the latter's research and energy generating nuclear

[166] Richardt Van Der Walt, Hannes Steyn and Jan Van Loggerenberg, *Armament and Disarmament: South Africa's Nuclear Experience (Second Edition)*, iUniverse Inc, 2005, pp. 2.
[167] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 80.
[168] Helen E. Purkitt and Stephen F. Burgess, *South Africa's Weapons of Mass Destruction*, Indiana University Press, 2005, pp. 46.

reactors[169] (giving impetus to the development of domestic enrichment capabilities) and (4) having the US, UK, France, Canada and West Germany oppose the South African occupation of neighbouring Namibia which added impetus for the United Nations Security Council (UNSC) to implement a mandatory arms embargo against South Africa on 4 November 1977 via UNSC resolution 418 (which deprived Pretoria of readily available arms sources with which to defend South Africa against its northern enemies)[170].

Concerning enmity from South Africa's northern neighbours, this has its roots in Pretoria's occupation of Namibia and the injustices of apartheid which directly and indirectly lead to hostility from newly independent Black states emerging from the fall of Portuguese and British colonialism. From the mid-1960s, the South-West Africa People's Organisation (SWAPO), which lead the drive for Namibian independence as a result of gross abuses under apartheid, was given sanctuary by a sympathetic Zambian government, and allowed to launch raids on South African forces in Namibia from bases in Zambia. Also, in 1974 Portugal relinquished its control of Angola (which bordered northern Namibia) and Mozambique (which shared its southern border with South Africa). In 1975, a civil war among domestic factions broke out in Angola with the Soviet backed People's Movement for the Liberation of Angola (MPLA) establishing itself in the capital, Luanda and allowing SWAPO to set up bases on Angolan soil from which they could launch attacks against South African

[169] President Carter banned nuclear fuel shipments to South Africa and this ban was upheld by President Reagan in 1985. Paraphrased from Or Rabinowitz, *Bargaining on Nuclear Tests: Washington and its Cold War Deals*, Oxford University Press, 2014, pp. 116, 126.

[170] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 9.

forces/interests in Namibia[171]. To worsen matters, the Soviet Union sought to expand communism's reach in Africa and Soviet President Nikita Khruschev obtained the help of Cuba, which sent troops to Angola to support the MPLA government against the South African backed anti-communist National Union for the Total Independence of Angola (UNITA)[172]. Pretoria provided materiel and troop support to UNITA as the latter expelled SWAPO forces from UNITA controlled territory[173], making it harder for SWAPO to operate from Angolan soil.

Lastly, on South Africa's northeastern border, a hostile pro-soviet regime took charge in Mozambique[174]. Propaganda from the Mozambican capital, Maputo portrayed South Africa as a mortal enemy, with Pretoria being ever ready to launch an invasion[175]. With this anti-South Africa policy stance, Mozambique sheltered rebels from the anti-apartheid African National Congress (ANC) of South Africa and in retaliation, Pretoria supported anti-communist Mozambican rebels called the Mozambican National Resistance (RENAMO). In total, Pretoria faced active opposition ranging from open conflict with Angolan and Cuban forces to sanctuary given to SWAPO and ANC guerrillas by Zambia and Mozambique.

From a simple realist perspective, South Africa was embroiled in deeply hostile regional power politics which manifested itself as a clear and present danger to its national security as a white ruled state. With hostile black states enjoying Soviet support arrayed against it on its northern frontier, while South

[171] Richardt Van Der Walt, Hannes Steyn and Jan Van Loggerenberg, *Armament and Disarmament: South Africa's Nuclear Experience (Second Edition)*, iUniverse Inc, 2005, pp. 5.
[172] Ibid, pp. 3.
[173] Ibid, pp. 22.
[174] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 8.
[175] Richardt Van Der Walt, Hannes Steyn and Jan Van Loggerenberg, *Armament and Disarmament: South Africa's Nuclear Experience (Second Edition)*, iUniverse Inc, 2005, pp. 5.

Africa could muster no regional or great power allies, the latter found itself in a geostrategically poor position with its back literally against the wall or in this case, the Indian ocean on its southern shores. Additionally, referencing the aforementioned realist paradigm with the absence of supranational authority to which states can appeal to, Pretoria could not seek help from the U.S. as the other countervailing superpower in the Cold War even as it as fighting on the latter's side as a *de facto* Western power. Indeed, South Africa's lack of interdependent security relationships or allies as a pillar of its nuclear weapons development motivation will be covered below.

4.2.1 The role of interdependence in South African nuclear arms acquisition

Examining the balance of military forces between South African and its principal adversaries, Angola and Mozambique prior to Pretoria's official decision to build nuclear bombs, it appears as if South Africa was strong vis-à-vis its northern enemies as seen from Table 2 below.

Table 2: Balance of Military Force between South Africa, Angola and Mozambique (1977 – 1978)[176]

	South Africa	Angola	Mozambique
Total Military and Para-Military Strength	145,000	46,500 (includes 15,000 Cubans and excludes several hundred Soviets)	19,000 (including an unknown number of Chinese, Cuban, East German and soviet Advisors)
Tanks	170	205	35 (minimal confirmed strength, actual strength is higher)
Armoured Vehicles	2330	265	(In possession of but quantity unknown.)
Warships excluding minesweepers	9	18	-
Combat Aircraft	362	33	8

[176] *The Military Balance 1977-1978*, The International Institute for Strategic Studies, Bartholomew Press, 1977, pp. 43, 45 and 47.

While South Africa appears strong with respect to military personnel, armoured vehicles and air power, it must be emphasised that all of its military strength and equipment could not be readily replaced due to the earlier mentioned UN arms embargo implemented in 1977. Hence, the maintenance of military hardware in the face of battle losses comes at high cost using domestic resources. In contrast, Angola and Mozambique enjoyed liberally granted Soviet military aid and thus had the potential to rapidly eliminate their equipment deficit vis-à-vis South Africa. In addition, the table reveals that both Angola and Mozambique could rely on their socialist allies for personnel support while South Africa had few state allies. As such, if the USSR had given its blessing to a major escalation of hostilities in Southern Africa, the arrival of a Soviet expeditionary force, backed up by contingents from the Warsaw Pact and an infusion of armoured vehicles and warplanes would have presented a serious threat to South Africa's northern frontier. Pretoria must have realised this.

Additionally, the elements of betrayal and abandonment by the capitalist Western powers as perceived by Pretoria's leadership must be accounted for. This is because senior South African politicians, scientists and military officers, being non-communist, would reasonably have thought themselves to be fighting on the same side as the West in the Cold War against the Soviet backed Angolans and Mozambicans[177]. Thus, when the U.S., UK, France, Canada and West Germany ganged up to oppose South African rule in Namibia as earlier mentioned, it set the stage for the creation of a siege mentality which would favour nuclear armament. As proof of this worldview, the consolidated opinion of three high ranking figures in the AEC, Armscor (the state arms manufacturing

[177] Helen E. Purkitt and Stephen F. Burgess, *South Africa's Weapons of Mass Destruction*, Indiana University Press, 2005, pp. 15.

corporation) and South African Air Force regarding the Western abandonment of South Africa is as follows:

> "…the Western Powers were neither willing nor able to counter military aggression by Communist forces on the African continent. This was an ominous development, given that the immediate aggressor in this case was widely regarded in the United States as their Enemy Number One. The same United States which was prepared to pay such a high price in an attempt to block communist expansion in Vietnam, was not prepared even to give token support to a neighbouring continent invaded by communist forces. The South Africans, who had become central players in a war they did not start, were left holding the can as Washington became ever more reluctant to get involved."[178]

Simply put, the data, arguments and quote presented above help to substantiate the vulnerability of South Africa in the minds of Pretoria's security establishment as they struggled to cope with a lack of interdependent security relationships or alliance partners from whom materiel and even manpower assistance could be sought. In view of South Africa's diplomatic and military isolation amongst the international community where it could at best only count upon Israel for support, a strategic equaliser was needed and that turned out to be the atomic bomb.[179] As succinctly stated by the last *apartheid* era President

[178] Richardt Van Der Walt, Hannes Steyn and Jan Van Loggerenberg, *Armament and Disarmament: South Africa's Nuclear Experience (Second Edition)*, iUniverse Inc, 2005, pp. 4.

[179] Due to the U.S. desire to prevent nuclear testing in order not to erode the global nuclear non-proliferation regime, Pretoria's nuclear arms strategy involved the phased 1) disclosure of operational nuclear arms, 2) detonation testing of nuclear warheads, and 3) battlefield employment of warheads as a last resort. With the hope that the last option would never have to be implemented, Pretoria hoped that the first two measures would convince Washington to intervene on South Africa's side in any dire

of South Africa, F. W. de Klerk, “Israel could always count on the support of the United States and powerful friends in the West. We could not.”[180]

4.2.2 Realist norms and the development of the South African bomb

Due to the covert and secretive nature of South African nuclear weapons building where only key members of the government were informed about the full extent of the weapons programme, there is no evidence of clearly enunciated pro-proliferation norms establishing the legitimacy of Pretoria’s nuclear warhead development efforts. With this in mind, the closest official statements which could be interpreted as justifying the building of atomic arms were those by the South African defence establishment clarifying the intention to prepare the nation for total war, where total war justifies the drastic option of building nuclear warheads. This will be mentioned in the next sub-section on leadership.

Alternatively, if we examine the issue from the perspective of absence of official commitment to non-proliferation agreements like the NPT or where the states does not fall under the jurisdiction of the IAEA, it can be inferred that there is no legal basis to interfere with the state’s perceived sovereign right to provide for its defence using nuclear weapons. Accordingly, the absence of normative non-proliferation pressure means that the government in question is free to promote normative approval of nuclear arms ownership. This applies to South Africa in that it was ostracised via expulsion from the governing board of the International Atomic Energy Agency (IAEA) which enforces the Nuclear Non-

national security crisis so as to prevent nuclear escalation. Paraphrased from Or Rabinowitz, *Bargaining on Nuclear Tests: Washington and its Cold War Deals*, Oxford University Press, 2014, pp. 124 – 125.

[180] Quoted from an email interview between the author and His Excellency, former President De Klerk on 19 August 2014.

Proliferation Treaty (NPT)[181] in June 1977, thus removing any principled restraint against acquiring nuclear weapons which Pretoria might have, as South Africa was not a signatory to the NPT when it was introduced in 1968[182].

4.2.3 Leadership and the development of South African nuclear weapons

Inasmuch as the lack of allies and the absence of non-proliferation pressure is important and contributes to nuclear weapons development motivations, the official decision to initiate weapons building and devote precious resources to sustain the nuclear arms programme requires leadership.

Accordingly, this leadership impetus to establish the South Africa nuclear arms programme was arguably triggered by the siege mentality fostered in Pretoria as a result of both the external political sanctions which were derived from international opposition to apartheid and the hostility of South Africa's northern external enemies. As the 1977 South African Ministry of Defence *White Paper* clearly states, "We are today involved in a war, whether we wish to accept it or not." As such, Pretoria planned to respond via a "Total National Strategy" which called for "state mobilisation and coordination of all South Africans to meet the threat of total war."[183] Consequently, when the above statements are analysed, the phrases "total war", "Total National Strategy" and "mobilisation and coordination of all South Africans" imply that the nation is in peril and that drastic measures requiring unrestrained allocation of resources are necessary. Inasmuch as nuclear arms fit the bill as a prescribed solution to a leadership and nation under siege, the 1977 White Paper can be seen as government endorsement of South African nuclear munitions.

[181] Helen E. Purkitt and Stephen F. Burgess, *South Africa's Weapons of Mass Destruction*, Indiana University Press, 2005, pp. 11.
[182] Ibid, pp. 47.
[183] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 9.

In the end, Pretoria saw no other option for guaranteeing national security and in October 1978, the new Prime Minister (and later President) P. W. Botha convened a committee that recommended in July 1979 that seven nuclear bombs be built[184], which led to the assembly of the first nuclear bomb in November 1979. Hence, it can be said that the 1978 – 1979 period serves as the point where Pretoria's political determination to acquire and maintain a nuclear deterrent was confirmed[185].

4.3 Counter Liberalist Drivers of the South African Bomb

Even as Pretoria felt threatened enough to weaponise its nuclear programme, the economy's role in bolstering the state's nuclear strategy cannot be ignored. While the South African nuclear arms programme was never made public and hence never became the justification for any economic sanctions directed at South Africa, the diversity of its economy which enabled some degree of self-sustenance if necessary, along with a fair measure of economic resilience, would have given Botha and his advisors confidence that South Africa could weather any sanctions from nuclear weapons discovery.

To begin with, in the late 1970s when the nuclear decision was taken, South Africa was one of the largest economies in the African continent[186], which would have afforded it the critical mass to endure shrinkage or deterioration from economic sanctions. Next, it had competent agriculture, mining and manufacturing sectors which made feasible a partially autarkic survival strategy

[184] Ibid, pp. 9.

[185] Armscor documents state that the nuclear programme did not militarise until 1978. Helen E. Purkitt and Stephen F. Burgess, *South Africa's Weapons of Mass Destruction*, Indiana University Press, 2005, pp. 249.

[186] In 2010, South Africa was listed as having the largest economy in Africa at US$524 billion. Considering that its neighbours would have been less developed in the 1978-79 period, it would be fair to assume that South Africa would still have been the largest or one of the largest African economies then. Data sourced from *Africa's Largest Economies – Top 20 Economies In Africa*, The Richest, http://www.therichest.com/business/largest-economies-in-africa/.

as it was and still is able to feed itself, provide mineral resources for local industry and produce essential goods indigenously.[187]

As for the stalwart nature of the South African economy, we can see, with reference to Table 3, that even though there was international pressure to boycott South African goods and refrain from investing there, the South African economy remained fairly stable from 1980 – 83 during the first few years of the nuclear weapons programme with per capita GDP hovering between US$2477.99 and US$2771.07 and unemployment registering a modest increase from 9.24% to 12.54%. Thus, despite a high inflation of between 12.59% and 15.74%, along with disappointing economic performance (2.5% fall in per capita GDP from 1980 – 1983), the economy shows a capacity for "muddling through" rather than collapsing.

Table 3: South African Economic Indicators (1980 – 1983)[188]

Year	GDP/Capita (Current prices, US$)	Inflation Rate (% year on year)	Unemployment Rate (% of labour force)
1980	2764.14	14.24	9.24
1981	2771.07	15.74	9.82
1982	2477.99	14.40	10.75
1983	2694.52	12.59	12.54

4.3.1 Economic interdependence and Pretoria's nuclear arms decisions

Economic liberal interdependence mindsets concerning nuclear proliferation theorises that the loss of profit and welfare from being denied access to world markets, due to economic sanctions and other punitive

[187] As sourced from *South Africa's economy: key sectors*, Media Club South Africa, http://www.mediaclubsouthafrica.com/index.php?option=com_content&view=article&catid=37:economy_bg&id=111:sa-economy-key-sectors, South Africa's present day economy has healthy agriculture, mining and manufacturing capabilities. However, even if we look back 34-35 years into the past and consider that the South African economy was still the most developed in Africa at that time, it would be fair to argue that it had adequate capabilities to survive if deprived of external assistance.

[188] *South African Economic Statistics and Indicators*, Economy Watch, 6 May 2013, at http://www.economywatch.com/economic-statistics/country/South-Africa/.

measures like trade boycotts, would deter potential nuclear arms aspirants because the economic harm would be politically unpalatable. However, according to the work of Etel Solingen, analysed in chapter 2, integration into the interdependent global economy can also negatively affect certain national groups, especially if they are economically uncompetitive or unproductive. If such groups such as industrial monopolies, state enterprises and insular organisations like the military wield political influence, nuclear weapons proliferation would be supported because the resultant international economic and political ostracism would reinforce their domestic power bases. In South Africa's case, its military became influential under the leadership of Prime Minister Botha (who was concurrently the Defence Minister), consuming up to 20% of the national budget[189] and could well have served as a power base supporting his decision to initiate nuclear weapons construction in 1979.[190]

Next, it should be noted that any insular and/or autarkic tendencies favourable to nuclear proliferation as mentioned above might have been strengthened, as the South African economy was already conditioned to forgo some of the benefits from globally interdependent trade. This is because much of the 3rd world had implemented a trade boycott of South Africa since the 1960s as a consequence of United Nations General Assembly Resolution 1761 passed in 1962, which requested (but did not make compulsory) that member

[189] Joseph R. Gregory, *P. W. Botha, Defender of Apartheid, Is Dead at 90*, The New York Times, 1 November 2006, at http://www.nytimes.com/2006/11/01/world/africa/01botha.html?pagewanted=all.

[190] According to Professor Waldo Stumpf, former head of South Africa's Atomic Energy Corporation, who was authorised by President De Klerk to oversee the dismantlement of the nuclear weapons programme, senior military leaders were not "highly enthusiastic" about Pretoria's nuclear arms. However, they certainly did not reject the generous funding granted by President Botha, and as much as they were superficially aware of Pretoria's nuclear warheads, gave their tacit support to the nuclear programme as evident from several confidential interviews with former senior officers in the South African Defence Force (SADF). Professor Stumpf was interviewed via email on 3 Sept 2014. The ex-SADF personnel were interviewed on 22 February 2014.

states halt all economic and political dealings with South Africa for its implementation of apartheid. Hence, Pretoria was already partially inured to being deprived of liberal economic integration benefits in the run-up to and in the early years of its nuclear arms programme.

However, it is worth noting that Western states like the UK and U.S. which had significant investments in and much trade with South Africa were reluctant to implement any economic isolation of South Africa from the 1960s to the mid-1970s, effectively ignoring Resolution 1761. It was only from the late 1970s onwards that, Western public pressure against apartheid was directed at Western firms involved in, and institutional funds investing in the South African economy to cease operations in, and withdraw investments from South Africa. But despite the weakening and disruption brought to the latter's economy, this deprivation of economic integration benefits came too late to stop Pretoria's nuclear bomb project which was already well underway by then.

4.3.2 The roles of counter liberalism norms and leadership for South African nuclear weapons development

While the presence of insular factions amongst Pretoria's leadership structure and the partial absence of trading opportunities would have fostered a pro-proliferation environment, the role of counter liberalist norms and supporting leadership needs to be mentioned as these provide a more direct motivation to introduce nuclear munitions.

Referencing the norms related work of Maria Rost Rublee in chapter 2, she posits that states are either intrinsically convinced to accept certain norms, abide by norms to gain prestige or avoid costs and/or follow the norms set by admired states which the former wants to model itself after. Utilising this

framework for South Africa, intrinsic counter liberalist norms held by Pretoria, such as an acceptance of autarky, would be relevant because they bolster nuclear proliferation decisions since the Government accepts the need for national self-reliance, and would be determined to weather any isolative sanctions. With the benefit of hindsight, evidence suggests that this was indeed the case as the following quote from former President De Klerk shows:

> "The government realised that it was likely that more restrictive sanctions would be imposed on South Africa in any event because of its refusal to be dictated to by the international community. Ironically, South Africa's growing isolation, and the fact that it could not expect international assistance if it were to be attacked, was one of the main reasons for its decision to develop nuclear weapons."[191]

Hence, autarky was incorporated into the *de facto* national survival posture, and coupled with the isolative counter liberalist and pro-realist circumstances facing Pretoria, pushed South African along the nuclear armaments development path.

Turning to the desire to reap prestige benefits and ignore counter liberalist costs by following pro-proliferations norms, this analytical pathway will be disregarded as Pretoria never intended to reveal its clandestine atomic weapons, thereby rendering prestige moot.

As for Rublee's third point, that states adopt norms so as to imitate their admired models, this was not applicable to South Africa despite its close relations with Israel, even as the latter adopted a quasi-autarkic economic strategy designed to cope with externally imposed counter liberalist economic realities, as many developing nations severed economic links due to Israeli

[191] Quoted from an email interview between the author and His Excellency, former President De Klerk on 19 August 2014.

occupation of Arab land. According to De Klerk, Pretoria's acceptance of economic counter liberalist norms as evinced by the South African determination to defy economic sanctions, was not swayed by Tel Aviv's economic policy. He states that,

> "We admired certain aspects of Israel's (economic) approach, but this did not in any way affect our own decisions regarding key policy questions. Our determination to weather sanctions arose from the fact that the only alternative would have been to surrender to the demands of the international community, which we then believed posed an existential threat to us."[192]

4.4 Moral Constructivism and the Decision to go Nuclear

The reality in the late 1970s when South Africa took the decision to militarise its nuclear research programme, was that internationally shared beliefs contributed to global norms which stated that nuclear weapons were *verboten* or forbidden. Indeed, the NPT which was signed in 1968, more than a decade before the official decision to initiate the South African nuclear weapons programme in 1979 was proof of this. Accordingly, it can be inferred that Pretoria was well aware of the global opprobrium against nuclear proliferation as it built its atomic bombs in secret.

Conversely, there existed a concurrent constructivist pro-proliferation norm held by a minority of states such as Israel, India and even North Korea which regarded the pursuit of nuclear munitions as legitimate, and resistance to proliferation by the established nuclear powers as exclusivist hypocrisy. The latter subsections are related to this pro-nuclear norm as interdependent

[192] Ibid.

influences on Pretoria's nuclear mindset, the essential structure-agency formation of South African nuclear arms norms and the role of leadership is explored.

4.4.1 Interdependent influences on Pretoria's nuclear mindset

Analysing constructivist norms interdependence, a case can be made that white ruled South Africa's close relations with Israel resulted in the reinforcement of pro-nuclear proliferation norms in Pretoria, in tandem with the growth of Tel Aviv's nuclear arsenal. In return, Pretoria's friendship with Tel Aviv bolstered the moral legitimacy of the latter despite being treated as *persona non grata* by many 3rd world nations for its occupation of Arab land.

From early South African recognition of Israel's independence in 1949[193] to South African government sympathy for Israel's political and strategic predicament in the late 1960s, the former came to see the latter as a kindred spirit facing international isolation and regional hostility.[194] In reciprocation and by the 1970s, Israel became South Africa's most significant military ally and substantial supplier of arms while South Africa return the favour, becoming one of Israel's key economic and military partners.[195] Inasmuch as both Pretoria and Tel Aviv both shared similar strategic norms about the need to defend themselves as regional minorities against the onslaught of numerically superior Blacks and Arabs respectively[196], it can be deduced that Pretoria accepted pro-nuclear proliferation norms at least in part because Tel Aviv developed its own

[193] Benjamin Beit-Hallahmi, *The Israeli Connection: Who Israel Arms and Why*, I.B. Tauris, 1987, pp. 109-111.
[194] Sasha Polakow-Suransky, *The Unspoken Alliance: Israel's Secret Relationship with Apartheid South Africa*, Random House, 2010, pp. 173.
[195] Benjamin Beit-Hallahmi, *The Israeli Connection: Who Israel Arms and Why*, I.B. Tauris, 1987, pp. 117-119.
[196] Chris McGreal, *Brothers in arms – Israel's secret pact with Pretoria*, The Guardian, 7 February 2006, at http://www.theguardian.com/world/2006/feb/07/southafrica.israel.

nuclear armaments in the 1960s. Hence, the white Pretoria regime could well have been influenced by Israeli existential preservation norms and joined the international minority of states who view the atomic warhead as a positive aspirational goal.

But even if the extent to which South Africa and Israel influenced each other's normative frameworks is uncertain, Israel provided tangible affirmation for the legitimacy of the South African nuclear weapons programme by assisting South Africa with nuclear research.[197]

4.4.2 Essential formation of South African nuclear arms norms

The influence that Israel has on South African proliferation norms would have been significant but the environmental and domestic catalysts that encouraged the formation of essential norms favouring nuclear armament require elaboration. Fundamentally, the environmental influences or the effects of structure on Pretoria's perceptions/judgement or agency need to be explained.

From the mid-1970s onwards, South Africa found itself fighting the Cold War alone in Southern Africa as former Portuguese administration in Angola and Mozambique was replaced by hostile Soviet supported governments while the Western world abandoned Pretoria over its continued control of Namibia. Hence, the reality of being surrounded and cornered in the structure might well have led to the exercise of agency in that Pretoria's elite perceived acute vulnerability. Additionally, South African anxiety over the long term sustainability of its military defence could have been felt since inflated defence spending could not be maintained indefinitely while Soviet support for the former's

[197] *The 22 September 1977 Event*, Interagency Intelligence Memorandum, December 1979, pp. 10, at http://www2.gwu.edu/~nsarchiv/NSAEBB/NSAEBB190/03.pdf.

enemies seemed inexhaustible. Lastly, the structural phenomenon of successful Israeli and Indian proliferation without crippling sanctions being implemented would have fuelled the South African belief that it too could get away with atomic bomb construction. Therefore, when holistically considered, the aforementioned structure and agency effects could have led to Pretoria adopting pro-nuclear proliferation norms supported by the right to state self-preservation, the view of nuclear arms as a cost effective long term deterrent and the belief that *de facto* recognition of nuclear weapons status would eventually be given.

4.4.3 Leadership and South African proliferation norms

But despite the importance of norm cultivation and external influences upon it, pro-proliferation norms still require active leadership in order to be realised in actual policy. Accordingly, while Prime Minister Vorster authorised the initiation of nuclear research in 1974, it was Prime Minister Botha who lead the committee that ultimately sanctioned nuclear arms development in 1979. Thus, an examination of Botha's leadership characteristics would shed light on the link between South African executive leadership and the decision to militarise the nuclear programme given discreet pro-proliferation norms in Pretoria.

As mentioned earlier, Botha held the concurrent appointment of defence minister even as he was the Prime Minister at the time that the official decision to build nuclear bombs was taken. That he held the defence portfolio for 14 years[198] should be an indication that he was deeply cognisant of national

[198] Joseph R. Gregory, *P. W. Botha, Defender of Apartheid, Is Dead at 90*, The New York Times, 1 November 2006, at http://www.nytimes.com/2006/11/01/world/africa/01botha.html?pagewanted=all.

security issues and that the defence of White South Africa would be a policy priority.

Additionally, Botha's education minister and subsequent successor to the Presidency, F. W. de Klerk commented that, "I did not like his overbearing leadership style and was opposed to the intrusion of the State Security Council system into virtually every facet of government."[199] Therefore, not only did Botha accord paramount importance to national security matters (the State Security Council was tasked with monitoring threats to the nation and advising the government on security matters), he also had a dominant and arguably authoritarian leadership style.

When Botha's focus on security and tough leadership demeanour is considered together with his leadership of the nuclear arms sanctioning committee, it can be reasoned that the approval of nuclear warhead building was a done deal as atomic arms are the ultimate deterrence against national security threats.

4.5 The Inter-related nature of Realism, Liberalism and Constructivism in South African Nuclear Militarisation

The previous sections on the realist, liberalist and constructivist drivers of South African nuclear armament clarified their individual contributions towards explaining nuclear proliferation. However, the reality is that these theoretical lenses interact with and reinforce one another in a tripartite system justifying Pretoria's atomic bombs. For instance, the parsimony of realism for explaining Pretoria's nuclear weapons decision is promoted by emphasising the anarchic paradigm facing Pretoria, which was bereft of allies but confronted hostile

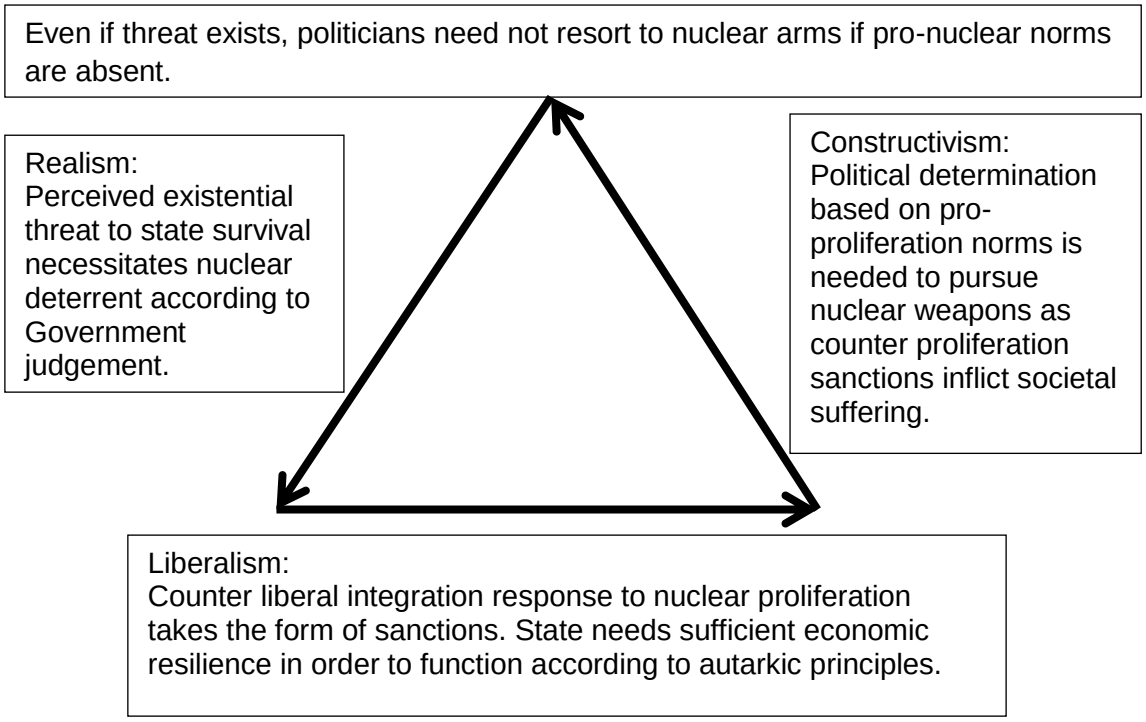
[199] Statement by F. W. de Klerk on the death of former president P W Botha. (Issued by the F W de Klerk Foundation, Cape Town, 1 November 2006.)

Soviet supported neighbours, fostering a classical realist mindset where an existential threat was perceived, necessitating nuclear weapons. However, consideration of nuclear warheads as a defensive realist military balancer against South Africa's adversaries would not be possible without a sufficiently large and diversified economy capable of not only building/running nuclear facilities but also being able to survive without the benefits of liberalist economic interdependence (which would be imposed due to international pariah status from nuclear proliferation).

Additionally, the counter liberalist argument that the South African economy must be capable of autarky in order to weather economic sanctions from nuclear proliferation discovery needs constructivist pro-nuclear norms as a reinforcing theoretical factor. Basically, the population bears the brunt of the economic harm from sanctions, including higher inflation, unemployment and investment capital deficiencies, even as the Government insists on pursuing nuclear weapons development and prolonging sanctions. Accordingly, this implies substantial political determination and belief in the legitimacy of nuclear arms from the ruling regime. Hence, a realist threat based need for nuclear arms requires counter liberalist economic resilience to weather inevitable sanctions which in turn necessitates political determination based on constructivist pro-nuclear norms to stay the course. Finally, pro-nuclear norms feed back into defensive realist thinking in that states which disavow nuclear proliferation would not consider threat induced military nuclearisation to begin with. This is reflected in Diagram 4 on the next page.

As will be shown in subsequent sections, the realist, liberalist and constructivist theoretical lenses also interact with and reinforce each other when explaining nuclear weapons disarmament.

Diagram 4: Tripartite Nuclear Proliferation System (1960s – 1989)



4.6 Building up Pretoria's Arsenal

After the first bomb was built and handed over to Armscor for safekeeping, atomic bomb production continued and 6 complete weapons were ready upon the programme's termination in 1989. The yield of the individual bombs was estimated at between 5 – 18 kilotons or 5000 – 18,000 tons of high explosives[200].

Regarding the cost of the nuclear weapons programme, an estimated US$300 – 600 million was spent over 10 years and this was comparable to 1-2% of South Africa's aggregate defence budget during this period[201]. Thus,

[200] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 11-12.
[201] Ibid, pp. 15.

Pretoria's atomic bomb arsenal was affordable. But, as will be explained in subsequent chapters with the nuclear armament policies of Ukraine and North Korea, financial considerations do play a role in disarmament decisions because affordability is relative and getting a government to decommission a nuclear programme costing a few hundred million U.S. dollars requires substantial compensation.

4.7 The Realist basis for South African Nuclear Weapons Relinquishment

From 26 August 1966 when the first serious battle between SWAPO guerrillas and the South African Police (SAP) was fought to the battle of Cuito Cuanavale in Southern Angola from 1987 – 1988 where the South African Defence Force (SADF) with their UNITA allies fought MPLA and Cuban forces to a stalemate[202], Pretoria's leaders could not have foreseen that a political solution to the South African occupation of Namibia would be found, SADF troops would withdraw from Angola and Namibia, Cuban forces would leave Angola, Namibia would achieve independence and peace would be restored.

While South Africa fought in the Angolan civil war on the side of UNITA against the MPLA government and its Cuban and Soviet allies, to prevent Namibian SWAPO guerrillas from using Angolan bases to destabilise Pretoria's rule in Namibia, it was argued that if South African military resolve failed, a successful SWAPO rebellion, followed by an joint Angolan-Cuban invasion capturing the Namibian capital of Windhoek, would expose South Africa's northern borders to an invasion. This was Pretoria's main national security concern sustaining the nuclear weapons programme. As proof of this mindset,

[202] Richardt Van Der Walt, Hannes Steyn and Jan Van Loggerenberg, *Armament and Disarmament: South Africa's Nuclear Experience (Second Edition)*, iUniverse Inc, 2005, pp. 19, 26-27.

the aggregated opinion of three high ranking AEC, Armscor and South African Air Force personnel is as follows:

Concerning the Perceived Danger of Communist Aggression in Africa

"Many people now question the necessity of the SADF's presence in Angola. Nowadays, with the threat posed by the USSR only a distant memory, it has become de rigueur to downplay that danger as grossly exaggerated. Forgotten are the crude threats of Nikita Khrushchev or the aggressive intents of the Brezhnev doctrine, the reality of the Cuban missile crisis or the invasion of Czechoslovakia. Forgotten is even the Cuban presence in Angola; they were seen by their masters in the Kremlin, as the vanguard charged with the responsibility to further the doctrine of worldwide communism in Southern Africa."[203]

Concerning the Logic of Nuclear Weapons

"But none of this could have been foreseen in the early seventies when the Cubans first set foot on African soil (regarding the fact that the Cubans would eventually withdraw). Between the threat of a bloody intervention in Southern Africa by even bigger forces of communism, stood a defence force prevented by an arms embargo to equip itself to face that threat……Inevitably, the Defence Force would have to face a deterioration of its equipment and any conflict would have accelerated that process, leaving the Republic of South Africa without any credible deterrent. It was clearly a situation that forced South African leaders to consider

[203] Ibid, pp. 27.

other ways and means to establish a credible deterrent against outside intervention at an affordable price."[204]

History tells us that the Pretoria's worst fears never materialised. In mid-1987, Soviet led MPLA forces mounted their largest ever offensive to drive UNITA from southeastern Angola. This force was launched from the Angolan town of Cuito Cuanavale but was repelled by a SADF force assisting UNITA. Even though Cuban forces reinforced the MPLA troops, the SADF fought them to a stalemate[205] and eventually withdrew from Angola back into Namibia by 27 June 1988[206].

In the end, we know that both sides paid a very heavy price for this phase of the SADF/UNITA – MPLA/Cuban struggle, and that either belligerent must have realised that neither party could be defeated, leading to the conclusion that further conflict would only lead to attritional bloodshed which would inevitably end in peace negotiations. Hence, with the USSR drained from their war in Afghanistan since 1979, limiting their capacity to support Cuba and MPLA ruled Angola, and the Soviet introduction of *Glasnost* and *Perestroika* in 1986 and 1987, which hinted at the ideological weakening and lessened virulence of communism, the MPLA and their Cuban allies signed a diplomatic compromise with Pretoria, known as the New York Accords on 22 December 1988[207].

The New York Accords provided for the exit of all foreign forces from Angola including the withdrawal of both South African and Cuban troops and independent statehood for Namibia. Subsequently, Cuba began troop

[204] Ibid, pp. 28.
[205] *Cuito Cuanavale Revisited*, Mail and Guardian Online, 11 July 2007, at http://mg.co.za/article/2007-07-11-cuito-cuanavale-revisited.
[206] George Edward, *The Cuban Intervention in Angola, 1965–1991*, Frank Cass, 2005, pp. 243-246.
[207] Inge Tvedten, *Angola: Struggle for Peace and Reconstruction*, Westview Press, 1997, pp. 38-40.

withdrawals on 10 January 1989 and free elections were held in Namibia in November 1989 with SWAPO winning a parliamentary majority.

The realist significance of this development for Pretoria's nuclear weapons programme was that a principle threat to South African national security had disappeared. Without having to concern itself with SWAPO (who as the new government of Namibia had much to lose from renewed conflict with Pretoria), Cuban forces or MPLA troops (Namibia now served as a buffer state), the only residual worry that South Africa had was the ANC and its armed wing, but even this was about to become irrelevant with the 1990 parliamentary announcement by President F.W. de Klerk that the ANC would be legitimised. Therefore, within 3 years from 1987 – 1989, Pretoria's strategic calculus based on its Cold War "balance of threat" had changed drastically with far less adversarial forces to combat, an improved classical realist balance of power and the radically decreased salience of nuclear weapons as defensive realist tools.

4.7.1 Interdependence and its realist role in South African nuclear disarmament

As was earlier mentioned, South Africa could not call on many interdependent security relationships or allies and this remained true even in the waning days of apartheid. However, South Africa's lack of allies ceased to matter following the New York Accords in December 1988 and the cessation of hostilities with SWAPO and Angola. Fundamentally, the reduction of enemies on South Africa's northern border greatly lessened the classical realist need to maintain substantial military power as part of a defensive realist doctrine to preserve the status quo. Correspondingly, as fears of a "total onslaught" receded, Pretoria's atomic bombs lost their salience.

Also, with the resolution of external conflicts and pending negotiations over the end of apartheid, Pretoria had more opportunities to establish diplomatic relations with other states that had previously shunned it, and restore interdependent political links with important partners in the West and elsewhere. More importantly, the unimpeded reintegration of South Africa into the international community of nations required that it relinquish its nuclear bombs and decommission its nuclear weapons programme to preclude any possibility of being sanctioned as a rogue nuclear proliferator.

As evidence of then President F. W. de Klerk's determination to restore South Africa's position in the international system and to decommission the nuclear deterrent built under the Botha administration, he emphasised to J. W. de Villiers and Waldo Stumpf, then head and deputy heads of the AEC, as soon as he became the elected state President on 14 September 1989 that,

> "I have one vision in my term of office. *I want to make this country once again a respected member of the international community*…and we'll have to terminate this program, turn it around and accede to the Nuclear Non-Proliferation Treaty."[208] (Italics added for emphasis.)

4.7.2 The erosion of pro-proliferation norms and De Klerk's counter proliferation leadership in the new realist paradigm

Lessened classical realist imperatives for nuclear arms have an important role in substantiating De Klerk's disarmament decision but non-proliferation norms based on a more benign security environment also supported his disarmament drive. Essentially, the reality of South African disarmament implies

[208] Helen E. Purkitt and Stephen F. Burgess, *South Africa's Weapons of Mass Destruction*, Indiana University Press, 2005, pp. 124.

that security based pro-proliferations norms were overpowered or superseded by counter proliferation ideals and this can be linked to the manner, speed and completeness of the disarmament process led by De Klerk.

Specifically, after De Klerk succeeded Botha as President of South Africa and confirmed his mandate to rule in the general election of September 1989, he was briefed by senior figures of the nuclear weapons programme about its status and details. Thereafter, he instructed a committee of high ranking AEC, Armscor and SADF personnel to evaluate the advantages and disadvantages of disassembling the nuclear bombs and joining the NPT as a non-nuclear weapon state. Additionally, they were told to derive plans for concrete disarmament like the safe storage of the HEU, the destruction of all relevant hardware, design information and manufacturing data, and even a timetable for joining the NPT and signing a nuclear weapons non-proliferation safeguards agreement with the IAEA. This consultative and non- authoritative style was possibly due to the fact that South Africa was no longer embroiled in a state of heightened security alertness, while the instructions to prepare for the complete decommissioning of the nuclear weapons programme implies that De Klerk was firm about denuclearisation and conforming to disarmament norms since joining the NPT was clearly on the cards.

Subsequently, in November, the committee presented both a proposal and plan for the complete dismantlement of Pretoria's nuclear bombs and these were approved by De Klerk and his cabinet. The process began with the shutdown of the Y plant by the AEC on 1 February 1990[209] and ended with

[209] Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 17.

complete dismantlement, including destruction of all non-nuclear weapons components in July 1991[210].

Additionally, to ensure that the nuclear weapons programme could not be reconstituted by any future regime that was prepared to invest the resources to rebuild all the destroyed nuclear and non-nuclear hardware, the intellectual core of the weapons programme was eliminated when more than 12,000 technical documents, drawings, design information, software and other data from the nuclear weapons programme was collated and destroyed[211]. This is an affirmation of the strength of non-proliferation norms winning out over pro-nuclear weapons norms as the door to nuclear arms programme resuscitation was firmly closed.

Finally, South Africa acceded to the NPT on 10 July 1991, signed a non-proliferation safeguards agreement with the IAEA on 16 September 1991 and regained its seat at the IAEA in the same month[212]. In total, it required 1 year and 9 months to effectively terminate the nuclear weapons programme from the time that De Klerk was elected, to the physical destruction of all physical components on July 1991. This stands in contrast to the 12 year approximate time frame that the nuclear weapons programme was effectively functional from the production of the first batch of HEU at the Y plant in January 1978 to the plant's closure on February 1990. Apart from the fact that acceding to the NPT and implementing IAEA approved safeguards is the clearest evidence of non-proliferation norms overcoming pro-proliferation norms in the wake of realist security improvements, the quick disarmament timeframe also indicates De Klerk's counter proliferation convictions. Lastly, the lack of leadership

[210] Ibid, pp. 18.
[211] Ibid, pp. 18-19.
[212] Ibid, pp. 19.

impediments to the demilitarisation of Pretoria's nuclear program bears mentioning.

4.7.3 The removal of leadership obstacles to denuclearisation

Inasmuch as it is difficult for the initiator of a pet project to conclude his or her endeavours in short order, it would have been more difficult to decommission Pretoria's atomic bombs if President Botha was still in charge.

According to renowned International Relations scholar Kenneth Waltz, "The most influential factors influencing a country's decision to undertake a covert nuclear weapons program are the views of a country's leaders."[213] Therefore, if President Botha was in favour of nuclear weapons as he had sanctioned via committee in 1979 that a limited nuclear deterrent be created, oversaw the creation of this nascent atomic arsenal over the following decade, and was nicknamed the "patron saint"[214] of South Africa's nuclear weapons programme, then any anti-nuclear arms leader who succeeded Botha as state President would be able to change Pretoria's policies and lead South Africa down the path of nuclear disarmament. Inasmuch as *apartheid* era South Africa had authoritarian decision making characteristics in its foreign and security policy bureaucracy, it was fortunate for global non-proliferation that the leader replacing Botha was a reformist by the name of F. W. de Klerk.

4.8 The Economic Liberalist Rationale for Disarmament

While the importance of realist security factors cannot be downplayed, it is a fact that the U.S., UK and many other states passed legislation enforcing economic sanctions on South Africa as a result of global opposition to apartheid. Hence, concerns about liberal economic interdependence become

[213] Helen E. Purkitt and Stephen F. Burgess, *South Africa's Weapons of Mass Destruction*, Indiana University Press, 2005, pp. 26.
[214] Ibid, pp. 82-83.

important as these states implemented laws forbidding their companies from dealing with South African commercial or financial entities[215]. This hurt the South African economy and these pressures would have been substantially responsible for De Klerk's counter apartheid reformist speech (which could partly be directed at an international audience) at the opening of parliament on 2 February 1990 where he stated among other topics that:

> "…the overall aims to which we are aspiring should be acceptable to all reasonable South Africans. Among other things, those aims include a new, democratic constitution; universal franchise; no domination; equality before an independent judiciary; the protection of minorities as well as of individual rights; freedom of religion; *a sound economy based on proven economic principles and private enterprise*; dynamic programmes directed at better education, health services, housing and social conditions for all."[216]
>
> (*Italics* added by the dissertation author.)

To understand De Klerk's focus on the economy, it helps to understand that better trade, investment and foreign relations would have served South Africa's national interests when the nuclear disarmament decision was made in 1989.

At that time, it should be noted that the 22 year counterinsurgency struggle against SWAPO in Namibia (1966 – 1988), the nearly decade long support for

[215] As an example of national laws enforcing business and commercial isolation on South Africa, the *Summary of the Comprehensive Anti-apartheid Act* as passed by the U.S. Congress in 1986 can be accessed at http://actrav.itcilo.org/actrav-english/telearn/global/ilo/guide/antia.htm.

[216] The Nelson Mandela Centre of Memory and Dialogue, materials compiled by Padraig O'Malley, F.W. de Klerk's speech at the opening of parliament, 2 February 1990, at http://www.nelsonmandela.org/omalley/index.php/site/q/03lv02039/04lv02103/05lv02104/06lv02105.htm.

RENAMO in Mozambique (1980 – 1989)[217], and military support for UNITA against the Cuban supported MPLA in Southern Angola which lasted for 13 years from Angolan independence in 1975 until effective South African withdrawal in 1988, had placed an inordinate burden on the South African economy and capital reserves. Additionally, when the reluctance of the 3rd world to trade with Pretoria as a result of apartheid, and the unilateral sanctions imposed by the U.S., UK and other like-minded countries in the 1980s in order to economically isolate South Africa were taken into consideration, it can be inferred that the South African economy was badly affected. Even De Klerk himself wrote that:

> "Obviously, sanctions also did serious damage to the country. Their general effects were to isolate the South African economy, to make us more inward looking and less competitive and to create serious long term economic distortions. It is estimated that sanctions cost us about 1.5 per cent in our annual economic growth rate during the eighties and early nineties."[218]

Table 4: South African Economic Indicators (1984 – 1989)[219]

Year	GDP/Capita (Current prices, US$)	Inflation Rate (% year on year)	Unemployment Rate (% of labour force)
1984	2325.99	11.18	13.72
1985	1735.62	16.20	15.45
1986	1937.54	18.75	16.05
1987	2485.04	16.19	16.59
1988	2614.36	12.89	17.24
1989	2662.24	14.51	17.83

[217] *Chronology of Major Events in Mozambican History*, at http://www.gutenberg-e.org/geh01/geh16.html.
[218] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 70.
[219] *South African Economic Statistics and Indicators*, Economy Watch, 6 May 2013, at http://www.economywatch.com/economic-statistics/country/South-Africa/.

As seen from Table 4, South African GDP per capita showed lack-lustre growth from 1984 to 1989 (the year disarmament was decided), expanding by only 14.46% over 5 years for an average annual growth of only 2.89% which was swallowed by a 14.95% average inflation rate and serious unemployment that averaged 16.15%. Basically, personal incomes were being consumed by rapid price increases and unemployment was unacceptably high, worsening the plight of the jobless who dealt with surging prices without any income. The economic sanctions against South Africa to coerce the lifting of apartheid caused much of this hardship.

Therefore, other than abolishing apartheid, granting independence to Namibia and ceasing to intervene in the internal affairs of neighbouring countries, it was imperative that the nuclear weapons programme be decommissioned and all bombs irreversibly dismantled in order not to present any obstacles to future benefits from liberalist economic interdependence. If Pretoria had continued to manufacture nuclear weapons or even to retain the nuclear bombs that it had accumulated by 1989, their inevitable discovery would still cause South Africa to be stigmatised as an international pariah subjected to political and economic sanctions in an attempt to coercively disarm it. Hence, nuclear weapons retention would have eliminated much of the returns from attempting to normalise economic relations through repealing apartheid and other reforms.

4.8.1 The tangible benefits from restoring economically interdependent relationships

Having addressed the urgent need to reintegrate the South African economy with the economically interdependent world, the tangible benefits that South Africa stood to reap are as elaborated below.

Referencing the South African nuclear sector, its nuclear weapons programme prevented South Africa from joining the NPT, which would have given the former economically advantageous access to peaceful nuclear energy technology and global nuclear energy agreements ensuring that wealthy states like Germany and France could continue to purchase South African uranium and earn vital foreign exchange for the South African economy[220]. Additionally, abolishing Pretoria's nuclear weapons programme and joining the NPT with a clean slate would enable South Africa to form mutually beneficial energy security relationships with other states involving the importation of affordable enriched uranium for civilian power generation, as domestic South African uranium enrichment technology developed for nuclear arms production was highly inefficient, producing uranium power station fuel that was many times more expensive than that purchased in the open market.[221] Besides all that, any potential impediments to the sale of economically lucrative products like citrus fruits, wines and other agricultural goods along with high technology exports including South African defence equipment[222] would also be removed. In

[220] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 21.
[221] Helen E. Purkitt and Stephen F. Burgess, *South Africa's Weapons of Mass Destruction*, Indiana University Press, 2005, pp. 130.
[222] By the early 1980s, South Africa could indigenously manufacture, precision guided aircraft munitions, air-to-air missiles and unmanned reconnaissance aircraft. Information sourced from Richardt Van Der Walt, Hannes Steyn and Jan Van Loggerenberg, *Armament and Disarmament: South Africa's Nuclear Experience (Second Edition)*, iUniverse Inc, 2005, pp. 54.

essence, the holistically well rounded South African economy could not only contribute towards autarkic state survival but with exposure to international markets and foreign investment, serve as an attractive source of products and foreign exchange earnings for the world and its people respectively.

But irrespective of South Africa's economic realities and the viability of the economic liberalist route to poverty alleviation, clearly enunciated pro-liberal interdependence norms and leadership guided by such norms, were still required to motivate denuclearisation as internationally integrated economic recovery and nuclear proliferation were incompatible.

4.8.2 Economic liberalist norms, leadership and their role in denuclearisation

It can be argued that the expression of economic primacy (as opposed to nuclear propelled national pride) as a policy goal, evidence of economic liberalist norms and the leadership of De Klerk were firmly intertwined.

With respect to the importance of economic growth for De Klerk, he wrote that as State President and head of government,

> "We needed rapid economic growth, above all, to enable us to address one of our central problems, the widespread poverty of millions of black South Africans, particularly in the rural areas...the long-term stability of South Africa would depend on our ability to bring tangible improvements to the day to day lives of all our people and to work towards closing the gap between rich and poor…"[223]

This economic growth and advancement was to be driven through liberalist economic interdependence as can be seen in the relevant parts of De Klerk's 1990 parliamentary speech:

[223] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 154.

> "Without *contact and co-operation with the rest of the world* we cannot promote the well-being and security of our citizens…It should be sufficiently attractive to ensure that the Southern African region obtains *adequate investment and loan capital from the industrial countries of the world*.…The Government is prepared to *enter into discussions with other Southern African countries* with the aim of formulating a realistic development plan…the encouragement of *exports as the impetus for industrialisation and earning foreign exchange.*"[224] (Italics added for emphasis.)

From the above, it is clear that De Klerk publicly enunciated the importance of good relations with both regional states and other countries further afield while stressing the aim of attracting foreign investments, promoting South African exports and improving national economic welfare. Subsequently, the crucial aim of repairing the damage from sanctions via economically integrative relations with foreign partners was stressed as De Klerk wrote in his memoirs that,

> "We urgently needed to gain access to foreign investment and to resume full economic relations with the rest of the world. Our economy had been stagnating for almost a decade and the lack of growth had already become a source of social unrest….We needed to break free from the overprotection, restraints and distortions that decades of sanctions had created in our economy, and to break into fiercely competitive global markets."[225]

[224] The Nelson Mandela Centre of Memory and Dialogue, materials compiled by Padraig O'Malley, F.W. de Klerk's speech at the opening of parliament, 2 February 1990, at http://www.nelsonmandela.org/omalley/index.php/site/q/03lv02039/04lv02103/05lv02104/06lv02105.htm.

[225] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 183.

All this would be severely hindered or even impossible if Pretoria's nuclear deterrent was maintained. As De Klerk himself said in parliament in March 1993, "A nuclear deterrent had become not only superfluous, but in fact an obstacle to the development of South Africa's international relations."[226]

4.9 Moral Constructivism and the end of Pretoria's Bombs

The need to rehabilitate an increasingly derelict economy via liberal interdependence economics was no doubt a significant factor motivating De Klerk's counter proliferation mindset but ultimately, the liberalist pillar explaining South African denuclearisation rests on moral constructivist underpinnings, as current global moral and ethical codes abhor the use of nuclear arms and support their prohibition.

To enforce this prohibition, force might be used to disarm a nascent proliferator but the potential cost in lives dissuades such action and results in diplomatic and economic sanctions being the preferred means to coerce nuclear disarmament. Accordingly, it is counter proliferation constructivist norms that promote nuclear demilitarisation since the international community at large would refuse to aid the liberal economic reforms of nuclear proliferators.

With reference to Pretoria's moral constructivist nuclear disarmament motivations, these can be divided into 1) acceptance of denuclearisation norms and 2) disarmament compliance serving national interests. Touching on the first, De Klerk's earlier mentioned statement to the top two men in the AEC that South Africa had to give up nuclear arms in order to re-join the international system with dignity, can be taken as evidence that he believed that disarmament was the right thing to do. As for the second motivation, nuclear

[226] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 32.

demilitarisation provided non-economic prestige benefits. For example, South African readmission to the IAEA would help to restore international prestige, while proving that it is a responsible member of the international community would win kudos from great power states like the U.S.. This can be retrospectively substantiated when De Klerk recalled the international reaction to his admission in March 1993 that Pretoria had developed but subsequently unilaterally dismantled its nuclear deterrent:

> "Our announcement *was widely welcomed and further helped to strengthen our international credibility.* South Africa is still the only country that has ever renounced and dismantled its full (indigenously developed) nuclear weapons capability. *I have no doubt that it was the right decision*."[227] (Italics added for emphasis.)

Also, another denuclearisation reason tied to norm acceptance was De Klerk's understanding that South Africa had an overwhelming Black majority, that the ANC was the most influential Black political party, and that the ANC would soon be the leader of a new Black majority government in Pretoria. As such, both the hardware as well as plans, details and other associated "software" of the nuclear weapons programme had to be disassembled, destroyed or permanently disposed to preclude the possibility of an ANC led government having access to nuclear arms. To De Klerk and Pretoria's leadership elite, the close links between the ANC and such unsavoury entities such as Muammar Gaddafi's Libya and the Palestinian Liberation Organisation (PLO) created an unacceptable risk of nuclear weapons proliferation to the

[227] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 274.

latter[228]. Basically, it would be morally irresponsible to facilitate the inheritance of nuclear weapons to rogue regimes and violent non-state actors.

4.9.1 External influences encouraging Pretoria's nuclear non-proliferation mindset

Thus far, it has been established that under De Klerk, Non-Proliferation norms held sway in Pretoria and it would be prudent to analyse how the external environment nurtured counter proliferation norms dominance in Pretoria. With an embryonic atomic bomb arsenal, South Africa was in no position to influence any other nuclear power. Hence, norms interdependence does not apply here and it was a net recipient of influence from overseas which quite possibly shaped De Klerk's counter proliferation beliefs.

Before De Klerk took office in September 1989 and after the signing of the New York Accords in December 1988, there were already signs of Soviet weakness such as the Soviet withdrawal from Afghanistan in February 1989 after ten years of exhausting guerrilla warfare, and the formation of the first non-communist government in Poland in August 1989 which was then nominally part of the Communist Bloc. Hence, Moscow the communist superpower effectively conceded defeat at the hands of the ragtag Afghan *Mujahedeen* resistance, while Moscow's acquiescence to the democratisation of Poland hinted at crumbling Soviet influence.

Additionally, from the November 1989 South African cabinet approval of the nuclear disarmament plan to the February 1990 shutdown of the Y plant, the Berlin Wall fell on 9 November 1989, Chairman Gorbachev assured President Bush that he would "never start a hot war against the USA" during the U.S.-

[228] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 20-21.

USSR Malta Summit from 2-3 December 1989, and communism in Czechoslovakia was overthrown in December 1989. These events may well have been significant in reinforcing De Klerk's confidence in counter proliferation norms as in both the German and Czechoslovakian cases, Moscow did not lift a finger to prevent the fall of the East German and Czech communist governments, thereby weakening the pro-proliferation norm that nuclear arms are needed for self-defence. Additionally, Gorbachev's statement could be taken as implying a policy of "no first use" of nuclear weapons, further eroding the self-preservation legitimacy norm of nuclear munitions. As De Klerk himself remarked,

> "The first few months of my presidency coincided with the disintegration of communism in Eastern Europe which reached its historic climax with the fall of the Berlin wall in November 1989. Within the scope of a few months, one of our main strategic concerns for decades – the Soviet Union's role in Southern Africa and its strong influence on the ANC and the South African Communist Party – had all but disappeared."[229]

Also, the Malta Summit signalled the end of the cold war and would have further lessened Pretoria's fears that Moscow was still determined to spread Communism in Southern Africa. This can be proven when De Klerk stated to Parliament in March 1993 that, "During 1989, the global political situation changed dramatically…..The Cold War had come to an end."[230] Therefore, there existed no state entity that needed to be deterred and those amongst Pretoria's

[229] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 160-161.
[230] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 20.

leadership elite who still espoused pro-nuclear arms norms could not rely on deterrence or defence arguments to justify retention of Pretoria's atomic bombs.

Lastly, as a result of industrial decline since the 1960s, substantially poorer technological progress vis-à-vis the West and general systematic economic malaise, the USSR itself was forced to implement unilateral military spending cutbacks and more importantly, negotiate partial nuclear disarmament via the Strategic Arms Limitation Talks (SALT).[231] Even though the reasons for Soviet disarmament were economic rather than norms based, the fact remains that nuclear arms reduction agreed between the superpowers of the day would have strengthened the influence of counter proliferation norms in Pretoria.

4.9.2 The impact of agency and leadership on South African nuclear disarmament norms

Using the structure-agency analytical framework from an earlier part of this chapter, we can see that the changing international strategic and political environment (structure) would have strengthened those who believed in disarmament norms but the perceptions, beliefs and policy proclivities of key decision makers still need to be analysed as it is they who ultimately react to the structure and determine the fate of Pretoria's nuclear weapons programme. In this case, since De Klerk initiated and provided key leadership for the disarmament effort, his perceptions, beliefs and decisional tendencies will be examined below.

In comparison to P. W. Botha, the earlier mentioned "patron saint" of the South African nuclear weapons programme, De Klerk was very much a moderate and reformer. He was open to contacts with the ANC as an

[231] Stephen G. Brooks and William C. Wohlforth, *Power, Globalisation and the End of the Cold War*, International Security, Vol. 25, No. 3 (Winter 2000/01), pp. 5-53, pp. 14-18, 25, 29, 32, 46-47.

undergraduate[232], and from the 1970s to 1989 as he was promoted from being a Member of Parliament to a cabinet Minister, he helped introduce legislation loosening the social, economic and educational aspects of apartheid.[233] From this, it can be deduced that De Klerk exercised mindset flexibility concerning evolving racial paradigms and was prepared to implement policy changes. This has relevance regarding his nuclear disarmament leadership.

As for De Klerk's personal attitudes concerning nuclear munitions, he had known about the nuclear arms project since the late 1970s when he was the Minister of Mines[234] and hence responsible for the AEC. Indeed, De Klerk's subsequent nuclear disarmament stance can be traced to his attitude towards the initial phase of the weapons programme which he was not supportive of. As written in his autobiography, "I had no enthusiasm for this massive spending programme, but it had already reached a point of no return when I became involved."[235]

Next, the influence of parliamentary sentiment on the nuclear disarmament decision of De Klerk should be considered. After President Botha suffered a stroke in January 1989, he relinquished his leadership of the National Party[236] and parliament decided to elect the next party leader who would succeed Botha as President. In the following election, De Klerk was nominated along with fellow ministers Chris Heunis, Pik Botha and Barend du Plessis. While De Klerk finally won the election to be the new party head and President-in-Waiting, the fact that all his rival contenders were reformist (Heunis had proposed that blacks be

[232] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 31.
[233] Ibid, pp. 49-50, pp. 73-74, pp. 75-76.
[234] Mitchell Reiss*, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*, The Woodrow Wilson Center Press, 1995, pp. 17.
[235] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 273.
[236] Ibid, pp. 130-131.

given a role in parliament[237] while both Pik Botha and Du Plessis were seen as enlightened ministers[238]), indicated that there would be substantial support if changes were made to Botha's policies. Though the nuclear weapons programme was not commonly known to parliament at that point, the support given to De Klerk combined with the strength of reformist sentiment would have helped reinforce his disarmament intentions. Hence, the support or influence of key national legislative bodies has an impact on the mental frameworks of leaders contemplating nuclear disarmament.

Finally, De Klerk openly announced to the South African parliament and public on 24 March 1993 that, "At one stage South Africa did develop a limited nuclear deterrent capability….", and also that, "Early in 1990, final effect was given to decisions that all nuclear devices would be dismantled and destroyed." Finally, he verbally put the last nail into the nuclear weapons programme's coffin by proclaiming that, "all the hardware and design information was destroyed" before Pretoria signed the NPT in July 1991[239]. Even as South Africa was not obligated to disclose any of its nuclear activities before the time it acceded to the NPT,[240] it was De Klerk's intention to reassure the world and the sole superpower, the U.S. that South Africa was being completely transparent about its nuclear past. Looking through the lens of moral constructivism, the global audience had to be convinced of South Africa's sincerity and responsibility as a NPT signatory and IAEA member.

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[237] *In The News: Chris Heunis*, The Los Angeles Times, 12 May 1989, at http://articles.latimes.com/keyword/chris-heunis.

[238] F. W. de Klerk, *The Last Trek – A New Beginning*, St. Martin's Press, 1998, pp. 133. (The actual Afrikaans political term for enlightened National Party members is *Verligtes,* which implies that they are open to and rapidly decide on change. See Ibid, pp. 79)

[239] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 7.

[240] Ibid, pp. 22.

4.10 A Tripartite Theoretical View of South African Nuclear Weapons Disarmament

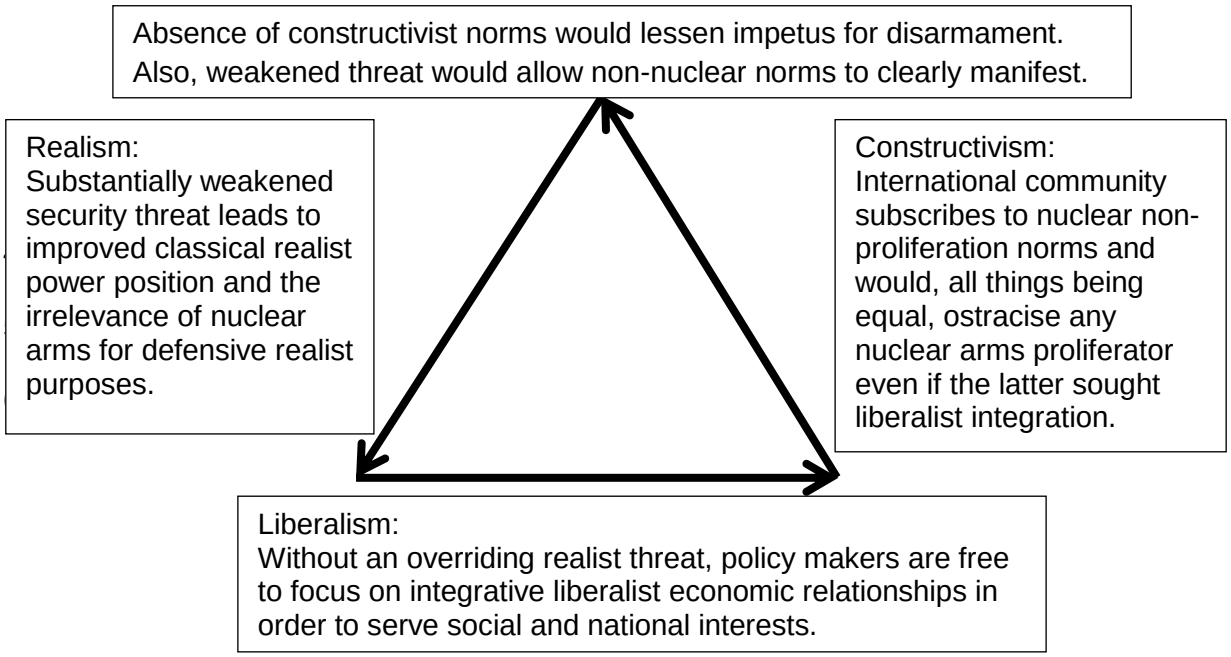
There are analysts who claim that the decommissioning of the South African nuclear weapons programme can be chiefly explained by the end of the Soviet supported Angolan and Mozambican threat, weakened aggregate Soviet power and Namibian independence, which removed the threat of invasion on South Africa's northern border and as a result, rendered the nuclear deterrent redundant. However, even as the parsimony of this realist approach is attractive, it fails to account for the liberal interdependence and constructivist norms facets of South African nuclear disarmament. For instance, De Klerk's desire to reintegrate South Africa into the interdependent global community as a legitimate nation state required that moral constructivist nuclear disarmament norms be upheld. Additionally, a threat or power based model of disarmament fails to account for a major argument against nuclear weapons possession, which is that non-great power state nuclear proliferators without any international strategic leverage[241] (as South Africa was), commonly get condemned as state pariahs and denied the benefits of global economic interdependence via sanctions. Basically, realism is not the all-encompassing theoretical lens for nuclear proliferation or counter proliferation.

Analysing South African nuclear disarmament as represented by Diagram 5, we can see that weakening realist security threats allowed Pretoria the "breathing room" to focus on the deteriorating economy shackled by sanctions as a result of apartheid and the financial cost of supporting and fighting various

[241] The cases of India and Pakistan are interesting in this regard because neorealist politics protects their respective nuclear weapons programmes from international condemnation as the U.S. utilizes India to balance Mainland Chinese power/influence while China supports Pakistan as a strategic counterweight to regional rival India.

conflicts in Namibia, Angola and Mozambique. Ultimately, upon the abolition of apartheid, more liberally interdependent economic relations with other countries to leverage on South Africa's nuclear energy and agriculture sectors could help relieve unacceptable levels of unemployment and inflation. However, prevailing global norms against nuclear proliferation would have made nuclear arms and liberal economic integration incompatible. Accordingly, it would have been obvious to De Klerk that nuclear warheads could not feed his people, would seriously hamper national income generating trade and investment upon confirmed possession, and would have to be decommissioned. Hence, interdependence liberalism in the economic sphere is a valid disarmament causational pathway for South Africa and cannot be discounted.

Diagram 5: Tripartite Nuclear Disarmament System



Next, examining constructivist norms and its connection to realist developments, it can be deduced that both the intrinsic moral influence of nuclear disarmament, as the ethical course of action, and the prestige gains to be had from self-directed disarmament, factored into De Klerk's decisions.

Reinforcing constructivism, it can be argued that the evolution of the Cold War towards a more benign phase gave De Klerk confidence to express counter proliferation norms. Hence, constructivist norms are clearly linked to and draw strength from realist security developments. Also, if non-proliferation norms were non-existent, De Klerk would have felt no pressure, either diplomatic or economic, to disarm. However, the opposite is true and evidence shows that moral constructivism does play a significant role in the South African nuclear disarmament triad, as evinced in De Klerk's memoirs by the pride that he took in his disarmament decision along with his satisfaction at the prestige that South Africa received. Therefore, realism, liberalism and constructivism form an interlinked and mutually reinforcing model of nuclear disarmament which validates a theoretically eclectic analysis of nuclear weapons policy.

On a more dynamic level, this tripartite framework accounts for policy inputs and other environmental changes over time even if they are "U-turns" and other changes of elite mindsets. As clearly shown in this chapter, 1) the resolution of the conflict with Angolan and Cuban forces over the Namibian issue resolved the realist threat even as De Klerk adopted a more conciliatory approach, 2) De Klerk enunciated economic growth via economic interdependence as a policy goal while then President Botha was silent on this, and 3) De Klerk paid heed to non-proliferation norms while Botha was the "patron saint" of the nuclear weapons programme. Thus, the basic trilateral realist-liberalist-constructivist framework accounting for nuclear weapons policy still applies but is able to accept changes of various independent variables (security, economic and norms based factors) leading to an altered dependent variable which for South Africa was permanent nuclear disarmament. In other

words, nuclear abnegation and acquisition are highly contingent decisions and this validates my eclectic interlinked tripartite framework.

The next chapter will present the argument that the debate over the retention versus relinquishment of inherited nuclear weapons by Ukraine also follows a similar tripartite realist-liberalist-constructivist framework.

Chapter Five – Fiercely Negotiated Ukrainian Nuclear Disarmament

5.1 Tripartite Theoretical Analysis and the Ukrainian Nuclear Disarmament Debate

Amongst the three principal cases examined, Ukraine is the lone state that inherited its nuclear arms from the break-up of another state, the USSR. In total, it inherited 130 SS-19 and 46 SS-24 Intercontinental Ballistic Missiles (ICBMs) carrying 1240 nuclear warheads, 592 nuclear tipped cruise missiles and 3000 tactical nuclear weapons[242]. To be sure, Ukraine contributed resources and expertise to the USSR's nuclear weapons programme but the nuclear arsenal it possessed upon independence was not the product of conscious national decision but rather the lethal by-product of the cold war. Without direct developmental ownership of these weapons, it can be argued that it was relatively easy for the government of a newly democratic Ukraine to give up these weapons as one of the steps towards an independent future free from Russian influence. However, the disarmament process was fiercely negotiated and in the context of a newly independent Ukraine, represents political polarisation over disarmament policy. The negotiations involved important considerations that had to be addressed to Kiev's satisfaction before the Soviet nuclear legacy could be completely removed from Ukrainian soil. That disarmament was successful represents not only the pro-relinquishment motivations of the executive branch, but also the determination of the legislative branch to satisfy national interests via disarmament compensation. Basically,

[242] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, Appendix F: Ukraine's Nuclear Inheritance, pp. 79.

there existed a vocal and fiercely conservative right wing minority faction championing nuclear munitions retention that lost the nuclear arms debate. However, their arguments will be revisited to indicate that the tripartite nuclear policy framework has relevance.

As with the South African case, the Ukrainian nuclear weapons disposal debate can be explained using an interrelated and mutually reinforcing, theoretically eclectic model involving security based realism, economic interdependence liberalism and norms based moral constructivism. Additionally, the realist, liberalist and constructivist theoretical lenses all possess interdependence, norms and leadership dimensions providing analytical commonality and depth throughout the entire model.

Fundamentally, Ukrainian nuclear relinquishment can be analysed using a triangular model where 1) the enunciation of a non-nuclear armed identity in conformance with constructivist norms is sustained by 2) the resolution of Kiev's realist security fears and is reinforced by 3) the need for economic rehabilitation to harness liberally integrative economic opportunities, which can be satisfied by bargaining for non-proliferation norms conformance benefits or compensation. Also, selecting leadership as a dimensional example that cuts across all three theories, we see that 1) adherence to Ukrainian non-nuclear norms had to be promoted by elite leadership, 2) whilst weakening realist concerns allowed Kiev's executive branch to support nuclear disarmament, and 3) recovery from Soviet poverty via enmeshment in the liberally interdependent world economy became a leadership imperative.

5.2 Realist Arguments for Ukrainian Nuclear Weapons Retention

Even as it was mentioned that the pro-nuclear weapons faction in Kiev did not win the debate over nuclear arms policy, it would lead to a more balanced analysis to consider their realist, liberalist and constructivist rationales. Beginning with realism, no state which has endured oppression and abuse from its neighbours, where such neighbours are great powers or allies of great powers, can afford to neglect the defence of sovereignty and territory. Such was the case with Ukraine in the initial years of its independence from 1991 until 1994, when security guarantees were received from the U.S. and Russia. Considering the invasions Ukraine has been subjected to, suffering under Russian hegemony and mismanagement, and even the callousness of Russian foreign policy towards Ukraine in the early 1990s, Kiev's anxiety over Ukrainian security was understandable. Indeed, Kiev still has legitimate concerns, as can be seen by the March 2014 Russian annexation of the Ukrainian territory of Crimea,[243] and ongoing Russian military support for Eastern Ukrainian separatism.

With Russia as a threat, examining Kiev's nuclear weapons policy through a realist lens reveals that the inherited nuclear arms represented a power source that could directly influence the classical realist military balance and deter Russian expansionism.

Despite the fact that Ukraine was one of the largest components of the Soviet Union, Russian human resource and materiel superiority meant that military forces drawn from the former were still quantitatively inferior. Thus, the

[243] The 2014 annexation of the Crimea will not affect the analysis done in this Chapter as it occurred well after Kiev's decision to relinquish nuclear arms. The Ukrainian leadership had no way of knowing that Moscow would one day violate the spirit if not the letter of the security assurance that the latter gave as a partial *quid pro quo* of nuclear weapons relinquishment.

"balance of threat" favoured Russia and Kiev had grounds to fear a Russian invasion. Also, its poor economy meant that funds to beef up conventional defence and internally offset the balance of power were not available. Analysing the military balance between Russia and Ukraine, we can see from Table 5 below that Russia's military might clearly overshadows that of Ukraine with an 11.8 to 1 advantage in terms of personnel, a 6.5 to 1 aggregate advantage for tanks and armoured vehicles, a 6.2 to 1 naval advantage and a clear air power lead with 2.4 Russian warplanes for every 1 Ukrainian one. Hence, even if Russia had to deploy forces away from Ukraine in order to secure its borders, there would be more than enough men and materiel left over to dominate the latter.

Table 5: Balance of Military Force between Russia and Ukraine (1992 – 1993)[244]

	Russia	Ukraine
Total Military Strength	2,720,000	230,000
Tanks	29,800	6480
Armoured Vehicles	51,000	5886
Warships excluding minesweepers	827	133 (optimistic estimate of Ukrainian share of former Soviet Black Sea Fleet)
Combat Aircraft	4025	1648

Thus, while it is clear that the balance of power fostered Ukrainian insecurity, the next sub-section will stress its vulnerability by highlighting its lack of interdependent security relations which could discourage Russian aggression.

5.2.1 Interdependent security relationships and Ukrainian nuclear arms retention

Militarily weak states involved in interdependent security relationships or alliances are better able to manage national security vulnerability and anxiety.

[244] *The Military Balance 1992-1993*, The International Institute for Strategic Studies, Brassey's, 1992, pp. 86-87, 92, 93-95, 97 and 98.

However, Ukraine did not belong to a stable security community like the European Union (EU), much less a concrete alliance like the North Atlantic Treaty Organisation (NATO). This surely weighed on the minds of Ukrainian leaders.

The reality confronting Kiev was that any attempt to rally an alliance against Russia was impractical as: 1) the other former Soviet republics were more eager to ally themselves with than against Russia as evinced by the rapid formation of the Commonwealth of Independent States (CIS) in 1991 with Russia as a principal member, 2) Ukraine could not source for alliance partners amongst the great European powers since they had most recently been on opposite sides of the Cold War and quick European Union (EU) membership was impossible, and 3) NATO membership was still a few years away even if the *Verkhovna Rada* or Ukrainian Parliament voted in favour of joining. Hence, without any reliable internal or domestic means to assure itself against Russian predation, many among Kiev's leadership saw nuclear arms as a means to negotiate Ukraine out of regional security anarchy (via security guarantees), provide potential deterrence (by not signing the NPT), or as concrete deterrence through nuclear weapons retention.

5.2.2 Pro-nuclear arms retention norms and the future of Kiev's inherited arsenal

As explained, nuclear weapons played a central role in the formulation of Ukrainian national security strategy and there was a significant minority of policymakers who saw nuclear arms as the only effective guarantor of Ukrainian sovereignty. Given Ukraine's unfortunate history and victimisation by Russia, these policymakers possibly saw nuclear weapons retention as legitimate.

Hence, Ukrainian leadership elements subscribing to pro-nuclear deterrence norms justified their mindsets on the basis of existential self-defence.

Regarding national vulnerability, Ukraine's institutionalised memory of being subjugated by foreign powers ranging from the Lithuanians and Polish in medieval times, to the Russians, Poles, Turks and Cossacks in the 17th century, and finally domination by the Russian Czarist empire and the Russian controlled USSR in the modern era, left the Ukrainians deeply distrustful of foreign powers. In all fairness, national security was a prime consideration as past atrocities such as the suppression of the Ukrainian language by the Czars in the 19th century[245] and the Soviet induced famine of the 1930s, which killed about 3-7 million people[246], left a deep impression on the national psyche. Also, recent incidents like then Russian President Yeltsin calling for Russian peacekeeping intervention throughout the CIS, and then Russian Foreign Minister Andrei Kozyrev referring to Ukraine as a mythical state[247] in 1993, created worrisome doubts about Moscow's potential willingness to violate Ukrainian sovereignty and independence. Additionally, in September of the same year, Kozyrev commented that Ukraine ought not to join the North Atlantic Treaty Organisation's (NATO) "Partnership for Peace" programme, which aimed to expand NATO's membership eastward as "We would not like NATO to protect Ukraine from Russia. We ourselves can defend Ukraine from anyone."[248]

[245] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 50.
[246] Robert Conquest, *The Harvest of Sorrow: Soviet Collectivization and the Terror Famine*, Oxford University Press, 1986, pp. 299-307.
[247] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 54.
[248] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 101.

Essentially, historical Russian-Ukrainian relations have been bedevilled by the Russian belief that Ukraine is a physical and cultural component of Russia[249].

Hence, with reference to Ukraine's status as a nuclear weapons inheritor, there was a sizeable *Rada* minority opposed to total nuclear disarmament as the weapons served as symbolic guardians of Ukrainian sovereignty against a revival of Russian expansionism. In essence, Russian refusal to respect Ukrainian sovereignty buttressed pro-nuclear arms retention norms amongst some of Kiev's parliamentarians.[250]

5.2.3 Leadership supporting Ukrainian nuclear weapons retention

With the pro-nuclear norms described above influencing the decisional proclivities of the Ukrainian leadership, Kiev's jittery policymakers were hesitant about agreeing to unconditional nuclear disarmament. Inasmuch as the potential threat from Russia worried representatives of the *Rada*, Dmytro Pavlychko, then Chairman of the Rada's Foreign Affairs Committee, warned the U.S. in late September 1992 of the distinct possibility that the *Rada* would make START[251] ratification conditional upon 1) there being economic assistance for any dismantlement of nuclear weapons, 2) the Ukrainian right to sell the Highly Enriched Uranium (HEU) removed from the warheads, and 3) *that security assurances towards Ukraine would be given*[252]. Additionally, the Ukrainians were particularly concerned about foreign threats to their nascent independence as Pavlychko and *Rada* Deputy Larisa Shoryk approached the U.S. Ambassador in Kiev on 20 January 1993 to propose a treaty obligating the U.S.

[249] Ibid, pp. 100.
[250] Serhy Yekelchyk, *Ukraine: Birth of a Modern Nation*, Oxford University Press, 2007, pp. 196.
[251] The U.S.-USSR Strategic Arms Reduction Treaty or START was signed on 31 July 1991 when Ukraine was still a member of the USSR.
[252] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996 , pp. 13.

to defend Ukraine in the event of an attack. As further proof of realist security imperatives, even then Ukrainian President Leonid Kravchuk and his Foreign Minister, Anatoliy Zlenko felt the need to press then President Bush and Secretary of State Baker on U.S. assurances to Ukraine against aggression during their May 1992 visit to Washington[253].

As for political recognition of Ukrainian security imperatives, the views of the various *Rada* factions concerning the relinquishment of inherited nuclear arms, confirms the perception of anxiety regarding the precariousness of Ukrainian sovereignty vis-à-vis the Russian threat. The factions and their differing agendas are represented below[254]:

i) Ukraine should eventually ratify START, eliminate its nuclear weapons and sign the NPT but that *concrete security assurances, especially from Russia should be given*, that proceeds from the sale of nuclear missile fuel and the commercial recycling of warhead components be shared with Ukraine, and financial aid for both denuclearisation and the Ukrainian economy be guaranteed first.

ii) That Kiev should eliminate its present nuclear arsenal but not join the NPT so as to keep the nuclear armament option open to ward off future Russian domination.

iii) That nuclear weapons be retained as the *Ultima Ratio*[255] or final argument supporting Ukrainian sovereignty[256].

[253] Ibid, pp. 48-49.
[254] Ibid, pp. 11.
[255] During the age of gunpowder, simple cannons were the most destructive weapons available and were termed "*Ultima Ratio Regnum*" or the final argument of kings. Similarly, nuclear arms are the *Ultima Ratio* or final argument protecting sovereignty since their use will result in complete destruction and preclude the deployment of other weapons.

With complete Ukrainian nuclear disarmament on 1 June 1996, we know that the faction represented by point i) was in the eventual majority but that points ii) and iii) had sufficient support to delay full ratification of START until 4 February 1994. More importantly, the policy stances of the above factions reveal that to varying extents, Kiev's political elite was cognisant of the need to protect their nation, and that the inherited former Soviet nuclear warheads offered either an indirect, potential or concrete defensive realist national security assurance.

5.3 Counter Liberalism and Arguments for Ukrainian Nuclear Arms Retention

Even as realist arguments serve as substantive reasons to support Ukrainian nuclear weapons retention, economic counter liberalist analysis is also important to understand why those championing realist based nuclear arms maintenance felt confident enough to do so. As with the South African case, a sufficiently large and self-sufficient economy supports a policy of nuclear weapons retention as global constructivist non-proliferation norms encourage state actors to economically ostracise nascent nuclear proliferators, denying them the benefits of international economic interdependence.

While the Ukrainian economy was afflicted with Soviet era poverty and was far from efficient, it still possessed a large agricultural sector[257] utilising 30% of the world's high yield "black earth" soil[258], which in Soviet times was responsible for feeding the USSR. It would not stretch the imagination to reason that with privatised efficiency, these farms should be able to independently feed Ukraine. In addition, Ukrainian heavy industry was established in the 19th

[256] Serhy Yekelchyk, *Ukraine: Birth of a Modern Nation*, Oxford University Press, 2007, pp. 196.
[257] Paul Robert Magocsi, *Ukraine: An Illustrated History*, University of Washington Press, 1996, pp. 706, 708.
[258] Paraphrased from an interview with His Excellency, Ukrainian Ambassador to Singapore, Pavlo Sultansky on 22 August 2014.

century, developed under German occupation in World War Two[259] and further strengthened by the Soviets, which endowed Ukraine with various modern industries[260], along with a relatively impressive steel smelting sector supporting its iron ore mines, while Ukrainian coal provided some domestic electricity.[261] As for energy, Ukraine depends on nuclear power as a key pillar of electricity provision but apart from the aforementioned coal, it also has hydroelectric dams to supplement power generation.[262] Hence, even if Ukraine was subjected to counter liberalist economic isolation via trade sanctions or similar measures, in order to coerce nuclear arms relinquishment, the economy might be able to "muddle through" at a subsistence level, thereby giving the pro-nuclear *Rada* hawks, the self-assurance to champion nuclear weapons retention.

The importance of economic resilience to resist counter-liberalist economic pressure in pursuit of a nuclear arsenal can be supported with reference to North Korea which managed to build a nascent atomic arsenal despite being unable to feed its people. Thus, if a proliferator was able to succeed despite failing to satisfy basic needs, Ukraine's comparatively stronger capacity for autarky may have emboldened minority parliamentarians calling for nuclear warhead retention.

5.3.1 Economic interdependence and pro-nuclear sentiment in the Rada

Examining the earlier referenced work of Etel Solingen, where leaders seek the support of domestic factions in order to assemble a powerbase, and where nuclear arms ownership is politically favoured if the faction supporting the

[259] Ibid.
[260] Paul Robert Magocsi, *Ukraine: An Illustrated History*, University of Washington Press, 1996, pp. 644.
[261] Ibid., pp. 693.
[262] Ibid., pp. 706.

politicians actually favours externally imposed isolation and autarky, it can be inferred that this, to some extent, applied to the newly independent Ukraine.

Specifically, Soviet era political economy, where all industries were state owned, external trade was government regulated, and companies were shielded from foreign competition, would have benefitted the old elites and lead them to favour the status quo, no matter how economically moribund. Accordingly, with the fall of the USSR, executives of state owned industries, *Rada* representatives whose constituents worked in government linked companies, and even civil servants connected to these aforementioned companies, would have exhibited fear of evolution towards an economy more closely integrated with the liberally interdependent world. Such a bloc of elites would have comprised the most conservative parliamentary faction which sought to preserve vestiges of the old Soviet system including their societal positions and nuclear arms deterrence. In a later sub-section on leadership in constructivist pro-nuclear norms, it will be shown that a majority of Ukrainian elites actually favoured nuclear arms retention.

Concerning nuclear weapons retention and the resulting impact of externally imposed autarky on the Ukrainian population, the decades under communist economic management where industrial stagnation and poverty began to be felt from the 1960s onwards, would have conditioned the people to put up with the loss of welfare resulting from economic ostracism to coerce nuclear munitions decommissioning. Irrespective of whether the *Rada's* pro-nuclear faction would have been cognisant of this, the Ukrainian people's greater "pain threshold" supported a nuclear arms retention policy.

5.3.2 Counter liberalist norms and leadership supporting Ukrainian nuclear retention

Even as societal conditions upon Ukrainian independence favoured pro-nuclear sentiment which could have been exploited by the *Rada* faction favouring a nuclear armed Ukraine, the presence, implied or stated, of counter liberalist norms by Kiev's leaders would further substantiate the role of counter-liberalism in accounting for the resistance of some parliamentarians to approve nuclear disarmament.

Regarding the implied presence of counter liberalist norms, it should be noted that many of the *Rada's* members and Kiev's elites during Ukraine's early independence were the same parliamentarians and leaders during Soviet times. Despite their rebranding from being loyal communists to becoming ardent nationalists, many of them would have clung to communist models of international trade (which was heavily regulated via government central planning) and foreign economic involvement in the domestic economy (no foreign investment and strictly controlled sale of foreign goods).

Thus, many *Rada* members and influential elites would have at best been unfamiliar with or at worst, hostile to the concept of beneficial global economic interdependence. Consequently, counter liberalist norms would have been sympathetically considered amongst the *Rada's* conservative minority, and proof of this can be seen in their hypothetical discussions about economic resilience supporting nuclear retention proposals. However, such willingness to

confront sanctions was confined to conservatives with right wing proclivities who were clearly political minorities.[263]

5.4 The Moral Constructivist Role in the Ukrainian Pro-Retention Argument

The realist analysis why Ukrainian nuclear arms retention was advocated provides the vulnerable and unsettling environment in which Kiev's nuclear weapons policy was being formulated, while the tendency for counter liberalist thinking helps foster pro-nuclear arms maintenance proclivities. However, for the environment and stimulus to derive a tangible *Rada* voting bloc pushing for nuclear arms retention requires enough politicians and leaders to *believe* that nuclear weapons are necessary, vital and legitimate for Ukraine to own for deterrence purposes. In other words, a pro-nuclear arms norm has to take root.

To analyse the foundations and causes of pro-nuclear munitions norms in Ukraine, it would help to revisit the work of Maria Rost Rublee mentioned in chapter 2 where states abide by international norms because, 1) they are intrinsically convinced to abide by the aforesaid norms, 2) they regard other states upholding these norms as models to emulate, and 3) that the prestige/respect gained from following the aforementioned norms is appealing.

Regarding the pro-nuclear *Rada* faction and their supporters, it will be elaborated that 1) as ex-Soviet citizens, they were conditioned to believe in the legitimacy of nuclear arms, 2) that the former USSR was able to deter others from threatening its vital national interests due to nuclear arms possession and so serves as a retroactive pro-nuclear role model, and 3) that the *de facto*

[263] Paraphrased from an interview with His Excellency, Ukrainian Ambassador to Singapore, Pavlo Sultansky on 22 August 2014.

respect accorded to a nuclear weapons state might have been attractive to some Ukrainian elites.

5.4.1 The role of interdependence in Ukrainian pro-nuclear norms

Interdependence *per se* is not a factor in Ukrainian pro-nuclear arms norms. Rather, it would be more accurate to describe the foundation of these norms as being an offshoot of the USSR's nuclear weapons legacy. As earlier stated, many *Rada* parliamentarians and leadership elements active during the early years of Ukrainian independence would have been the same elites of the Soviet power structure. Inasmuch as they would have been proud of the USSR's nuclear superpower status, and regarded nuclear arms as a legitimate Soviet right, that same aura of legitimacy and pride would have been transferred to Ukraine's inherited nuclear warheads as it was a Soviet successor state. Since global norms accepted Russian nuclear munitions, some Ukrainian elites could have assumed that it was only fair for those norms to legitimise Kiev's inherited warheads.

Next, the USSR was able to exert unquestionable control over its sphere of influence in Eastern/Central Europe and even parts of Asia which the Western great powers respected. Despite proxy wars in Vietnam and Afghanistan, the West refrained from escalating these conflicts and consequently, the Soviet satellite regime in Hanoi endured while that in Kabul lasted longer than expected. Even as Soviet power was partially supported by conventional military strength, a major source of its deterrence power securing its geostrategic national interests would have been the Soviet nuclear arsenal, forcing the West to be circumspect in their actions during the Cold War. Taking a leaf from the USSR's nuclear enforced deterrence, Soviet inspired Ukrainian

elites would have upheld pro-nuclear norms, as warhead retention would imply that adversaries would be deterred from threatening Ukrainian sovereignty and national interests, giving Kiev the same deference as accorded to Moscow.

Lastly, nuclear arms are the pinnacle of strategic weapons and so bestow prestige upon their owners. Being a newly independent state with an urgent need to establish prestige and recognition separate from that possessed during Soviet times, some of Kiev's parliamentarians may have promoted pro-nuclear norms purely for the prestige and "face value" that goes with owning the *Ultima Ratio* of weapons.

5.4.2 Structure, agency and leadership supporting pro-nuclear norms in Kiev

While the formation of pro-nuclear norms is important, the interaction between the social environment (structure) and policy makers who believe in pro-nuclear norms and perceive reality though individual biases (agency) must be considered as this process constitutes the crux of policymaking leading to proposed nuclear weapons retention legislation (even if led only by minority *Rada* factions).

Having covered the historical invasions of Ukrainian soil before the 20th Century, grievous Russian abuses and Moscow's contemporary disregard for Ukrainian sovereignty, the concept of "Never Again" as applicable to the structure-agency dynamic needs to be explained.

When the Israelis assembled their first atomic bomb in the late 1960s, they welded the words "Never Again" on the bomb's casing.[264] This alludes to the Jewish holocaust of World War Two where approximately 6 million Jews were

[264] Seymour M. Hersh, *The Samson Option*, Random House, 1991, pp. 179-180.

massacred by Germany and its collaborators,[265] which reinforces the determination of the Jewish state of Israel to never allow Jewish genocide again, defending them via nuclear force if necessary. This is similar to the Ukrainian experience under German occupation in World War Two where at least 10 million Ukrainian civilians died[266] and over 2.3 million Ukrainians were conscripted as slave labourers.[267] As this tragic slaughter happened in the 20th Century, searing the trauma into the national consciousness, with aged Ukrainian survivors still living in the early 1990s, when nuclear weapons policy was being debated, it can be reasoned that the structural influence of this atrocity, processed by the agency of select policymakers to "Never Again" tolerate the genocide of Ukrainians, would have strengthened deterrence based pro-nuclear retention norms. Furthermore, despite the harshness of German occupation, Soviet domination was no better as hundreds of thousands who involuntarily worked for the Germans to sustain their livelihoods were executed by Soviet authorities for treason. Additionally, there were numerous Ukrainians who opposed Soviet rule, were hostile to the latter's military, and were brutally persecuted.[268]

Lastly, Ukrainian genocide is not a parsimonious reason for pro-nuclear weapons sentiment, but it is telling to note that in 1993, 45% of the public were against ratification of START and 31% favoured retaining the USSR's leftover nuclear weapons. This meant that there was a substantial undercurrent opposing nuclear disarmament which implied strong pro-nuclear norms.

[265] Timothy Snyder, *Bloodlands: Europe Between Hitler and Stalin*, The Bodley Head (Random House), 2010, pp. 45.
[266] Edgar Snow, *The Pattern of Soviet Power*, Random House, 1945, pp. 73.
[267] Andrew Gregorovich, *World War II in Ukraine: Ostarbeiter Slave Labour*, 1995, at http://www.infoukes.com/history/ww2/page-12.html.
[268] Narrative about post World War Two Soviet brutality paraphrased from an interview with His Excellency, Ukrainian Ambassador to Singapore, Pavlo Sultansky on 22 August 2014.

Worryingly, much of the Ukrainian elite had pro-retention proclivities since 60% of a sample poll of parliamentarians, civil servants and state company leaders favoured keeping the inherited weapons[269].

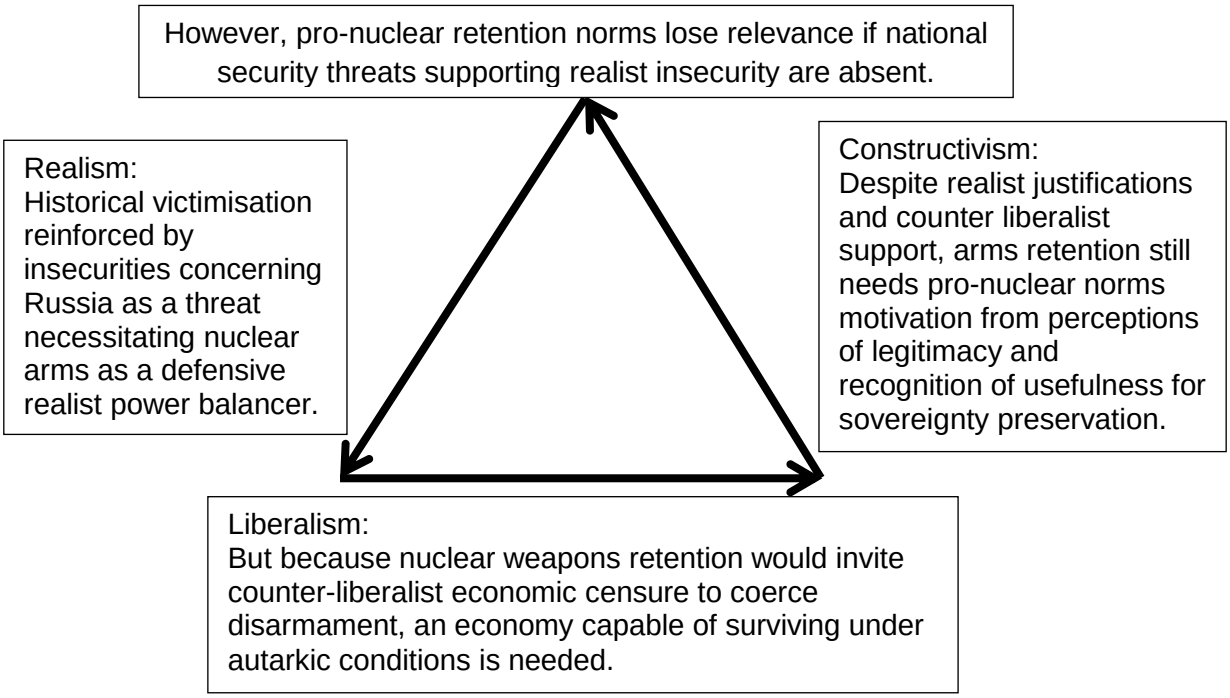
5.5 The Connections between Realism, Liberalism and Constructivism in the Arguments for Ukrainian Nuclear Weapons Retention

In order to holistically understand pro-nuclear arms sentiment in Ukraine and grasp the mechanics behind support for nuclear munitions retention in the *Rada*, it must be realised that as with South Africa, Kiev's nuclear weapons policy consists of inter-related and mutually reinforcing realist, liberalist and constructivist drivers as seen in Diagram 6 below. The period under consideration for expressing pro-nuclear weapons sentiment is taken as falling between 1991 and 1994 as 1991 represents the start of Ukrainian nuclear arms inheritance with the break-up of the USSR, and 1994 denotes the end of the nuclear weapons debate when the *Rada* agreed to START ratification and NPT membership.

Beginning with realism, it can be seen that Ukrainian nuclear arms retention had a security based catalyst due to historical victimisation by foreign powers, with the most contemporary one being Russia which refused to accept the former's sovereignty. Worryingly, Moscow's will to dominate Kiev was and is backed up by overwhelming military force, leading to political opinions which regarded nuclear weapons as the only effective classical realist equaliser to the Russian threat, given Kiev's lack of alliance partners.

[269] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 28-29.

Diagram 6: Tripartite Justification for Ukrainian Nuclear Arms Retention (1991–1994)



However, security based defensive realist justifications for nuclear retention cannot stand alone, as economic resilience and autarkic self-sustainability are required to resist counter liberalist economic isolation, which will be imposed to coerce nuclear arms relinquishment. Inasmuch as Ukraine could feed its people, satisfy minimalist electricity requirements and supply basic industrial goods, pro-nuclear retention advocates would have been confident of resisting counter liberalist interdependence economic sanctions in pursuit of realist driven nuclear munitions maintenance.

Next, counter liberalist resilience needs reinforcement as an explanatory factor because the will to defy economic sanctions presupposes the influence of constructivist pro-nuclear norms on policymakers and politically supportive factions. Even as Soviet raised commercial and political leaders might have preferred economic isolation to the benefits of global economic integration, their ingrained identities as Soviet *nomenklatura* or senior officers/executives implies that they believed in the legitimacy of Ukraine's inherited nuclear weapons since

they also believed in the Soviet nuclear deterrent, and such legitimacy should be owed to Ukraine as a Soviet successor state. Also, in a point related to defensive realism, the deterrent efficacy of nuclear weapons makes them extremely desirable and strengthens support for pro-nuclear norms. With newly achieved Ukrainian independence, the desire to safeguard it and the security of the Ukrainian people would have justified support for and intellectual subscription to pro-nuclear retention norms.

Finally, constructivist norms feed back into realism in that it is a threatening security environment that justifies pro-nuclear norms. If nuclear arms have no role as defensive realist equalisers because the nation has never been victimised or threatened, pro-nuclear norms lose much relevance.

Turning to the process that led to complete Ukrainian nuclear arms relinquishment from 1990 when enunciated nuclear non-proliferation became state policy, to 1994 when complete nuclear relinquishment was agreed to, it will be later substantiated that a similar model employing constructivism, realism and liberalism in a related and mutually reinforcing pattern can be used to account for the removal/decommissioning of all nuclear weapons from Ukrainian soil.

5.6 Ukrainian Moral Constructivist Commitment to Nuclear Disarmament

Unlike the motivational drivers supporting nuclear armaments retention, which was advocated by a vocal minority of *Rada* parliamentarians, the factors championing Ukrainian nuclear weapons decommissioning and relinquishment had moral constructivist norms rather than a realist security threat as an initial catalytic policy base.

Admirably, the Ukrainian Declaration of State Sovereignty on 16th July 1990 declared Ukraine's principle of "not accepting, producing or purchasing nuclear weapons"[270] while the *Rada* reiterated this commitment in October 1991 by agreeing that Kiev would eliminate all nuclear weapons as soon as possible subject to technical, financial, environmental and security conditions that had to be addressed[271]. Therefore, we can see that from the onset, the Ukrainian leadership elite had positioned their national defence policy as proscribing nuclear weapons, despite the caveats mentioned above. This implied that Ukrainian nuclear disarmament was a matter of "when" rather than "if".

Subsequently, another hopeful sign of sincere nuclear disarmament motivation on the part of Kiev was Ukraine's signing of the Alma Ata Declaration signed by the 11 Heads of State of the Commonwealth of Independent States (CIS) on 21 December 1991 where Ukraine agreed that: "Until their destruction in full, nuclear weapons located on the territory of the Republic of Ukraine shall be……dismantled by the end of 1994, including tactical nuclear weapons by 1 July 1992.[272]" A concrete manifestation of Ukrainian disarmament dedication was the complete shipment to Russia of all its 3000 tactical nuclear weapons by May 1992 even before the July deadline[273]. What is significant about Kiev's cooperation was that these weapons represent the dream of Third World states which seek to acquire their own nuclear deterrents. Hence, the moral

[270] Quoted from section IX, External and Internal Security, *Declaration of State Sovereignty of Ukraine*, Verkhovna Rada of Ukraine, 16 July 1990, at http://gska2.rada.gov.ua/site/postanova_eng/Declaration_of_State_Sovereignty_of_Ukraine_rev1.htm.
[271] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 2.
[272] *The Alma Ata Declaration*, signed by the 11 heads of state of the CIS on 21 December 1991, *Agreement on Strategic Forces*, Article 4, Paragraph 2. Sourced from Library of Congress, Federal Research Division, at http://lcweb2.loc.gov/frd/cs/belarus/by_appnc.html.
[273] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 3.

constructivist norm amongst Ukrainian leaders was principled nuclear non-proliferation.

Lastly, the Lisbon Protocol of 23 May 1992 serves as the legally binding basis for Ukrainian nuclear disarmament. This treaty bound the nuclear armed successor states to the Soviet Union, namely Belarus, Kazakhstan, Russia and Ukraine to ratify the US-USSR Strategic Arms Reduction Treaty (START), which was signed on 31 July 1991 when Ukraine was still a member of the USSR, "in accordance with their own constitutional procedures" and eventually "exchange instruments of ratification with the United States of America", wherein then START shall effectively apply. More importantly, the protocol also committed Belarus, Kazakhstan and Ukraine to accede to the Nuclear Non-Proliferation Treaty (NPT) as non-nuclear weapons states as soon as possible, hence cementing the decision to give up their nuclear arms via the most concrete legal expression of non-proliferation norms. In particular, the portion of the protocol signed by President Kravchuk bound Kiev to honour the total elimination of its remaining nuclear arsenal within 7 years as allowed under START[274]. The protocol has norms based relevance to Kravchuk and the Ukrainian leadership because it sets out a disarmament policy that is more concrete and arguably more credible than Kiev's unilateral Declaration of State Sovereignty. When we interpret Kiev's denuclearisation behaviour according to Maria Rost Rublee's earlier enunciated reasons driving international norms, we see that Kiev was autonomously motivated to conform to nuclear non-

[274] Quoted and paraphrased from the Lisbon Protocol or *Protocol to the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms*, 23 May 1992, United States Department of State, at http://www.state.gov/1997-2001-NOPDFS/global/arms/starthtm/start/lisbon.html.

proliferation norms and that the prestige gained from denuclearisation was welcomed.

With respect to intrinsic disarmament motivation, this has been enunciated in the Ukrainian Declaration of State Sovereignty, the Alma Ata Declaration and the Lisbon Protocol as these agreements did not promise any form of tangible reward or inducement for Kiev's cooperation with the relinquishment of its inherited nuclear arms. Additionally, a relatively minor intrinsic motivator was the 1986 Chernobyl nuclear disaster which took place on Ukrainian soil and provided Kiev with first-hand experience of nuclear fallout, creating a societal aversion to nuclear weapons which strengthened the hand of anti-nuclear arms retention advocates in the *Rada*. While territory surrounding the stricken Chernobyl nuclear plant was declared off limits for human habitation, and fostered a healthy domestic constituency supporting anti-nuclear norms, the fact that only 4% of Ukraine versus 20% of Belarus was contaminated, implies that civil nuclear disasters are a contributing but not foundational factor for Ukrainian nuclear relinquishment motivation.

When discussing prestige based norms compliance as a component of moral constructivism, the signing of an official agreement with the two superpowers of the Cold War, confers prestige value on Ukraine as it signals to the International community that both Washington and Moscow are prepare to deal with Kiev as an equal. When the U.S., Russia and Ukraine signed a joint agreement on security, compensation and assistance in Moscow on 14 January 1994, where the Ukrainian quid pro quo was START ratification and nuclear

arms relinquishment,[275] Ukraine reaped the diplomatic payoff which had comparable weight to the compensation and security gains which will be subsequently elaborated.

5.6.1 *Interdependence and structure in Ukrainian constructivist denuclearisation norms*

The regional and international structure or environment that Ukraine found itself in during its early independence enmeshed the fledgling state in a paradigm that strongly encouraged nuclear disarmament. To begin with, the earlier mentioned Lisbon Protocol effectively locked Ukraine, along with all the other ex-Soviet republics into a disarmament framework governed by START. As the protocol obligated Ukraine, Belarus and Kazakhstan to eliminate their inherited nuclear arms within 7 years, there would have been interstate "peer pressure" amongst these three subsidiary members of the ex-USSR, ensuring that none of them retained their nuclear arsenals by the 7 year deadline. Fundamentally, there was an interdependent moral/ethic dynamic at play as none of these states would want to be seen as prone to violating international treaties at such an early stage in their independence. As can be seen by eventual Ukrainian nuclear relinquishment, constructivist peer pressure ultimately triumphed over nationalistic pro-nuclear sentiment.

Next, there was the issue of START which established the influence of nuclear disarmament on the international structure at that time. Indeed, START mandated that both the U.S. and the USSR (or its eventual successor states)

[275] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, Annex A, pp. 67.

reduce their nuclear arsenal to no more than 6000 warheads for each side[276], and this generated significant global nuclear disarmament momentum since the U.S. had a total stockpile of 9150 warheads while Russia alone had about 10,100 warheads,[277] which would have meant a decommissioning of 3150 U.S. and 4100 Russian warheads. Kiev could not afford to disregard the nuclear relinquishment impetus driven by such extensive cutbacks.

Concerning the interdependence aspect of START, the principle signatories, the U.S. and Russia would have every incentive to ensure the disarmament of Ukraine, Kazakhstan and Belarus in order to eliminate geostrategic uncertainty and uphold international nuclear non-proliferation norms. On the other hand, knowing how important their disarmament is to Washington and Moscow, these states would ask for tangible security, economic and even prestige based *quid pro quos*. As will be explained, nuclear disarmament for Ukraine involved trading nuclear relinquishment for security guarantees, economic benefits and norms based prestige in an interdependent process.

5.6.2 *The role of agency and leadership in Ukrainian constructivist disarmament norms*

While expressions of denuclearisation sincerity, tangible benefits from nuclear relinquishment and environmental influences are crucial, leadership perceptions or agency along with actual executive branch decisions need to be discussed because the latter serve as real world manifestations of the former.

[276] *Strategic Arms Reduction Treaty (START 1): Executive Summary*, Treaty Compliance, Office of the Under Secretary of Defence for Acquisition, Technology and Logistics, at http://www.acq.osd.mil/tc/treaties/start1/execsum.htm.

[277] Christopher E. Paine, Thomas B. Cochran and Robert S. Norris, *The Arsenals of the Nuclear Weapons Powers: An overview*, Canberra Commission Issue Paper, The Nuclear Program of the Natural Resources Defense Council, 4 Jan 1996, Table 1 and Table 2, at http://docs.nrdc.org/nuclear/files/nuc_01049601a_160.pdf.

But before agency can be analysed, the importance of domestic identity which leaders have to consider, must be covered. Ukrainian identity was not European nor Soviet *per se*. It had an agrarian flavour with a strong connection to the land. Hence, such a "salt of the earth" identity underpinned Ukrainian nationalism and helped to differentiate Ukrainians from Russians. As for national policy operationalising such differences, getting rid of nuclear weapons helped to sever artificial links to Russia established during Soviet times, while the agricultural Ukrainian psyche sought to protect their land via non-offensive defences which was incompatible with weapons of mass destruction like nuclear arms.[278] Therefore, pro-nuclear arms retention norms did not find favour amongst the Ukrainian majority.

With the above in mind, there existed a pragmatic faction within the Ukrainian executive branch that saw no practical nuclear armed future for their nation. The most prominent of these was Kravchuk who pledged the elimination of all of Ukraine's tactical weapons by July 1992 in the Alma Ata Declaration of December 1991. Even though some have commented that it was Kravchuk's inexperience with disarmament negotiation that deprived Kiev of initial compensation from the disposal of these tactical nuclear weapons[279], the fact remains that he helped provide initial momentum for disarmament whereas a Ukrainian president that believed in nuclear arms retention norms might have refused to sign the Alma Ata Declaration. Next, Defence Minister Morozov promoted the building and maintenance of a strong conventional military for deterrence and sovereignty protection, eschewing a nuclear deterrent as being

[278] Paraphrased from an interview with His Excellency, Ukrainian Ambassador to Singapore, Pavlo Sultansky on 22 August 2014.
[279] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 94-95.

ethically and practically unrealistic. It should be noted that the executive branch's willingness to implement nuclear disarmament co-existed with the nuclear armament retention desires of a minority of *Rada* members along with the *Rada* majority that wanted any disarmament deal to concretely serve Ukrainian national interests. Such was the strongly contested nature of this disarmament process.

Despite spirited denuclearisation debate, like minded Ukrainian ministers and officials worked in conjunction with their Russian and U.S. counterparts in establishing technical processes for deactivating Ukrainian nuclear warheads, and thereafter shipping them to Russia, as well as the specifics of missile and missile launcher dismantlement[280]. For example, prior to U.S. Ambassador Strobe Talbott's 9 May 1993 trip to Kiev, the Ukrainians stated their willingness to discuss de-targeting and removal of both the guidance systems as well as warheads from their nuclear missiles, while in a meeting between Morozov and Talbott, the former mentioned that Ukraine might even be able to unilaterally dismantle some of its ICBMs[281]. Subsequently, by mid-June Russia was in favour of a U.S. proposed plan to first decouple the warheads from Ukrainian missiles and then defuel the latter while on 17 June, Kiev and Moscow came to an initial agreement on the maintenance of the Ukrainian weapons to prevent deterioration such as radiation leakage[282]. As these technical discussions remained out of the Rada's purview, these helped promote progress that sidestepped political gridlock. Additionally, these technical discussions would

[280] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 33-34.
[281] Ibid, pp. 37.
[282] Ibid, pp. 38.

have to be conducted in any case upon successful ratification of START, so early technical deliberations helped with subsequent START implementation.

When analysing these actions on the part of Kiev, it can be reasoned that the minority nature of those Ukrainians and Rada deputies who opposed nuclear disarmament, helped those Ukrainian ministers and senior officials who supported eventual disarmament like Kravchuk and Morozov, forge ahead with technical preparations for nuclear arms elimination, secure in the knowledge that their efforts would not be wasted, and that the momentum of norms driven denuclearisation policy would not lag.

5.7 The Realist Security Dimension of Ukrainian Nuclear Disarmament

Moral constructivist arguments for Ukrainian nuclear disarmament do have much influence but as earlier discussed, the realist concern of the Russian threat was a major obstacle to Ukrainian nuclear weapons free status. Moreover, the realist threat argument bolsters the position of the pro-nuclear retention *Rada* minority. Hence, Kiev's classical realist concern about the inability to marshal enough power to offset potential Russian aggression must be addressed for nuclear relinquishment to be advanced.

This concern can be seen during the latter stages of nuclear disarmament negotiations when the *Rada* eventually voted to ratify START on 18 November 1993 but with several conditions, amongst which realist (security assurances) and economic liberalist (compensation and disarmament assistance) concerns were the more important issues. Also, the *Rada* only agreed to destroy 42% of all remaining warheads and ignored both the Lisbon Protocol and NPT[283]. This

[283] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 41.

stringently conditional START ratification can be understood as an expression of the Rada's classical realist insecurity. As elaborated by Kravchuk:

> "We fear the territorial claims that are being expressed in certain nationalist circles in Russia. The *Rada* vote reflects the opinion – which is widely held here – that nuclear weapons are a means of protection against threats to the integrity of Ukrainian territory….You must understand the fears of the Ukrainian people."[284]

Also, Kiev's political system was more democratic than Washington realised. While Kravchuk could propose complete START ratification, NPT joining and expedited nuclear disarmament, it was up to the *Rada* to vote on whether to approve or reject his denuclearisation policy.

5.7.1 The role of interdependence in realist analysis of Ukrainian nuclear disarmament

Having earlier explained that there exists an interdependent relationship between Russia and the U.S. on one hand, and the subsidiary former Soviet republics like Ukraine on the other, where the former expects the latter to surrender inherited nuclear arms, while the latter wants economic, security and prestige incentives as a *quid pro quo*, Ukraine's case will be further examined below.

Knowing that security anxiety amelioration about the Russian threat in Kiev's consciousness, was one of the interdependent keys to securing the *Rada's* approval for total Ukrainian nuclear disarmament, this process can be demonstrated when on 20 December 1993, Kiev showed its sincerity to eventually disarm by initiating the deactivation of 17 SS-24 ICBMs. Thereafter,

[284] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 113.

the U.S., Russia and Ukraine concurred on a joint agreement on security, compensation and assistance which would be signed in Moscow on 14 January 1994.

The tripartite agreement arranged for the transfer of the remaining Ukrainian nuclear weapons to Russia for dismantlement, covered Russian reimbursement to Kiev for the HEU in the disposed warheads (comprising fuel assemblies for nuclear power stations containing 100 tons of LEU or Low Enriched Uranium[285]) and clarified the security assurances[286] that Washington and Moscow were to give Kiev once the *Rada* fully ratified START and Ukraine joined the NPT. Lastly, the *Rada* fully ratified START in February 1994 without the pre-conditions of November 1993, acceded to the NPT in November 1994 and received security assurances not only from the U.S. and Russia but also from Britain, France and China[287]. Hence, the interdependent relationship where Ukraine satisfied its realist security needs, while the nuclear great powers were assured of the former's eventual disarmament, is clearly exhibited.

5.7.2 Norms and the realist examination of Ukrainian nuclear disarmament

Even as the importance of national security and the reciprocative interdependent nature of military denuclearisation negotiation have been stressed, the indispensable role of non-nuclear norms for sustaining the Ukrainian nuclear disarmament process need to be analysed.

Fundamentally, the receding of deterrence based pro-nuclear norms, in the minds of the *Rada* majority, from the perceived redundancy of the Russian threat, was superseded by an alternative non-nuclear norm based on a less

[285] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, Annex A, pp. 67.
[286] These included assurances against the threat or use of nuclear force, aggression against Ukraine and economic coercion.
[287] Ibid, pp. 42-43.

conflictual realist paradigm governed by threat reduction instead of threat balancing.

Referring to the earlier mentioned security guarantees from the global nuclear armed great powers, Ukraine would only implement complete and irreversible relinquishment of all its nuclear weapons after security based realist and economic liberalist compensation prerequisites were met, thereby garnering enough norms based non-nuclear retention support in the *Rada* to ratify START, fulfil the disarmament promises made in the Ukrainian Declaration of State Sovereignty and earn respect as a principled NPT signatory.

5.7.3 Leadership dynamics in Ukrainian nuclear disarmament under a realist lens

The need to safeguard national survival, receive fair returns for nuclear relinquishment, and the victory of non-proliferation norms make for salient analysis, but a closer look at the functional dynamics of Kiev's leadership completes the realist model of nuclear disarmament for Ukraine.

Based on all that has been discussed, we can deduce that two major disarmament negotiation world views existed in Kiev. The first was that held by Kravchuk and his foreign and defence ministers that disavowed nuclear weapons as a deterrence option, perceived nuclear disarmament as a means of cementing good relations with the West, saw the disposal of these weapons as lessening USSR-era security threats to Ukrainian national security (a nuclear armed Ukraine would be targeted by foreign nuclear weapons) and as a secondary focus, sought fair material and security based compensation for relinquishing nuclear arms. The other negotiation stance was adopted by the *Rada* who's deputies were not keen on unconditional disarmament, perceived

the inherited nuclear weapons as providing the means for defensive realist protection against Russian expansionism and among whom, a simple majority supported disarmament and START ratification but demanded substantial compensation, concrete security assurances against aggression from other nuclear powers (to prelude the need for nuclear arms as classical realist balancers), and other forms of aid. In short, foreign commentators might see Kravchuk and his ministers as being flexible while the Rada could be regarded as demanding and stubborn, but in actuality, both the Ukrainian executive and legislative branches of government had the same objective which was safeguarding national security and sustainability.

But despite the executive branch's optimism, START ratification and NPT accession as a non-nuclear armed state was still subject to the *Rada's* approval. As quoted from the writings of independent Ukraine's first defence minister, Kostiantyn Morozov, as evidence of the importance attached to the *Rada* in any negotiations:

> "The negotiations…required that Kravchuk have the support of the democrats back home, for they increasingly set the tone for the parliamentary debates in Ukraine. No important issue could be resolved without their approval."[288]

Therefore, unlike the South Africa case where nuclear arms decommissioning was initiated and driven by President De Klerk, the political paradigm in Kiev meant that parliamentary support for a nuclear weapons free Ukraine had to be obtained. Without a concrete and holistic compensation package, quick START ratification and disarmament progress was impossible.

[288] Kostiantyn P. Morozov, *Above and Beyond: From Soviet General to Ukrainian State Builder*, Harvard University Press, 2000, pp. 92.

To illustrate the importance of realist threat ameliorating security assurances and compensation for the HEU in the warheads, the relevant excerpt of the *Rada's* February 1994 resolution ratifying START is as follows:

> "Considering the fact that Ukraine has received confirmation from the Presidents of the US and Russia of their willingness to *provide Ukraine with national security guarantees* following entry into force of the START 1 treaty and Ukraine's accession to the Treaty on the Non-Proliferation of nuclear weapons (NPT) as a non-nuclear weapon state and considering *the obligations of the United States or America, the Russian Federation….in regard to Ukraine, to respect its independence, sovereignty and existing borders, to refrain from the threat and use of force…..to refrain from economic pressure and their obligation not to use any weapons against Ukraine*.
>
> That the Russian Federation and the United States of America will provide just and timely compensation to Ukraine for the value of highly enriched uranium as nuclear warheads are removed from Ukraine to Russia for disassembly[289]." (Italics added for emphasis.)

From the detailed nature of the language used, we can infer that the returns from its inherited nuclear arms were highly valued and intimately linked to the *Rada's* national interest protection strategy.

5.8 Liberalism's Role in Ukrainian Nuclear Disarmament

Winning security guarantees from the nuclear armed great powers was in itself an admirable foreign policy achievement. However, relief from military

[289] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, Annex B, pp. 69. Quoted from the Resolution of the Supreme Rada of Ukraine on February 1994, ratifying START. Translated from Ukrainian by the U.S. Department of State.

aggression did not guarantee that Ukraine would be able to sustain itself and deliver economic growth and welfare, which would build national strength, nurture population morale and make the nation a valuable partner to others in the liberally interdependent world economy. In other words, security guarantees do not preclude the possibility of state failure due to prolonged economic decline.

As with all former Soviet republics, decades of economic mismanagement meant that Kiev urgently needed to reform the Ukrainian economy in order to pull it out of poverty. Notwithstanding the autarkic capacity of the economy and that Ukrainians could tolerate economic hardship, Kiev wanted to bring prosperity to the nation. Thus, the production mismatches, inefficiencies and poor output quality leading to economic decline, and the inability to cope with a liberally interdependent global economy[290] had to be remedied. Taking brief snapshots of the economy between the years 1992 (1 year after the USSR's collapse), 1994 (when a conclusive denuclearisation deal was signed with the U.S. and Russia) and 1996 (when the last nuclear warhead left Ukraine), we can see from Table 5 that, despite the lack of economic data for 1992 and 1994, it is quite obvious that Ukraine was economically weak in 1992 but managed to strengthen its economy in robust increments with Gross Domestic Product (GDP) per Capita increasing by 71.25% from 1992 to 1994 and 23.24% from 1994 to 1996. As for inflation, even though it was still problematic in 1996, it had fallen drastically from unmanageable levels in 1994. Lastly, the lack of data for the unemployment rate prevents any comparison

[290] As with other centrally planned communist economies, output seldom coincided with consumer demand, there was no individual profit incentive for efficiency and lack for incentives for quality meant many shoddy goods were made. This not only created a poor domestic economy but also made Ukrainian products unattractive for export.

over the years and the 10% unemployment rate in 1996 is moderately high but in relation to South African unemployment rates from 1980 – 89 mentioned in tables 3 and 4, Ukrainian unemployment was not insurmountable.

Table 5: Ukrainian Economic Indicators (1992 – 1996)[291]

Economic Health Indicators	1992	1994	1996
GDP/Capita (Current prices US$)	415.01	710.71	875.86
Inflation Rate (Average Consumer Price Change %)	Data Unavailable	891.19	80.23
Unemployment Rate (% of labour force)	Data Unavailable	Data Unavailable	10

Examining the data retrospectively, it can be inferred from the statistical image of economic resurgence presented above, that Kiev was actively trying to remake the economy into one more suited to liberally interdependent capitalistic realities. This implied that foreign economic aid to help restructure the economy had to be sought, which would be denied if Kiev decided to retain its inherited nuclear arsenal. Hence, even if the *Rada* had a conservative and autarkic pro-nuclear armament faction, it can be deduced from the initial economic recovery from 1992 to 1994, amidst liberal economic realities, that this faction was not influential.

Moreover, Ukraine has since independence, been a major export player in the international commodities market for grains and maize and has produced a record harvest in 2014 despite problems from Russian expansionism.[292] Hence, Ukraine has excellent agricultural prospects in the liberally interdependent international economy and this would have been scuttled if nuclear armaments were retained.

[291] *Ukraine Economic Statistics and Indicators*, Economy Watch, at http://www.economywatch.com/economic-statistics/country/Ukraine/.

[292] Paraphrased from an interview with His Excellency, Ukrainian Ambassador to Singapore, Pavlo Sultansky on 22 August 2014.

5.8.1 Economic liberal interdependence and Ukrainian nuclear disarmament

With the USSR's dissolution, the need for economic reform to benefit from the liberally interdependent world economy, and escape the inefficiencies and welfare sapping distortions of the centrally planned Soviet economy would have been obvious. Accordingly, since nuclear weapons decommissioning or relinquishment could be traded for economic aid to bolster economic reform, the process of Ukrainian nuclear disarmament became intertwined with negotiated aid to assist in the re-tooling of the economy for internationally integrated trade and investment.

Fundamentally, the commitment to denuclearisation via START ratification was interdependently tied to financial assistance. Kiev's argument was that since Ukraine was being economically overhauled from a centrally planned to a market economy with significant economic dislocations, it could ill afford to spend precious resources on expensive nuclear weapons dismantlement. Specifically, the economic imperative must have concerned Kiev's leadership elite, as following the removal of all tactical nuclear weapons from Ukraine, President Kravchuk visited the US on 6 May 1992, where he stated that he would: 1) work towards the Ukrainian Rada's ratification of the US-USSR Strategic Arms Reduction Treaty (START), 2) dispose of all remaining Ukrainian nuclear weapons within 7 years as stipulated by START, and 3) promised Ukrainian membership in the NPT as a non-nuclear state. In return, Kravchuk secured U.S. political and economic benefits including a trade agreement, $110 million in agricultural credits and technical assistance in housing among other

concessions[293]. While it would be incorrect to suggest that the expectation of tangible economic gain was the sole impetus behind Kiev's disarmament decisions, since all Ukrainian tactical weapons were eliminated without compensation, it was very likely that the provision of benefits, rewards and compensation for the fulfilment of START obligations would reinforce the denuclearisation movement in the *Rada*, lending weight to economics as a disarmament driver.

Subsequently, Kiev requested US$174 million from the US as disarmament aid and in December 1992, President Bush wrote to Kravchuk that the US was willing to offer Ukraine US$175 million with more assistance to follow as disarmament proceeded. Additionally, to underscore the importance of economic assistance to Kiev, Kravchuk had a few months earlier in July contacted the G7 nations to request their help in setting up a small business assistance fund and national stabilisation fund.[294] As such, assistance to bolster the health of the Ukrainian economy and improve connectivity with the liberally interdependent world economy was closely intertwined with nuclear disarmament. More importantly, these developments established the pattern of interdependence where Kiev exchanges nuclear arms decommissioning progress for economic assistance.

In a related point, one of the prime financial considerations which was important to Kiev's political decision making vis-à-vis nuclear disarmament was the issue of compensation for surrendering Ukraine's inherited nuclear weapons. As one of the largest and more industrialised Soviet republics, Ukraine contributed a substantial amount of resources towards the Soviet

[293] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 4-5.
[294] Ibid, pp. 19.

nuclear arsenal, which it felt it had an economic claim to. As stated by then President Leonid Kuchma on 1 Jun 1996:

> *"*The people of Ukraine once had to finance an exhausting nuclear arms race during the Cold War at the expense of their well-being and economic development. Having proclaimed itself the owner of nuclear weapons deployed in its territory and inherited from the former USSR, Ukraine regarded these weapons *not as an active military force* but, above all, *as an asset that could, at least partially, compensate for its losses*[295]*."* [italics added for emphasis]

Hence, Kiev set direct compensation for nuclear weapons relinquishment as an interdependent negotiative *quid pro quo* to assist economic recovery.

Lastly, Ukraine does not have enough oil, natural gas or other energy resources to be self-sufficient to such an extent that it can power a thriving economy. It has to import its energy needs primarily from Russia, and in order to prevent the latter from economically coercing the former via the depravation of vital energy imports or by raising prices, civilian nuclear power generation is an important pillar of Ukrainian national sustainability. Therefore, for Kiev, acquiring LEU suitable for fuelling nuclear energy reactors either as compensation for giving up its nuclear weapons or by processing the weapons grade HEU from dismantled weapons was an important part of its disarmament negotiation strategy[296]. In as far as energy security is an important economic foundation, obtaining returns from Ukrainian based nuclear weapons to sustain

[295] Quoted from a speech by President Kuchma on 1 June 1996 on Kiev UT-1 Television Network. Translation from Ukrainian done by the Foreign Broadcast Information Service of the CIA.
[296] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 20.

energy generation for vital industries, would be important to Kiev in order to prove useful to the liberal global economy.

5.8.2 Norms and leadership in a liberally interdependent view of Ukrainian disarmament

Even as we know that Kiev did trade nuclear disarmament for economic and fuel aid and that the aforementioned aid would have supported national economic integration into the interdependent world economy, it would round off the analysis of Kiev's liberalist motivations if evidence could be found to support the existence of liberal interdependence norms and leadership.

Referencing the work of Maria Rublee where states are either innately motivated to follow norms, conform to norms to emulate admired models or subscribe to norms to further national interests, it can be argued that Kiev submitted to liberal economic interdependence norms which served economic recovery in line with national interest. In turn, this was linked to non-proliferation policy because global norms frowned on Ukrainian weapons retention, barring economic cooperation.

Examining Ukrainian denuclearisation, it would be fair to say that since economic autarky or trading within closed blocs has been discredited as promoting economic advancement (as evident by the economic failure of the socialist bloc), Ukrainian hopes for economic recovery lay in interdependent global economic integration, so that technology and foreign investment could flow in and the quality of Ukrainian exports improved to earn valued foreign currency. Inasmuch as Kiev's leaders were aware that universal non-proliferation norms rendered nuclear arms retention incompatible with

international aid to benefit from liberally interdependent economics, their disarmament decisions accounted for this reality.

To begin with, an example of the interconnectedness between liberal economic norms and Ukrainian nuclear disarmament was when the Clinton administration came to power in the U.S. on 20 January 1993. At that time, U.S. strategy involved the exertion of more diplomatic pressure to push the Ukrainian disarmament process forward. The U.S. pressured Ukraine to ratify START and accede to the NPT by emphasising that good relations depended on denuclearisation progress. For instance, due to the *Rada's* inactivity on START ratification, Prime Minister Leonid Kuchma was denied a chance to have an audience with President Clinton and the U.S. Agriculture Secretary during a planned trip to Washington in April 1993.[297] Given Ukraine's large farming sector, this would have been significant for economic interdependence norms because Kuchma could have won American agricultural aid to help Ukrainian farmers become more internationally competitive.

However, this prestige based snub backfired because it did not account for the stronger than expected pro-nuclear weapons, and anti-ratification sentiment amongst the Ukrainian public that the *Rada* had to pay heed to. Even though Kravchuk tried on 20 April to convince the *Rada* to ratify START by reasoning with the *Rada* that Ukraine could not effectively maintain the nuclear weapons, and that the ratification would be conditional upon sufficient liberalist compensation, and realist security assurances, parliament's response to Kravchuk's pro-ratification appeal was lackadaisical[298].

[297] Ibid, pp. 26-27.
[298] Ibid, pp. 28.

Next, the importance of fair compensation for Ukrainian disarmament (which impacted Ukrainian prospects for benefitting from economically interdependent liberalism since export industries could be supported by such compensation) was revisited as the U.S. encouraged both Kiev and Moscow to reach a compensation agreement by March 1993. To Kiev, the policy centrality of obtaining fair material returns from the weapons to be relinquished was even demonstrated when the *Rada* on 2 July 1993 overwhelmingly voted that Ukraine owned the nuclear weapons on its territory, where Ukraine had "acquired its own nuclear weapons for historical reasons" but would preclude their use[299]. From Kiev's perspective, the *Rada* action provided a legal basis for Ukraine to lay claim to their inherited nuclear weapons and possibly demonstrate the political resolve for a fair disarmament settlement as many *Rada* deputies rationalised that START ratification and NPT membership with the attendant disposal of weapons that Kiev did not formally own would rob Ukraine of equitable reimbursement. All this political manoeuvring by the legislative branch hinted at leadership support for liberal economic norms since any compensation received would be ploughed back into the economy, improving its ability to function internationally.

Subsequently, as a foretaste of the link between aid supporting liberal economic progress and nuclear disarmament, on 15 July, in an apparent display of Ukrainian sincerity, Kravchuk confirmed Morozov's earlier May 1993 comment to Talbott about missile dismantlement by initiating the dismantlement of 10 SS-19 ICBMs before START ratification, thereby beginning the *de facto*

[299] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, pp. 38.

START process[300]. Thereafter, during an October 1993 visit to Kiev, US Secretary of State Warren Christopher signed an agreement with the Ukrainians that transferred $175 million to the latter as a liberal economic sweetener for dismantling the SS-19s, while Christopher also promised that the Clinton administration would seek another $155 million in economic aid for Ukraine in 1994[301].

As earlier mentioned, on 20 December 1993, Kiev demonstrated its earnest intention to disarm by initiating the deactivation of 17 SS-24 ICBMs which were significantly more advanced than the aforementioned SS-19s. Also, to facilitate Ukrainian receptivity to nuclear demilitarisation, the Clinton administration doubled financial assistance to Ukraine to $310 for the 1994 fiscal year in January 1994 if the *Rada* approved the earlier mentioned 14 January Moscow Trilateral Agreement[302], which it did. This arranged for the removal of Ukrainian nuclear weapons to Russia for dismantlement and as earlier mentioned, certified the security assurances that Washington and Moscow were to give Kiev once the *Rada* fully complied with the Lisbon protocol. But more importantly, it covered Russian reimbursement to Kiev for the HEU in the disposed warheads, comprising fuel assemblies for nuclear power stations containing 100 tons of LEU[303]. It was a win-win solution for all with the Ukrainian president subsequently announcing on 1 June 1996 that the last Ukrainian warheads had been sent to Russia, and the latter even agreeing in May 1994 to compensate the former for the tactical weapons previously

[300] Ibid, pp. 39-40.
[301] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 110-111.
[302] Ibid, pp. 119.
[303] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, Annex A, pp. 67.

shipped to Russia, where both parties agreed to $450 million which would reduce the Ukrainian debt for previously imported Russian oil and natural gas.[304]

The significance of the LEU compensation and oil and natural gas debt forgiveness for reinforcing economic liberal interdependence norms, was that the LEU could help ensure power dependability for Ukrainian industry (the Ukrainian nuclear energy authorities had warned on 28 January 1993 that all nuclear energy reactors could cease functioning in 1995 without fresh LEU fuel[305]), thus reassuring foreign investors and export customers, while the debt forgiveness could allow Ukraine to import more conventional fuel and bolster commercial electricity supply. All of this had a direct bearing on Ukrainian usefulness as an international industrial partner, and allows fair inference of leadership subscription to liberally interdependent ideals.

5.9 Other issues contributing to Disarmament Momentum

Concerning other disarmament factors that defy easy constructivist, realist or liberalist categorisation, Crimean separatist sentiment and nuclear weapons decay stand out as being most prominent.

In an accurate portent of events in 2014 where the Ukrainian territory of the Crimea was annexed by Russia, the Crimea had before the 14 January 1994 Trilateral Agreement, elected a nationalist president who favoured independence and close ties with Russia. In as far as the Trilateral Agreement provided for security assurances and respect for Ukrainian sovereignty while implying the non-recognition of Crimean independence by Moscow, START ratification would bring Kiev closer to securing its territorial integrity. Inasmuch

[304] Ibid, Annex A, pp. 42-43.
[305] Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities, The Woodrow Wilson Center Press, 1995, pp. 119.

as politicians are unable to divine the future, this legalistic means to shackle Moscow's expansionism seemed reasonable at that time.

Secondly, with the horrors of the Chernobyl disaster fresh in their minds and a growing realisation that Kiev did not have the technical capabilities to prevent Ukrainian based nuclear weapons from becoming environmental hazards, the *Rada* decided that START ratification would hasten the removal of these liabilities. As Colonel General Maslin, chief of nuclear systems in the Ukrainian Defence Ministry reported, "The condition of nuclear safety in Ukraine continues to worsen. A moment may come when Russia will simply refuse to accept such warheads for disassembly.[306]"

5.10 Constructivism, Realism and Liberalism in an Interlinked Model of Ukrainian Disarmament

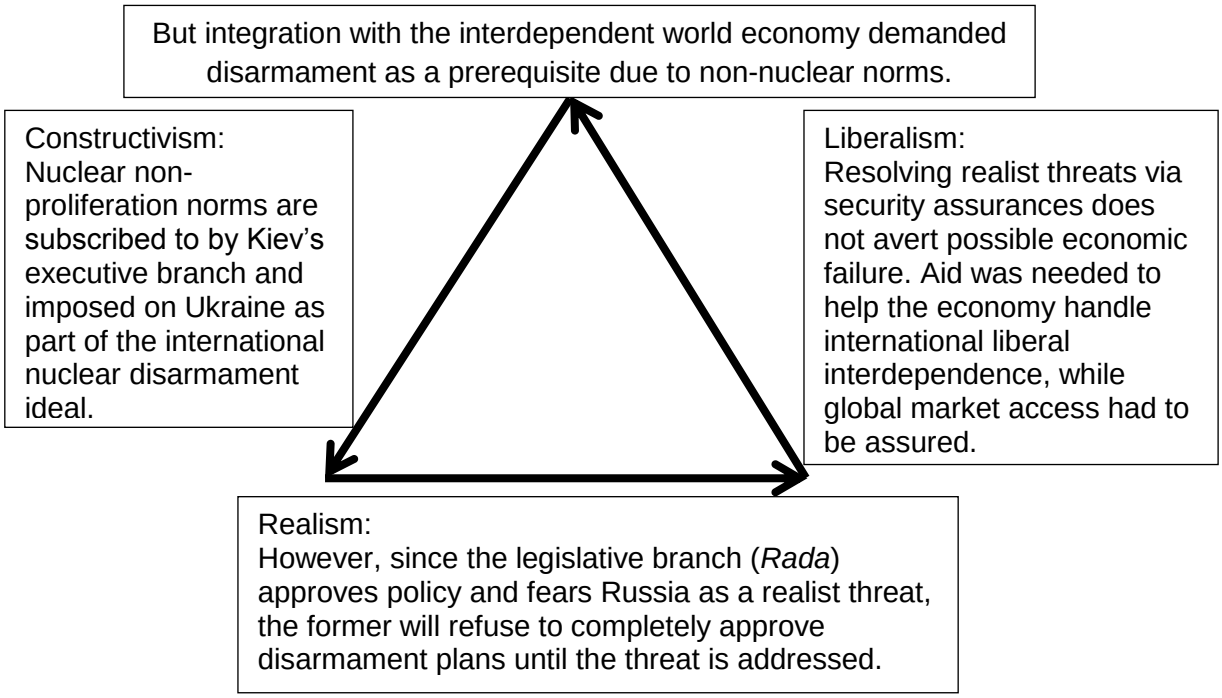
Having examined the South African case and the argument for Ukrainian nuclear weapons retention, it can be seen that the eclectic realist, liberalist and constructivist theoretical mosaic does display efficacy for explaining nuclear munitions policy. When analysing the impetus for Ukrainian nuclear arms disposal, it will be shown that a similar inter-reinforcing constructivist, realist and liberalist system accounts for Ukraine's military denuclearisation.

With reference to Diagram 7 below which analyses the considerations associated with the Ukrainian nuclear disarmament process, (which is the direct counterpart to Diagram 6 which justifies nuclear retention) it can be seen that Kiev expressed moral constructivist nuclear non-proliferation norms in its sovereignty declaration, and by being a signatory to the Lisbon Protocol which

[306] Ibid, pp. 118.

obliged Ukraine to join the NPT (the ultimate institution of non-proliferation ideals), and eliminate all inherited nuclear weapons within 7 years.

Diagram 7: Tripartite Ukrainian Nuclear Disarmament Model (1990–1994)



But even as constructivist disarmament norms were championed by members of the Ukrainian executive branch like President Kravchuk and Defence Minister Morozov, the fact remained that any state policies, which included nuclear disarmament, still had to be approved by the *Verkhovna Rada* or Ukrainian parliament. As shown by history, the *Rada* parliamentarians had other concerns other than abiding by constructivist norms, and one of their worries was the realist threat from Russia. Basically, nuclear disarmament would not be approved if the former was not addressed.

Indeed, the *Rada* only gave its blessing to full ratification of START and Ukrainian NPT membership, after Russia and the U.S. agreed to give Ukraine the security assurances needed to ameliorate the latter's realist fears. It bears repeating that realist security considerations were very important to the *Rada* as its 1994 resolution ratifying START clearly states that the U.S. and Russia were

obliged to: “respect its independence, sovereignty and existing borders, to refrain from the threat and use of force…..to refrain from economic pressure and their obligation not to use any weapons against Ukraine.”[307]

However, even if realist threats could be ruled out, the resultant peace and stability would be meaningless if Ukraine remained mired in Soviet era poverty, lacking the wherewithal to effect economy recovery via mutually beneficial integration with the liberally interdependent world economy. In order to support constructivist norms and realist insecurity elimination to effect nuclear disarmament, aid for liberal economic restructuring, and assured access to world markets for Ukrainian products was vital.

Proof of the above was clearly shown as Kiev linked denuclearisation progress with financial assistance and is evident from 1) the $110 million in economic aid that Kravchuk received for pledging adherence to the Lisbon Protocol when he visited Washington in May 1992, 2) the $175 million in aid given by the U.S. in December 1992 for further disarmament progress, 3) another $175 million in U.S. economic aid given in October 1993 for disassembling SS-19 ICBMs and 4) $310 million in aid from Washington in 1994 as a reward for the *Rada* approving the 14 January 1994 Moscow Trilateral Agreement.

Additionally, the need to acquire resources to bolster Ukrainian industrial sustainability (either via nuclear power fuel or cash subsidies) for participation in the interdependent global economy, was a major policy imperative linked to nuclear disarmament approval. This can be seen in Kiev’s intense negotiations

[307] Roman Popadiuk, *American-Ukrainian Nuclear Relations*, McNair Paper 55, Institute for National Strategic Studies, National Defence University, October 1996, Annex B, pp. 69. Quoted from the Resolution of the Supreme Rada of Ukraine on February 1994, ratifying START. Translated from Ukrainian by the U.S. Department of State.

to receive compensation for the HEU in decommissioned Ukrainian nuclear warheads sent to Russia.

Lastly, Ukrainian pro-liberal interdependence policies fed back into constructivist norms as global non-proliferation ideals stipulate that full or ongoing nuclear disarmament must be a precondition for participation in the liberally interdependent cooperative world economy.

Having examined the Ukrainian arguments for nuclear munitions retention and the drivers for subsequent disarmament, it must be highlighted that both the South African and Ukrainian case study exemplars have similarities in that the latter's tripartite nuclear retention/disarmament framework also accounts for significant changes in policy input emphasis and greater flexibility on the part of negotiation counterparts (environmental changes) over time. As illustrated in this chapter, the changes were:

1) The willingness of Moscow to grant a security assurance to Kiev which made the latter's inherited nuclear arms redundant as defensive realist balancers and weakened the arguments of pro-retention *Rada* advocates.
2) The reality of a moribund Ukrainian economy, at least $770 million in aid from the U.S., LEU fuel and oil and gas debt forgiveness from Russia as disarmament compensation and pro-liberal interdependence leadership. This overwhelmed pro-nuclear elites who might have been prepared to adopt counter-liberalist economic autarky and retain nuclear arms.
3) Nuclear Non-Proliferation as an essential tenet of Ukrainian sovereignty, contractual obligations to disarm and join the NPT, the

global disarmament impetus driven by the momentum from START, and executive branch leadership championing pro-disarmament norms, overpowered the *Rada* minority who still favoured Soviet era beliefs about nuclear weapons legitimacy.

Thus, the basic trilateral realist-liberalist-constructivist framework accounting for nuclear weapons policy is able to account for vigorous policy debate between pro-retention factions and those advocating non-proliferation. Essentially, this model is able to accept influential changes of independent variables (security, economic and norms based factors), leading to an assured dependent variable which for Ukraine was permanent nuclear disarmament. In other words, nuclear disarmament and retention are highly contingent decisions and this further validates the eclectic interlinked tripartite framework.

The next chapter on North Korea will show that even though it is the poster child of nuclear proliferation recalcitrance, the tripartite realist-liberalist-constructivist model also applies to Pyongyang's nuclear weapons decisions.

Chapter Six – Contentious North Korean Disarmament Prospects

6.1 Using a Tripartite Theoretical Model to Examine North Korean Nuclear Weapons Policy

While North Korea only has a modest collection of about 12 nuclear warheads, it still exhibits nuclear proliferation intransigence, in contrast to the positive South African and Ukrainian nuclear disarmament outcomes.

Specifically, North Korea experienced fitful nuclear weapons development from 1991 – 2006, culminating in its first nuclear weapons test on 9 October 2006, surprising nuclear disarmament progress from 2007 – 2008, and persistent nuclear armaments development from May 2009 when it detonated its second nuclear device until today. But despite the gloomy prognosis for nuclear disarmament, a case can be made that, regarding these three periods, Pyongyang's nuclear armaments policy is, as with the nuclear decision making of Pretoria and Kiev, driven by inter-related security based realist, economic interdependence liberalist and moral constructivist norms considerations. Additionally, DPRK nuclear policy has similarities with that of Ukraine since pro and counter proliferation motivations exist concurrently in alternating time periods. However, unlike Ukraine where pro-retention sentiments were weaker, North Korea exhibits a "Jekyll and Hyde" nuclear arms policy oscillating between disarmament negotiability and proliferation intransigence.

As for an abridged example of the efficacy of the realist-liberalist-constructivist nuclear arms policy framework, realism points to the unresolved 1950-53 Korean War, involving the DPRK and PRC on one side and the U.S., South Korea and UN forces on the other. This only ended with an armistice,

without a peace treaty being signed. Hence, a technical state of war still exists, and even though North Korea is protected by a mutual defence treaty with the PRC, Pyongyang perceives the DPRK to be on the losing side of the classical realist balance of power, since the U.S.-ROK alliance is militarily preponderant. Therefore, if Pyongyang treasures state security, it will regard nuclear munitions as the best defensive realist national survival guarantor.

Next, the end of the cold war terminated socialist economic aid which North Korea depended on. This precipitated the DPRK's economic decline and unlike South Africa or Ukraine, which could feed themselves and produce basic industrial goods, North Korea could not feed its people or sustain meaningful economic autarky. Unfortunately for the DPRK, environmental conditions exacerbated its economic malaise, which was not ameliorated by enough foreign economic assistance to stabilise state survival prospects. Consequently, without the prospect of being able to effect economic restructuring and recovery to benefit from the liberally interdependent international economy, Pyongyang clung to its nuclear weapons programme both as a bargaining chip for aid and as a source of pride and defensive realist deterrence.

Concerning moral constructivist norms, Pyongyang's leadership subscribes to pro-nuclear proliferation norms supported by the North Korean nationalist doctrine of *Juche,* which regards nuclear weapons as a symbol of power and legitimacy. Hence, based on jingoistic national identity, nuclear weapons development is enmeshed in an ideational norm framing their possession as a natural right. Lastly, constructivism flows back into realism since military power and North Korean national security – both concepts important to *Juche*, occupy prime consideration in Pyongyang's realist calculus.

Above all, if the U.S. ever ceased to be a threat, constructivist arguments for nuclear warheads would lose a justifying pillar since the North Korean military possesses enough brute (albeit outdated) firepower to deter South Korea.

Additionally, the realist, liberalist and constructivist analytical lenses all possess interdependence, norms and leadership characteristics which provide analytical commonality and greater depth. Using interdependence as an example, it will be later elaborated that, 1) North Korea only has one interdependent security partner, the PRC, but this leaves the DPRK in a precarious situation since any moves by Beijing to distance itself from Pyongyang would leave the latter vulnerable. Thus, indigenous nuclear arms serve as an avenue to security based realist self-sufficiency. 2) Next, North Korea's decrepit economy and rogue status makes it a poor business partner in the liberally interdependent world economy. With stagnant demand for non-military exports and the undesirability of the DPRK to foreign investments, welfare from economic liberal cooperation eludes Pyongyang and does not exert any counter nuclear proliferation pressure. Since the North Korean leadership sees no economic benefits to unconditional nuclear weapons abnegation, Pyongyang partially pursues nuclear arms for their realist utility and to compel the international community to treat North Korea as an equal. 3) Finally, as a minor Cold War actor (when Pyongyang already harboured nuclear aspirations), North Korea could not interdependently influence other would-be nuclear proliferators, but it can be inferred that Pyongyang developed pro-nuclear proliferation norms since its two key patrons, the USSR and PRC were nuclear powers. Hence, if Moscow and Beijing could own atomic weapons, Pyongyang reasoned that its nuclear arms ambition was morally and

constructivistically legitimate. Indeed, Soviet and Chinese assistance to develop atomic arms in 1963 and 1964 respectively was sought, but was rejected.[308]

6.2 A Brief Account of North Korean Nuclear Weapons Developments

With the complexity of the DPRK's nuclear arms development history as an ongoing concern, an abbreviated narrative would promote clarity of analysis.

While Pyongyang's atomic arms desires can be traced back to the early 1960s, the DPRK nuclear controversy only began in the early 1990s when in May 1992, the IAEA suspected that the North Koreans were trying to process weapons grade plutonium from their nuclear reactor in Yongbyon district.[309] Thereafter, the IAEA became even more wary of DPRK proliferation when the former was prevented from inspecting two North Korean nuclear waste sites in December 1992.[310] Subsequently, in October 1993, Pyongyang informed Washington that the former would only submit to full IAEA inspections in return for the abolishment of U.S.-ROK military exercises, the lifting of economic sanctions and further U.S.-DPRK negotiations to address broader issues[311]. However, later disputes between the IAEA and DPRK involving the latter's uncooperativeness lead to the U.S. reinstatement of military exercises and cancellation of U.S.-DPRK negotiations, leading to the North Koreans unloading 8000 spent fuel rods from the Yongbyon nuclear reactor on 12 May 1994, which could be reprocessed to yield plutonium for nuclear warheads[312].

[308] Lee Jae Bong, *U.S. Deployment of Nuclear Weapons in 1950s South Korea & North Korea's Nuclear Development: Toward Denuclearization of the Korean Peninsula*, The Asia-Pacific Journal, 17 February 2009, at http://www.japanfocus.org/-Lee-Jae_Bong/3053.
[309] Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 269 – 270.
[310] *North Korean Nuclear Weapons Program,* at http://www.fas.org/nuke/guide/dprk/nuke/index.html.
[311] Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 293.
[312] Selig S. Harrison, *Korean Endgame: A Strategy for Reunification and U.S. Disengagement*, Princeton University Press, 2002, pp. 213.

This crisis was later resolved by the 21 Oct 1994 Agreed Framework between the U.S. and DPRK where nuclear proliferation resistant Light Water Reactors (LWRs) for generating electricity, conventional fuel oil for electricity provision, improvement in U.S.-DPRK economic and diplomatic ties, and U.S. formal assurances against the threat and use of nuclear weapons would be provided to North Korea in return for Pyongyang freezing its nuclear programme, complying with all IAEA requirements, and complete dismantlement of all North Korean nuclear facilities upon completion of LWR construction.[313]

8 years would pass before the North Korean nuclear programme would once again become a U.S. foreign policy priority when on 3 October 2002, a U.S. representative informed Pyongyang that the former knew about the latter's circumvention of the Agreed Framework[314] via a clandestine Highly Enriched Uranium (HEU) nuclear weapons programme. Despite North Korean denials, on 4 October, Pyongyang declared that North Korea was justified in pursuing HEU capabilities and was withdrawing from the Agreed Framework. Subsequently, KEDO[315] suspended oil shipments to North Korea, and Pyongyang's December 2002 response was to expel all IAEA personnel and equipment. In addition, it withdrew from the NPT, started reprocessing its 8000 unloaded fuel rods and declared itself a nuclear weapons state[316].

[313] Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 357.
[314] The 1994 Agreed Framework only referred to and froze Pyongyang's plutonium based nuclear programme.
[315] KEDO, the Korean Peninsula Energy Development Organisation, was founded by the U.S., ROK and Japan to implement the 1994 Agreed Framework and build the two LWRs for North Korea. KEDO was disbanded in 2006 without completing the LWRs.
[316] The Agreed Framework collapsing from Pyongyang's HEU programme and the heightening of nuclear tensions is paraphrased from Victor D. Cha and David C. Kang, *Nuclear North Korea: A Debate on Engagement Strategies*, Columbia University Press, 2003, pp. 131 – 133.

Eventually, Pyongyang attended the first three of six rounds of the Six Party Talks[317] negotiating North Korean nuclear disarmament but it was during the fourth round in September 2005, where Pyongyang signed a Joint Statement of Principles committing it to surrendering its nuclear arms programme and returning to the NPT in return for energy assistance, the possibility of normalised relations with the U.S. and Japan, negotiations for a peace treaty ending the Korean War, and future discussions on LWR provision[318]. But despite apparent progress, obstacles were soon encountered in the form of DPRK insistence on being given LWRs before its nuclear weapons programme was decommissioned, and U.S. restrictions placed on Macanese Bank, Banco Delta Asia which froze US$25 million in DPRK funds due to money laundering allegations[319]. Consequently, then DPRK supreme leader Kim Jong Il announced his intention to test a nuclear device[320], which was detonated on 9 October 2006[321].

However, Pyongyang was persuaded to return to the negotiating table and on 13 February 2007, it accepted 50,000 tons of fuel and U.S. moves towards normalised relations in exchange for the disablement of its Yongbyon reactor and the re-admission of IAEA inspectors[322]. Soon after, unprecedented nuclear disarmament progress ensued with the shutting down of the Yongbyon nuclear

[317] The Six-Party-Talks involved the main stakeholders in the North Korean nuclear crisis, namely the PRC, Russia, the DPRK, Japan, the ROK and the U.S..
[318] *Joint Statement of the Fourth Round of the Six Party Talks*, Ministry of Foreign Affairs of the People's Republic of China, 19 September 2005, at http://www.nukestrat.com/korea/JointStatement091905.pdf.
[319] Jayshree Bajoria and Carin Zissis, *The Six Party Talks on North Korea's Nuclear Program*, Council on Foreign Relations, 1 July 2009, at http://www.cfr.org/publication/13593/.
[320] *N Korea "to conduct nuclear test"*, BBC News, 3 October 2006, at http://news.bbc.co.uk/2/hi/asia-pacific/5402018.stm.
[321] Jeff Bliss, *North Korea Nuclear Test Confirmed by U.S. Intelligence Agency*, Bloomberg.com, 16 October 2006, at http://www.bloomberg.com/apps/news?pid=20601101&sid=aO7kW.RjqqaE&refer=japan.
[322] *N Korea Agrees Disarmament Steps*, BBC News, 13 February 2007, at http://news.bbc.co.uk/2/hi/asia-pacific/6356481.stm.

reactor on 15 July 2007 after 6200 tons of ROK fuel aid was received[323], and a 7500 ton fuel shipment was sent after the IAEA confirmed the shutdown on 16 July[324]. Encouragingly, reciprocal concessions carried on into 2008 with Pyongyang surrendering 18,000 papers concerning its nuclear programme to the U.S. state department on 10 May 2008[325], the submission of a 60 page declaration about DPRK nuclear capabilities to the chairman of the Six Party Talks on 26 June, and the destruction of a cooling tower at the Yongbyon nuclear reactor in the same month[326]. In response, the U.S. *quid pro quo* was the removal of North Korea from the former's State Sponsors of Terrorism list on 11 October[327].

Yet, despite progress made, Pyongyang inexplicably decided to launch a satellite bearing rocket on 5 April 2009[328]. Suspecting a disguised ICBM test, the UNSC passed a statement condemning the launch and demanding that Pyongyang cease further testing[329]. This started a vicious cycle where Pyongyang withdrew from the Six Party Talks, disavowed obligations from previous agreements, expelled IAEA inspectors, and announced the resumption

[323] Edward Cody, *N. Korea Shutters Nuclear Facility*, Washington Post Foreign Service, 15 July 2007, at http://www.washingtonpost.com/wp-dyn/content/article/2007/07/14/AR2007071400293.html.
[324] *UN Confirms N.Korea Nuclear Halt*, BBC News, 16 July 2007, at http://news.bbc.co.uk/2/hi/asia-pacific/6900184.stm.
[325] *U.S. Diplomat Returns from North Korea with Boxes of Nuclear Records*, Associated Press, 10 May 2008, at http://www.foxnews.com/story/0,2933,354850,00.html.
[326] Norimitsu Onishi and Edward Wong, *U.S. to Remove North Korea from Terror List*, New York Times, 26 June 2008, at http://www.nytimes.com/2008/06/26/world/asia/26iht-nuclear.3.14018130.html.
[327] Paul Richter, *U.S. drops North Korea from Terrorism List after New Deal*, Los Angeles Times, 12 October 2008, at http://articles.latimes.com/2008/oct/12/world/fg-norkor12.
[328] *North Korea Space Launch "Fails"*, BBC News, 5 April 2009, at http://news.bbc.co.uk/2/hi/asia-pacific/7984254.stm.
[329] *U.N. condemns North Korean rocket launch*, CNN International, 13 April 2009, at http://edition.cnn.com/2009/WORLD/asiapcf/04/13/north.korea.un/index.html.

of its nuclear weapons programme[330], which was confirmed with a second nuclear test on 25 May 2009[331].

But in spite of these setbacks, Pyongyang and Washington agreed to a breakthrough whereby North Korea would suspend its nuclear tests and uranium enrichment programme in return for U.S. food aid in December 2011.[332] However, another long range rocket was launched on 13 April 2012[333], causing the U.S. to withdraw its aid offer. Sadly, the latest North Korea leader, Kim Jong Un ordered a third nuclear test on 12 February 2013[334] and there has since been no nuclear disarmament progress. A timeline of Pyongyang's nuclear weapons programme is shown in Diagram 8 below.

Diagram 8: Timeline of Events for North Korean Nuclear Arms Programme

May 1992	IAEA suspects North Korean plutonium separation
December 1992	IAEA stopped from inspecting DPRK nuclear waste sites
October 1993	Pyongyang bargains for military, economic and negotiative concessions from Washington in return for IAEA inspections
May 1994	President Kim Il Sung orders the unloading of Yongbyon fuel rods suitable for plutonium harvesting
October 1994	Agreed Framework signed with U.S. providing DPRK with infrastructural, economic, diplomatic and security benefits in exchange for abandonment of nuclear proliferation
October 2002	North Korean HEU weapons programme detected, DPRK withdraws from Agreed Framework

[330] Mark Landler, North *Korea Says It Will Halt Talks and Restart Its Nuclear Program*, New York Times, 14 April 2009, at http://www.nytimes.com/2009/04/15/world/asia/15korea.html.
[331] *North Korea conducts Nuclear Tests*, BBC News, 25 May 2009, at http://news.bbc.co.uk/2/hi/asia-pacific/8066615.stm.
[332] *N. Korea, US Agree on Nuclear Halt*, Agence Presse France, 29 Feb 2012, at http://www.spacewar.com/reports/N_Korea_US_agree_on_nuclear_halt_999.html.
[333] Evan Ramstad and Laura Meckler, *North Korean Launch Fails*, The Wall Street Journal, 13 April 2012, at http://online.wsj.com/article/SB10001424052702304444604577340343672810680.html?mod=googlenews_wsj.
[334] Austin Ramzy, *North Korea Confirms "Successful" Nuclear Test*, Time World, 12 February 2013, at http://world.time.com/2013/02/12/north-korea-confirms-successful-nuclear-test/?xid=rss-topstories.

December 2002	DPRK ceases all cooperation with IAEA, withdraws from NPT and declares nuclear weapons owning status
September 2005	Pyongyang signs Joint Statements of Principles pledging nuclear disarmament for energy aid, diplomatic normalisation, a Korean War peace treaty and future possible LWR provision
October 2006	Disagreements between DPRK and other six party talks members along with U.S. freezing of North Korean funds lead to first DPRK nuclear test
February 2007	During Six Party Talks, North Korea agrees to disable Yongbyon reactor and re-admit IAEA inspectors in exchange for fuel aid and progress on normalisation of U.S.-DPRK relations
July 2007 – October 2008	Reciprocal exchange of fuel aid to North Korea and delisting of DPRK as a terrorism sponsor in return for shutdown of Yongbyon reactor, demolition of reactor cooling tower, and unprecedented transparency about North Korean nuclear weapons programme.
April 2009	DPRK tests suspected ICBM earning harsh rebuke from UNSC, leading to discontinuation of Pyongyang's nuclear disarmament cooperation
May 2009	North Korea tests second nuclear device
December 2011	Pyongyang agrees to suspend nuclear tests and uranium enrichment in return for U.S. food aid
April 2012	DPRK launches another long range rocket suspected to be an ICBM test, U.S. suspends aid
February 2013	Third North Korean nuclear test

6.3 Realism and the North Korean Nuclear Weapons Programme

As earlier mentioned, Pyongyang's pro-nuclear proliferation and counter proliferation policy motivations exist concurrently. Indeed, both appear to be opposing sides of Pyongyang's nuclear negotiating strategy where counter proliferation is agreed to when appropriate incentives are offered, and nuclear arms development is pursued when inducements are lacking. Examining Pyongyang's realist nuclear arms development motivation, we see that

Pyongyang decided to initiate a nuclear weapons program in the early 1960s, when help was sought from socialist bloc nuclear powers, and local nuclear weapons development efforts started with the construction of a nuclear reactor for producing plutonium in 1979.

With history as a guide, the DPRK's perceived need for nuclear arms as a defensive realist existential guarantee can be traced to the Korean War when then-leader Kim Il Sung realized that Washington considered employing atomic bombs and had dummy nuclear weapons dropped on Pyongyang in 1951.[335] Thereafter, hundreds of U.S. nuclear weapons based in the ROK from 1958 until 1991 to counter North Korea made Kim uneasy despite Communist-bloc protection. Indeed, the U.S. nuclear threat can be substantiated by U.S. Secretary of Defense James Schlesinger's statement in 1975, "We have deployed nuclear weapons in Europe and Korea along with our forces, and that those nuclear weapons are available as options for the President," and his statement on U.S. nuclear readiness, "If circumstances were to require the use of tactical nuclear weapons [. . .] I do not think it would be wise to test American reactions."[336] Even as the Cold War ended in 1991, succeeding leader Kim Jong Il might have worried about the U.S. nuclear threat, with such worries being validated by the early 2002 Nuclear Posture Review of the Bush administration, which included contingency plans for employing nuclear

[335] Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East* (Princeton, NJ: Princeton University Press, 2007), pp. 119; and Conrad C. Crane, *To Avert Impending Disaster: American Military Plans to Use Atomic Weapons during the Korean War*, Journal of Strategic Studies, Vol. 23, No. 2, June 2000, pp. 72–88, pp. 79–80.

[336] Selig S. Harrison, *Korean Endgame: A Strategy for Reunification and U.S. Disengagement*, (Princeton, NJ: Princeton University Press, 2002), pp. 199; and Don Oberdorfer, *The Two Koreas: A Contemporary History*, (Reading, MA: Basic Books, 2001), pp. 257.

weapons against the DPRK.[337] Kim, in turn, apparently exercised risk adversity by developing a nuclear deterrent. As such, the U.S. nuclear threat motivated the elder Kim to initiate development of nuclear weapons capabilities leading to the 1994 crisis, while the younger Kim made contingencies for any future perceived belligerence from Washington by side stepping the Agreed Framework with a HEU nuclear arms programme discovered in late 2002. Both cases can be reasoned as being motivated by a defensive realist desire to maintain a "balance of threat".

Next, to address the North Korean classical realist inability to internally maintain a balance of power vis-à-vis its ROK and U.S. adversaries, it should be noted that despite devoting much resources to building conventional military capabilities, Pyongyang realized that the DPRK's position in the balance of power was eroding as the ROK economy grew spectacularly from the 1970s to 1990s, facilitating defence modernisation while the U.S. brought its military preponderance to aid the ROK. Though the North Korean economy was burdened by extensive military spending (15 – 20% of the DPRK's economy Vs 5% of the ROK's economy)[338], the DPRK was facing eventual military obsolescence. Indeed, the air, land, and sea branches of the Korean People's Army (KPA) were reduced to relying on quantitative advantages for national security assurance. For instance, the KPA Air Force had an inventory of 1,620 aircraft in 1992, but most of its fighter-bomber fleet consisted of outdated 1950s and 1960s technology.[339] Weakening conventional capabilities would have

[337] Anthony DiFilippo, *North Korea's Denuclearization and a Peace Treaty*, North Korean Review, Vol. 7, No. 1, Spring 2011, pp. 7–20, pp. 12.
[338] Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 98.
[339] "Korean People's Army Air Force," *Global Security*, at http://www.globalsecurity.org/military/world/dprk/airforce.htm.

shaken confidence in national preservation ability, leading to nuclear arms adoption as an existential deterrence equalizer.[340]

6.3.1 Interdependence and Pyongyang's march towards atomic warheads

The declining ability to stand up to U.S.-ROK technological superiority can be mitigated by having interdependent security relationship partners, who are obligated to lend North Korea their military might, thereby restoring the balance of power and rendering less relevant, Pyongyang's declining wherewithal to domestically sustain classical realist military parity. However, since nuclear weapons are involved, this is not entirely true. Specifically, Soviet and subsequently, Chinese nuclear umbrellas would have been cold comfort, as they depend on extended deterrence, and both Kim Il Sung and Kim Jong Il had no guarantee that either the Soviets or Chinese would be willing to sacrifice Moscow or Beijing to avenge Pyongyang's destruction.[341] Father and son in turn, exercised risk adversity by initiating an atomic weapons programme before 1994 and declaring nuclear weapons state status in December 2002 respectively.

Returning to the conventional balance of power and North Korea being on the losing end, Pyongyang suffered a strategic setback with the effective end of the Cold War in 1990 as it was abandoned by Moscow, and Beijing began to materially distance itself from the DPRK, depriving Pyongyang of reliable interdependent allies. Basically, North Korea received substantial military aid

[340] They are efficient because a single nuclear warhead is sufficiently destructive to exert a far higher deterrence effect on an adversary than conventional weapons that could be bought for the cost price of the warhead.

[341] In a nuclear Korean War with extended Soviet and Chinese deterrence offered to North Korea, any nuclear attack on Pyongyang would have been countered by Soviet and/or Chinese strikes on major U.S. cities. The result would be American escalation, with nuclear attacks on Moscow and Beijing. Knowing this, either the USSR and/or PRC would decide *not* to destroy American cities upon the nuclear destruction of Pyongyang, voiding the extended deterrence guarantee.

from both the Soviets and Chinese. However, this was curtailed in the early 1990s, when the USSR established relations with the ROK in 1990 and collapsed in 1991. Consequently, Russia ceased to supply concession-priced essentials, such as petroleum and defence matériel. Thereafter, the DPRK had to pay market prices in hard currency, and Russian imports plunged.[342] Moreover, China did not substitute the shortfall in Soviet energy imports, and the DPRK had to curtail petroleum consumption, limiting military training and lessening war readiness.[343] As ally abandonment handicapped North Korea, President Kim accelerated nuclear weapons development as a security equaliser.

After Kim died in 1994, Pyongyang's anxiety about the lack of allied support can be seen in the probable reasons for the North Korean repudiation of the Agreed Framework in 2002. Simply put, it was not in the DPRK's interest to remain within the framework because, 1) the U.S. did not formally assure Pyongyang against nuclear weapons use, 2) did not implement full normalisation of political and economic relations as there was no movement towards a peace treaty and no exchange of liaison offices, and 3) the DPRK was still listed as a sponsor of terror.[344] From Pyongyang's viewpoint, the U.S. was still as much a threat as when the Agreed Framework was signed in 1994, leading to the conclusion that the denuclearisation deal with Washington had done nothing to ameliorate Pyongyang's vulnerability over the lack of interdependent security relationships.

[342] Selig S. Harrison, *Korean Endgame: A Strategy for Reunification and U.S. Disengagement*, Princeton University Press, 2002, pp. 311 and 335.
[343] Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 233.
[344] Discontent with Agreed Framework paraphrased from Victor D. Cha and David C. Kang, *Nuclear North Korea: A Debate on Engagement Strategies*, Columbia University Press, 2003, pp. 137.

Essentially, the perception of strong and aggressive adversaries, the unreliability and subsequent absence of major allies, a widening defence power gap because of adversary technological advancement, and the lack of military modernisation resources were factors driving the DPRK nuclear weapons program. The balance of power did not favour North Korea and its resultant insecurity promoted nuclear arsenal development. To emphasise the precariousness of the DPRK's perceived security *sans* nuclear weapons, it should be noted that North Korean chances of prevailing in a conventional war with South Korea, where both China and the U.S. decline to intervene, are poor. As mentioned by Professor Andrei Lankov, a seasoned scholar of DPRK affairs, "With its impressive technological superiority, the South Korean military could probably sink half the North Korean navy or wipe out a number of their artillery positions within a few hours."[345]

6.3.2 Norms favouring nuclear armaments and supportive North Korean leadership

Being a dictatorship, the head of the Kim family occupies the penultimate position of authority in North Korea, making his opinion and mindset important for state policy.

Referencing the personalities of Kim Il Sung, who initiated the DPRK nuclear programme, his son Kim Jong Il, under whom two nuclear tests were conducted in 2006 and 2009 and Kim Jong Il's son, Kim Jong Un, who ordered the third nuclear test in 2013, it can be deduced that the Kim regime are no strangers to conflict or the employment of force. For example, Kim Il Sung was

[345] Andrei Lankov, *The Real North Korea – Life and Politics in the Failed Stalinist Utopia*, Oxford University Press, 2013, pp. 205.

once a World War Two guerrilla leader[346] and was trained by the Red Army before becoming the Soviet installed leader of the DPRK[347]. The guerrilla origins of DPRK leadership along with the conflictual nature of Kim Il Sung's training may be seen as the default basis for his aggressive stance vis-à-vis North Korean state adversaries, where he was willing to engage in nuclear brinkmanship with the U.S. in 1994. As for Kim Jong Il, he may have been inured to conflict due to being groomed by his father as the latter's successor. In 1982, President Kim placed Kim Jong Il in charge of covert foreign operations[348] and in 1983 and 1987, he ordered bombings in Burma and of Korean Air Lines flight 858 that killed South Korean cabinet ministers and 115 people respectively. Lastly, based on Kim Jong Un's actions, it would be fair to say that he possesses the same aggressive approach as his father. Since assuming North Korean leadership on 17 December 2011, his government has threatened the U.S. with a pre-emptive nuclear attack on 7 March 2013[349], and even had the second most powerful man in Pyongyang, his uncle Jang Sung Taek executed for allegedly plotting against him.[350]

Hence, the Kims are well versed in realist power politics while seeing coercive domestic and foreign policy as a practical norm. Thus, U.S. and allied coercion other than the deployment of overwhelming military force would be

[346] Lankov, Andrei, *From Stalin to Kim Il Sung: The Formation of North Korea 1945–1960*, Rutgers University Press, 2002, pp. 53.
[347] Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 17.
[348] Ibid, pp. 142.
[349] F. Brinley Bruton and Ian Johnston, *UN passes sanctions despite North Korea threat of "pre-emptive nuclear attack"*, NBC News, 7 March 2013, at http://worldnews.nbcnews.com/_news/2013/03/07/17220065-un-passes-sanctions-despite-north-korea-threat-of-pre-emptive-nuclear-attack.
[350] *Crying Uncle*, The Economist, 14 December 2013, at http://www.economist.com/news/asia/21591581-kim-jong-un-has-managed-improbable-feat-making-north-korea-even-scarier-crying-uncle.

counterproductive, leading instead to the Kim regime clinging more tightly to its nuclear munitions programme.

With the above in mind, Pyongyang's realist leadership mentality can be seen in some revisited terms of the 1994 Agreed Framework, when Pyongyang agreed to freeze its nuclear program in return for nascent diplomatic relations and efforts toward normalized relations plus American assurances against the threat of nuclear weapons.[351] Fundamentally, Pyongyang wanted to discount the U.S. as an enemy, thus equalizing the military balance of power on the Korean peninsula via threat reduction rather than balancing. However, as no significant improvement in U.S.-DPRK relations have taken place, and as Pyongyang is unable to reassure itself against the perceived U.S. threat, a pro-realist norm supported by a nuclear deterrence mindset remains entrenched in the leadership, as seen in the following tirade in the *Workers' Daily* (*Rodong Sinmun*) against annual U.S.-ROK military exercises:

> A series of nuclear test war exercises including "Team Spirit," "Key Resolve," "Foal Eagle" and "Ulji Freedom Guardian" all aimed to deliver nuclear strike on our Republic. For this to be done, the U.S. must feel an urge to get its troops versed in surprise attacks.
>
> [. . .]
>
> *The reality compels us to augment war deterrence and shows that we made a correct determination to comprehensively re-examine the nuclear issue.*[352] (Italics added by dissertation author for emphasis)

[351] Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 357.
[352] Hyon Do Ri, *War Deterrent Will Grow Further,* Rodong Sinmun [Workers' Daily], 29 August 2012, at http://www.rodong.rep.kp/InterEn/index.php?strPageID=SF01_02_01&newsID=2012-08-29-0011.

It is worth noting that though U.S.-ROK military exercises are billed as defensive, they include offensive manoeuvres like paratrooper drops and amphibious troop landings which alarm Pyongyang.

Accordingly, the leadership subscribed to pro-nuclear norms legitimising the ultimate weapon as a defensive realist necessity against a nuclear superpower (the U.S.) and its Korean lieutenant (the ROK). As earlier written in chapters 3 and 4, this type of normative realist justification for nuclear arms also follows the same rationale used for South Africa and Ukraine.

6.3.3 Realist justification for the 2009 and 2013 nuclear tests

Despite nuclear disarmament progress from 2007 to 2008, Pyongyang inextricably decided to launch an ICBM-like rocket in April 2009 and after this was internationally condemned, acted with indignation by conducting its second nuclear test in May. While some analysts would class Kim Jong Il as insane for breaking the momentum of mutually beneficial reciprocative disarmament, these events can best be explained in terms of realist domestic politics and foreign policy.

The event that supposedly precipitated the suspected ICBM test was the severe stroke in the summer of 2008 of Kim Jong Il. As he was the apex North Korean leader, his incapacitation caused a secession planning panic as his successor, his son Kim Jong Un, lacked leadership credentials. Arguably, the missile and subsequent nuclear test was conducted to rally national spirit and pride around Pyongyang, through demonstrations of technological success, which would have provided a stable moral platform for Jong Un to assume

leadership[353]. Additionally, the reintroduction of the US and UN as enemies allowed Kim and his advisors to re-focus his peoples' attention away from their economic hardships towards an external threat, providing a leadership objective for Jong Un. Using realism as an interpretive lens, the display of rocket science and nuclear fission were intended to bolster domestic perceptions of North Korea's national and military power, assuring the DPRK's security and continued survival, and strongly hinting that North Korea will progress under Kim Jong Un. As for international objections to the purported ICBM and nuclear tests, the conflictual and adversarial assumptions of realism would allow Pyongyang's propagandists to capitalise on any siege mentality held by North Koreans to rally the latter against perceived foreign oppression despite dismal economic conditions. These attempts to inspire aspirational feelings of national power and "us versus them" mindsets are fostered by the nationalist *Juche* ideology which will subsequently be covered.

Subsequently, another long range rocket was launched on April 2012 and a third nuclear device detonated on February 2013. As with the suspected 2009 missile test and second nuclear detonation, this can also be interpreted as a technological exhibition buttressing realist domestic perceptions of state power assuring national security while shoring up Kim Jong Un's claim to leadership legitimacy since his father passed away on 17 December 2011.[354]

Deductive evidence that the interrelated North Korean rocket and nuclear tests have domestic realist causational factors, can be seen from a recent

[353] Evans J. R. Revere, *The North Korea Nuclear Problem: Sailing into Uncharted Waters*, American Foreign Policy Interests, Vol. 32, 2010, pp. 183 – 190, pp. 186 – 187.
[354] *North Korean leader Kim Jong Il dies 'of heart attack'*, BBC News Asia, 19 December 2011, at http://www.bbc.co.uk/news/world-asia-16239693.

interview with Ambassador Robert Gallucci,[355] the chief U.S. negotiator with North Korea during the 1994 Korean nuclear crisis who opined that Pyongyang decides on its rocket and nuclear tests based on a cost/benefit analysis and that:

> "They [Pyongyang] may well perceive positive payoffs with these tests, that they [the tests] always enhance the North Korean domestic position, as the tests make the North Koreans look strong as they disregard the approbation of the international community."

With reference to the April 2012 launch of a North Korean long range rocket, which scuttled the December 2011 deal with the U.S. for substantial food aid in return for nuclear test and uranium enrichment suspension, Gallucci mentioned that:

> "That was a case with an enormous domestic motivation because they [the North Koreans] must have known that they were going to pay for this [the rocket launch] with the loss of nuclear programme compensation negotiations with the U.S.".

6.4 Liberalism's Role in North Korean Nuclear Proliferation

From the previous section, it was substantiated that realism ably explains enduring North Korean insecurity and vulnerability leading to nuclear proliferation. But even though national security is paramount for Pyongyang, realist power and state survival ultimately rest on a functional economy and presently, the liberally interdependent realities of international trade, investment and technology transfers are indispensable for economic sustainability. Despite autarkic rhetoric championed by *Juche*, Pyongyang realises that improving the

[355] The subsequent quotes are taken from an interview that the author conducted with former Assistant Secretary of State for Political-Military Affairs, Ambassador Robert L. Gallucci on 1 October 2014.

economy and boosting mutually beneficial international trade and investment are at least as important as military progress. However, as nuclear pariahs are excluded from international economic integration, and the rewards from international economic interdependence due to global non-proliferation norms, this has led to North Korea either clinging more tightly onto its nuclear arms programme as a state power symbol, or demanding economic benefits as a disarmament pre-condition.

Even as the DPRK engages in illicit narcotics, counterfeiting of U.S. dollars and cigarettes, and arms sales, North Korea incurred a cumulative current account deficit of US$4.5 billion from 1990 to 2005.[356] Even if overseas remittances are included, the outflowing funds spent on imports substantially exceed the amount earned through exports. Consequently, the economy was losing cash for at least fifteen years, and according to macroeconomic theory, the current account shortfall had to be paid via the capital account by using foreign currency reserves (which impoverished North Korea lacks); by being offset against incoming foreign investment (which North Korea is unattractive to); or by liquidating capital assets (which would retard efforts to manufacture exports for foreign currency and stem future current account deficits).[357] In any case, the DPRK economic crisis impacted its nuclear weapons policy, and this is substantiated when nuclear arms developments are compared with the North

[356] The current account is the sum of the balance of trade (total value of exports minus imports), net factor income (the flow of investment interest and dividends into and out of the economy) and net transfer payments, such as remittance income. Stephan Haggard and Marcus Noland, "The Political Economy of North Korea's External Economic Relations," *Engagement with North Korea: A Viable Alternative*, eds. Sung Chull Kim and David C. Kang (Albany, NY: State University of New York Press, 2009), pp. 119–144, pp. 134.

[357] The capital account absorbs surpluses from the current account or is used to pay for deficits of the latter and consists of the financial account (foreign currency denominated liquid assets and gold reserves) and domestic currency denominated physical/capital, as well as liquid and semi-liquid financial assets.

Korean economy. From a counter liberalist perspective, the effects of weakened trade relations, export curtailment due to competition, sanctions enforcement and law enforcement, plus poor relations with Japan impacting remittance income will be examined below.

6.4.1 The inability to reap economic liberal interdependence welfare and the DPRK's nuclear weapons

Current Account Health

The dissolution of the USSR resulted in the collapse of North Korea's international trade. As trade data reveals, DPRK commercial imports and exports nosedived from 1990 to 1994 and continued to sink until 1998 – 1999, when trade was at less than 40% of 1990 levels. Indeed, DPRK foreign trade sank from US$4.9 billion in 1988 to only US$2 billion in 2000.[358] While trade later recovered, imports overshadowed exports, widening to a large trade gap from 2000 to 2002 and persisting to 2005, when the trade deficit was about –US$900 million.[359] This indicates that, while North Korea needed to import market priced essentials, its exports were not saleable or that it was shunned by potential trading partners.

As for the lucrative arms trade, it faltered from 1990 to 1995 as the Soviet collapse eliminated weapons technology transfers to Pyongyang, bringing about the qualitative stagnation of DPRK military goods, while ex-Soviet republics began competing for the DPRK's arms customers.[360] Next, the enriched uranium nuclear crisis in 2002 invoked the Proliferation Security Initiative (PSI),

[358] Sang T. Choe, Hyun Jeong Cho, and Sang Jang Kwon, *North Korea's Foreign Trade: An Indicator of Political Dynamics*, North Korean Review, Vol. 2, No. 1, Spring 2006, pp. 27–37, pp. 27.
[359] Stephan Haggard and Marcus Noland, "The Political Economy of North Korea's External Economic Relations," *Engagement with North Korea: A Viable Alternative*, eds. Sung Chull Kim and David C. Kang (Albany, NY: State University of New York Press, 2009), pp. 119–144, pp. 121.
[360] Ibid, pp. 123.

designed to stop the trafficking of weapons of mass destruction (WMD), their delivery systems, and associated components.[361] This led to the curtailment of DPRK missile shipments and related reduction in air-shipped arms sales, as U.S. diplomatic efforts led to DPRK air-flown weapons shipments being denied over-flight rights. Additionally, the 2006 nuclear test led to UNSC Resolution 1718 on October 2006, banning all trade with North Korea in armored vehicles, missiles, and heavy weapons, further dampening arms trade.[362] Thus, North Korea was denied global economic participation for exports that it was still competitive in.

Regarding currency counterfeiting and counterfeit cigarette proceeds along with narcotics production/exports, accurate figures for the former two are unavailable and have to be bypassed. Still, estimates of DPRK narcotics revenues range from US$100–200 million annually.[363] However, it is suspected that the narcotics trade was significantly undermined because of improved surveillance and anti-narcotics enforcement against North Korean smugglers from 1995 to 2000, resulting in fewer seizures of North Korean drugs since. Correspondingly, the DPRK was denied participation in the international contraband sector.

Lastly, with the collapse of many pro-DPRK Japanese remittance organizations, following the 1998 financial crisis, the volume of DPRK-bound remittances dropped substantially. By 2006, because Pyongyang failed to resolve the issue of Japanese abductees in the late 1970s to early 1980s,

[361] *Proliferation Security Initiative*, U.S. Department of State, at http://www.state.gov/t/isn/c10390.htm.
[362] *Security Council Imposes Sanctions on DPR Korea after its Claimed Nuclear Test*, UN News Centre, 14 October 2006, at http://www.un.org/apps/news/story.asp?NewsID=20261&Cr=DPRK&Cr1.
[363] David L. Asher, *The North Korean Criminal State, Its ties to Organised Crime and Possibility of WMD Proliferation*, Nautilus Institute for Security and Sustainability, 15 November 2005, at http://www.nautilus.org/napsnet/napsnet-policy-forum/the-north-korean-criminal-state-its-ties-to-organized-crime-and-the-possibility-of-wmd-proliferation.

remittances virtually ceased.[364] Notwithstanding remittance income from Russia- and China-based North Koreans, along with cash from the South Korean Hyundai Group for the right to operate the Mount Kumgang resort in North Korea, loss of Japanese remittance hurt the DPRK current account.[365]

In summary, when left unaided in the interdependent global economy, the DPRK had serious difficulties earning revenue. It should be re-emphasised that weakening North Korean exports were partially self-induced as worldwide counter nuclear proliferation opprobrium gave impetus to sanctions targeting Pyongyang's arms industry.

Capital Account Health

As current account deficits must be offset by foreign currency reserves and incoming foreign investments or by selling assets listed under the capital account, DPRK economic health can be confirmed by examining its capital account over time as shown in Table 6 on the next page. The table partially charts the North Korean capital account by collating foreign direct investment and South Korean investment over the years. Although data on DPRK foreign and gold reserves, as well as domestic currency denominated assets, are unknown, what is available indicates the economic difficulties encountered. From the table, one can see that investment and capital inflows into the DPRK economy range from dismal (-US$61 million) to barely adequate (US$364 million). As the projected current account balance, including North Korea's legitimate trade, arms sales, illicit exports and remittance transfers, ranges from –US$200 million to about –US$500 million through most of the 1990 to 2005

[364] Stephan Haggard and Marcus Noland, "The Political Economy of North Korea's External Economic Relations," *Engagement with North Korea: A Viable Alternative*, eds. Sung Chull Kim and David C. Kang (Albany, NY: State University of New York Press, 2009), pp. 119–144, pp. 126.
[365] Ibid, pp. 126–127.

period, it is inferable that the DPRK was surviving on finite foreign reserves, liquidation of domestic assets, and international aid.

Table 6: The North Korean Capital Account from 1990 – 2005[366]

Year	Foreign Direct Investment/US$ Mil	ROK Investment/US$ Mil	Total/US$ Mil
1990	-61	0	-61
1991	134	0	134
1992	2	0	2
1993	8	0	8
1994	-1	0	-1
1995	0	0	0
1996	2	0	2
1997	307	17.8	324.8
1998	31	43	74
1999	-15	61	46
2000	5	67	72
2001	7	50	57
2002	0	82	82
2003	158	45	203
2004	197	91	288
2005	113	251	364

Viewing the DPRK current and capital accounts alongside nuclear weapons policy reveals a trend. Concerning the 1994 nuclear crisis, when Pyongyang threatened to extract plutonium from reactor fuel rods, North Korean commercial trade was deteriorating since 1991, while arms sales started to falter. Since the DPRK current account (including arms, illicit goods, and remittances) varied from –US$500 million from 1990 to about –US$100 million in 1994, while the investment component of the capital account varied from –US$61 million to –US$1million over the same period, Pyongyang had difficulty paying import bills. Thus, economic hardship from the DPRK's inability to benefit from the liberally interdependent world economy was a factor in regime willingness to portray itself as a nuclear proliferation risk and conclude the 1994

[366] Stephan Haggard and Marcus Noland, "The Political Economy of North Korea's External Economic Relations," *Engagement with North Korea: A Viable Alternative*, eds. Sung Chull Kim and David C. Kang (Albany, NY: State University of New York Press, 2009), pp. 119–144, pp. 128, 130–131.

Agreed Framework. This can be seen in the latter's pertinent terms: (1) a U.S.-organized consortium would provide proliferation-resistant and efficient energy generating light water reactors (LWR) in exchange for the dismantlement of existing nuclear facilities; (2) the U.S. would help supply 500,000 tons of fuel annually to North Korea; and (3) both countries would reduce barriers to economic ties. Pyongyang would regard this deal as alleviating the current account deficit via the fuel provided, while the LWRs would have boosted power supply to vital export industries, and improved U.S.-DPRK economic links would have improved export prospects. In short, the Agreed Framework had major economic and asymmetric liberal market interdependence components.

Referencing the 2002 disclosure of the DPRK uranium weapons program and the 2006 nuclear test, both have economic justifications and liberal objectives. Analyzing North Korean commercial trade, one sees that while trade bottomed out from 1998 to 1999, imports outstripped exports, leading to a huge trade gap from 2000 to 2002 and an eventual –US$900 million 2005 trade deficit.[367] When weapons and narcotics exports are considered, the 2002 uranium crisis backfired on Pyongyang with the PSI disabling its revenue from ballistic missile and air-flown weapons sales, while UNSC Resolution 1718 from the 2006 nuclear test crippled heavy weapons exports. Also, narcotics trafficking failed to compensate for weakened arms revenue, as heightened pre-2000 prosecution of drug trafficking made the drug trade less profitable. Lastly, the 1998 financial crisis bankrupted many DPRK-supporting Japanese remittance firms, diminishing transfer income that could ease the current

[367] Ibid, pp. 121.

account balance, while Japanese dissatisfaction over sluggishness on the abduction issue led to a shut-off of Japanese funds by 2006.

When North Korean commercial, arms, and narcotics trade plus remittances are factored, a drastically worsening current account from 1997 to 2001 is seen, from imports and exports nearly balancing in 1997, to a slump of about –US$500 million in 2001.[368] Hence, the 2002 uranium weapon disclosure was likely designed to extract U.S. economic concessions to help pay bills, since the current-account offsetting investment component of the capital account in 2001 was only US$57 million. Similarly, plunging trade from 2004 to 2005, the crackdown on narcotics exports, and irreplaceable Japanese remittance losses produced a stubborn US$500 million current account deficit (unmatched by only US$364 million in capital injections), which likely contributed to the 2006 nuclear test. This strengthened Pyongyang's bargaining position to seek concessions from the U.S.-ROK alliance in 2007, during the fifth round of the Six-Party Talks, when Pyongyang accepted 50,000 tons of fuel, and initial steps towards normalized relations with the U.S. in exchange for disablement of the Yongbyon reactor, readmission of IAEA inspectors and disclosures about the former's nuclear programme.[369] Considering liberal economic motivations, the fuel aid would have provided energy sustainability to export industries, and normalized relations (including delisting of North Korea as a terrorism sponsor in 2007) would have improved DPRK standing with potential trading partners and global financial institutions, enabling enhanced exports and secured credit.

[368] Ibid, pp. 134.
[369] *N Korea Agrees Disarmament Steps*, BBC News, 13 February 2007, sourced from http://news.bbc.co.uk/2/hi/asia-pacific/6356481.stm.

Hence, Pyongyang used nuclear proliferation triggered disarmament bargaining to gain benefits comparable to participation in the liberally interdependent international economy.

6.4.2 Counter liberalist norms and leadership championing DPRK nuclear armament

While the previous sub-section highlighted Pyongyang's tendency to negotiate for economic aid or benefits, so as to improve survival prospects in the liberally interdependent world economy, the North Korean willingness to continue nuclear weapons development if economic inducements are insufficient or absent needs to be explained. For instance, despite the earlier mentioned deal agreed to in December 2011 where Pyongyang would suspend nuclear testing and uranium enrichment in return for food aid (thereby sustaining the DPRK work force), the Kim regime chose to antagonise the U.S. with the test of a suspected ICBM (which could potentially carry a nuclear warhead), thereby scuttling the deal. Within a year in February 2013, Pyongyang reasserted North Korea's nuclear armed status by detonating a third nuclear device despite the inability of the DPRK economy to feed its own population or recover from moribund stagnation.

To account for Pyongyang's nuclear intransigence, it would help to remember Etel Solingen's work where governments seek backing from various factions, and in some cases, the militarist and/or nationalist bloc vies with the pro-economic reform and globalist bloc for influence. Such a paradigm forces some governments to assemble compromise coalitions with each bloc jockeying to influence state agendas, creating a foreign policy oscillating between nuclear aggrandisement and compromise. Inasmuch as factions like the military,

preferring counter liberalist isolation from external economic and social influences to preserve their domestic power, are temporarily dominant, and as the Kim regime derives support from the Korean People's Army or KPA[370], the military will support nuclear arms development. Additionally, inasmuch as the DPRK economy is limited in scope and size, restructuring/reforms for easier cooperation with other liberally interdependent economies necessitates a smaller share of industrial production for military needs, which the KPA will do anything to avoid.

As proof that the KPA is influential and seeks to exert the primacy of the military-industrial complex over the civilian economy, thereby strengthening counter liberal interdependence norms, and indirectly bolstering nuclear proliferation, the following quote from one of the principal North Korean newspapers, the *Nodong Sinmun* should be mentioned:

> "Modern revisionists at one time melted even tanks and guns that required blood and sweat to manufacture and weakened defence capabilities while crying for a peaceful coexistence lacking principle. For one to jettison the principle of giving precedence to military affairs in the era of peaceful construction when no guns of war are fired is like digging one's own grave. This eventually is surrender to the imperialists and a betrayal to the revolution."[371]

Simply put, this strident comment emphasises that military production must remain paramount and that by implication, devoting resources to producing other goods for competing objectives like economic rehabilitation through

[370] The Korean People's Army actually refers to the combined land, air and sea military forces of the DPRK, specifically, the Korean People's Army Ground Force, Korean People's Air Force and Korean People's Navy.

[371] Editorial board special article, *Military First Politics is a Powerful Weapon in Our Era's Anti-imperialist Struggle*, Nodong Sinmun, 1 April 2002.

liberally interdependent international trade is anathema to state survival. Accordingly, we can also deduce that the pursuit of nuclear weapons, even if it courts punitive sanctions, is perfectly acceptable because it symbolises defiance against “imperialism” and precludes “surrender to the imperialists”.

Concerning other relevant parts of the same article, this quote helps to explain the “military first” mindset:

> “Our economic foundation is solid……The most acute sectors in the confrontation with imperialists are the political and foreign relations sectors. Political and military strength is behind the diplomatic war to safeguard the country’s sovereignty.”[372]

Hence, the military and its supporters dismiss the need for economic reform to cope with liberal economic realities while highlighting the conflictual nature of international relations. Despite nuclear arms not being mentioned, it should be noted that they are very useful for augmenting “political and military strength” in a “diplomatic war”.

6.5 Moral Constructivism and North Korean Nuclear Proliferation

It is clear that realism serves as a systematic framework for interpreting any perceived threats to North Korean statehood, advocating nuclear armaments development as a response, while liberalist economic survival needs explain Pyongyang’s use of nuclear proliferation crises to bargain for material benefits. However, the fact remains that the U.S.-ROK alliance has not invaded the DPRK since the signing of the Korea War armistice in 1953, and North Korea has been provided with fuel aid, along with an attempt to normalise U.S.-DPRK relations via the delisting of North Korea as a terrorism sponsor.

[372] Ibid.

These imply that North Korea is not in peril and that the road to nuclear disarmament is potentially paved with indirect liberal economic benefits. However, since Pyongyang continues to recalcitrantly develop nuclear weapons, moral constructivism can help account for pro-nuclear armaments norms held by many of the DPRK leadership elite.

To explain North Korean moral constructivist motivations driving its pro-nuclear norms, it would help to refresh Maria Rost Rublee's conceptualisation of norms where states either inherently subscribe to the norms in question, follow the aforementioned norms because it is in the national interest to do so, or practice these norms in order to emulate an admired nation. In the sub-sections below, it will be elaborated that Pyongyang was possibly influenced by the nuclear arms acquisition of its communist patrons, the USSR and PRC, and that the benefits of nuclear weapons ownership inspired Kim Il Sung and subsequently, Kim Jong Il to support constructivist beliefs legitimising nuclear armaments. Additionally, the compatibility of pro-nuclear norms with *Juche*, given an arguably hostile environment will be covered.

6.5.1 Interdependence and North Korean pro-proliferation norms

Being a junior partner in the international socialist fraternity, North Korea would not be in any position to influence any other communist state's nuclear proliferation. However, it might have been influenced by the nuclear weapons policies of its patron states, the USSR and PRC and consequently, could have been convinced to acquire a nuclear deterrence capability in light of the benefits that the communist behemoths derived from their arsenals.

Since both the Soviet Union and communist China appeared to acquire their nuclear arsenals as a natural progression of state advancement, without

any resistance from the international community, and with their arsenals regarded as legitimate, Kim Il Sung would have assumed that North Korea too, could acquire atomic warheads as a sovereign state entitlement.[373] As mentioned earlier, Pyongyang did request Soviet and Chinese help to build atomic weapons in 1963 and 1964 respectively. But even as these requests were denied, Kim did not give up and it can be deduced that in his and his advisor's minds, North Korea would have to indigenously develop its own atomic munitions just as the Soviets and Chinese did. This journey to the DPRK's first atomic detonation in 2006 was started with the construction of a nuclear reactor in 1979.

Inasmuch as North Korean moral constructivist nationalism extolls the DPRK's status as a power to be respected, pro-nuclear arms norms would have been compatible with such nationalism. Accordingly, it would not have escaped Kim Il Sung's and later Kim Jong Il's notice that nuclear weapons conferred a degree of deference upon their possessors. Beginning with the Cuban missile crisis in 1962 where the U.S. exercised much circumspection vis-à-vis the Cubans and Soviets due to Soviet nuclear tipped missiles on Cuban soil, to the American escalation in the Vietnam War from 1960 – 1972 where the U.S. military exercised restraint against North Vietnamese forces, out of deference to the Soviets and Chinese, in order not to aggravate the Cold War, Pyongyang would have admired the deterrent power of nuclear munitions. Even after the Cold War, the younger Kim must have noted that despite a weakening economy and lessened global clout, Russia still retained its permanent seat at the UNSC,

[373] In his negotiations with Pyongyang's representatives, Gallucci did perceive that the North Koreans regarded their nuclear ambitions as legitimate and "that as a sovereign state, they would decide what was necessary for their national security", implying that the Kim regime possessed a moral willingness to acquire a nuclear deterrent. This viewpoint is sourced from the author's interview with Ambassador Gallucci on 1 Oct 2014.

which is testament to the prestige that recognised nuclear weapons status brings.

Hence, additional moral constructivist arguments supporting pro-nuclear munitions norms are that their deterrence efficacy justifies their ownership by states perceiving acute insecurity, and that nuclear weapons confer enough prestige to warrant state legitimisation of nuclear armaments.

6.5.2 Structure and agency driving pro-nuclear norms in Pyongyang

Even as the influence of nuclear armed national models and the benefits of being a recognised member of the nuclear club are important for supporting pro-proliferation norms, the formation of such norms within the domestic policymaking leadership needs to be analysed. Towards this end, the interaction between North Korea's environment or structure and policy makers' perceptions or agency must be examined. Also, the interpretation of the DPRK's security environment using the state ideology of *Juche* will be explained.

Referencing the North Korean security environment, the reality that North Korea has not been attacked since the Korean War comes as cold comfort because its principal adversary, the U.S. does not have friendly intentions. Adding to the fact that the U.S. has not signed a non-aggression treaty with the DPRK, or even given the latter a written guarantee of "no first use" of nuclear weapons, North Korea is clearly framed as an adversary nation in popular American culture, and even by the White House as part of the "Axis of Evil", denoting declared U.S. enemies, by then President George W. Bush during his 2002 State of the Union Address.[374]

[374] George W. Bush, State of the Union Address, Miller Center, University of Virginia, 29 January 2002, at http://millercenter.org/president/speeches/detail/4540.

Additionally, the U.S.-ROK alliance stages extensive yearly military exercises which serve as reminders to Pyongyang that the former has military technological preponderance on the Korean peninsula, and that the technological gap between the former and latter is widening every year since transfers of military technology from the socialist block ceased with its collapse in 1991. From Pyongyang's perspective, its security establishment is subjected to annual anxiety as U.S. troops and military hardware surge into South Korea for joint exercises. For the Kim regime, the inability to trust the U.S-ROK alliance and the deployment of more men and materiel than normal makes the military exercises the perfect cover for an invasion. When this agency or perception of such a hostile structure is influenced by siege mentality paranoia (which Pyongyang arguably has), it makes excellent fodder for pro-nuclear arms norms sustained by the need for existential preservation assurance.

Turning to the North Korean nationalist ideology of *Juche*, it emphasises the Korean will to achieve greatness and the prime importance of Korea and the Korean people. *Juche* extolls North Korean mastery of their own destiny guided by the head of the Kim regime. It is in essence a DPRK centric and Confucianistic nationalism.[375] With *Juche* as a DPRK-centric philosophy preaching North Korean progressive destiny, several applications are seen. They are political independence, national self-defence and economic self-sustenance[376]. With emphasis on the first two objectives, nuclear weapons are well suited to support them as nuclear armed status induces adversaries to regard nuclear powers with a fair amount of caution, preventing the former from

[375] Juche elaboration paraphrased from Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 19 – 20.
[376] *Selig S. Harrison, Korean Endgame: A Strategy for Reunification and U.S. Disengagement*, Princeton University Press, 2002, pp. 333.

attempting to stymie the latter's vital national interests or using overt force. Hence, the pursuit of nuclear arms is justified by *Juche*, influences North Korean agency, and fuels a moral constructivist pro-proliferation norm legitimising atomic warheads. Also, factoring in the political-strategic structure, the abandonment by the USSR/Russia and the loss of support from the PRC, while North Korea's immediate adversary, South Korea received unwavering backing from the world's sole superpower, the U.S., implies greater salience for *Juche*. This is because Juche advocates the DPRK's moral superiority on the Korean peninsula, implying that Pyongyang will eventually triumph against the U.S.-ROK alliance, and since nuclear armaments provide the only hope for this, a pro-proliferation norm arises.

6.5.3 Leadership backing for North Korean constructivist pro-nuclear norms

Lastly, even as the "how" of moral constructivist nuclear proliferation norm formation and the "why" concerning factors supporting the growth of these norms, has been analysed, there remains the necessity of uncovering "what" was actually expressed as evidence that Pyongyang's leadership espoused pro-nuclear weapons norms.

In chronological order, Pyongyang first established nuclear weapons as an acceptable weapon of conflict resolution when a North Korean official threatened to engulf South Korea in a "sea of fire" during North-South talks about the DPRK nuclear weapons programme in 1994. Subsequently, the same threat was made against the South Korean Blue House (presidential residence) in November 2011.[377] The "sea of fire" rhetoric was interpreted as a nuclear strike because the issue of contention was the North Korean nuclear

[377] *"N. Korea Threatens South with 'Sea of Fire'"*, CBS News, 24 November 2011, sourced from http://www.cbsnews.com/8301-202_162-57330909/n-korea-threatens-south-with-sea-of-fire.

programme, and also because the vast amounts of energy released from nuclear detonations makes them capable of incinerating large areas.

Next, after the DPRK conducted its first nuclear test in October 2006, the Pyongyang controlled Korean Central News Agency (KCNA), announced that the detonation was executed at a "stirring time when all the people of the country are making a great leap forward in the building of a great prosperous powerful socialist nation."[378] This can be interpreted to mean that the Kim regime wanted to associate nuclear weapons progress with legitimate national advancement, thereby strengthening domestic pro-nuclear weapons norms.

Lastly, Pyongyang issued a statement on 31 March 2013 declaring that North Korea would never accept nuclear disarmament as its warheads are a "treasure" not to be traded for "billions of dollars". In addition, the statement mentioned that these weapons:

> "are neither a political bargaining chip nor a thing for economic dealings to be presented to the place of dialogue or be put on the table of negotiations aimed at forcing (Pyongyang) to disarm itself…..(North Korea's) nuclear armed forces represent the nation's life, which can never be abandoned as long as the imperialists and nuclear threats exist on earth."[379]

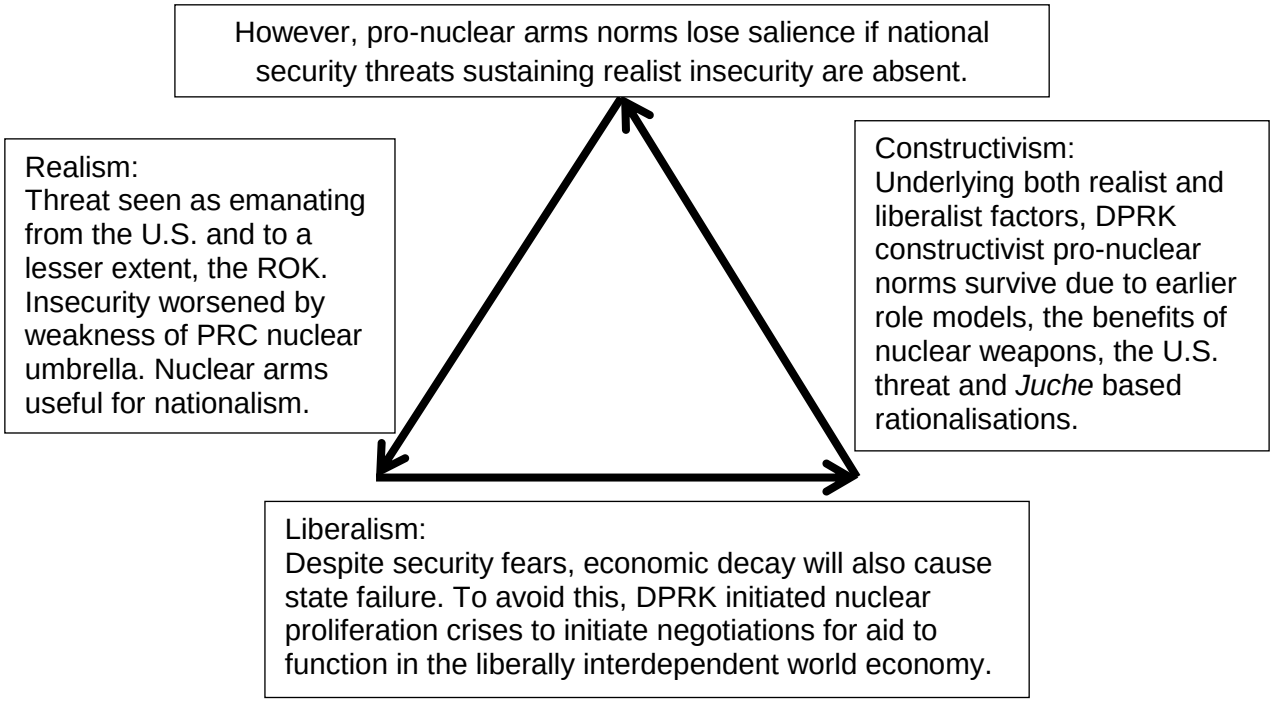
Parsing Pyongyang's communique, a likely interpretation of its message is that the Kim regime is alluding to its nuclear weapons as if they were a national relic or icon with all the associated legitimacy and value, thereby reinforcing pro-nuclear arms norms. As for the latter 3 lines of the quote

[378] *DPRK Successfully Conducts Underground Nuclear Test*, KCNA, 10 October 2006, at http://www.kcna.co.jp/index-e.htm.
[379] Foster Klug, *North Korea: Nuclear weapons are a 'treasure'*, Associated Press, 31 March 2013, USA Today, at http://www.usatoday.com/story/news/world/2013/03/31/north-korea-nukes/2039783/.

that referred to the DPRK's nuclear munitions as a defence against "imperialists", this expressed notion links back to defensive realism which contributes to the constructivist foundation of North Korean nuclear development mindsets. After all, if Washington was prepared to sign a peace treaty and normalise U.S.-DPRK relations, Pyongyang would find it challenging to maintain nuclear warhead entitlement norms since these depend on overwhelming existential threats.

6.6 How Realism, Liberalism and Constructivism are linked as North Korean Nuclear Arms Development Drivers

Diagram 9: Tripartite DPRK Nuclear Arms Motivations Analysis (1963–Present)



With reference to diagram 9, which holistically examines all the decisional drivers of Pyongyang's nuclear weapons programme, it can be seen that they flow into each other and connect in a cycle. Beginning with realism, Pyongyang perceives an acute threat from the U.S. as contingency plans to deploy nuclear weapons against North Korea were and are still in force. Moreover, the DPRK

was and is unable to keep up with the conventional balance of power versus its immediate rival the ROK, due to the latter's economic muscle powering its military modernisation. Also, if the PRC might be unwilling to make good on nuclear umbrella coverage for North Korea for reasons earlier given, the Kim regime decided that the only means to assure classical realist parity vis-à-vis the U.S.-ROK alliance was to develop a defensive realist nuclear deterrent.

Furthermore, nuclear weapons and their rocket delivery systems serve as a realist demonstration of power rallying North Koreans around the Kim regime, convincing the former about national power and emphasising the conflictual nature of international relations, when foreign "oppressors" censure the DPRK for its nuclear antics.

But despite realism's apparent parsimony, economics plays a significant role in the North Korean nuclear weapons programme, as a functional economy forms the foundation of any nation state, and in spite of realist insecurities, the lack of a functioning economy will doom any state, regardless of military threats. Specifically, the end of socialist economic largesse led to the decrepit state of the North Korean economy, where the DPRK was losing vast sums of money as the value of imports outstripped exports, and foreign investment/capital inflows and remittances were insufficient to pay for this deficit. This resulted in foreign reserve liquidation, the sale of North Korean capital assets and reliance on international aid.

Accordingly, Pyongyang instigated nuclear proliferation crises in 1994, 2002 and 2006 to strengthen its position for later disarmament bargaining. Essentially, the global economy was a liberally interdependent one, and in order to benefit from it and effect economic recovery, Pyongyang had to trade nuclear

disarmament steps for economic benefits to help North Korea cope with liberally interdependent economic realities. However, each nuclear incident also brings the DPRK further towards an operational nuclear weapons capability which garners conservative military support.

But even if Pyongyang's security based realist and economic liberal interdependence needs could be addressed, there still remains a need to account for the strong pro-nuclear arms sentiment in Pyongyang. This is where moral constructivism plays a role since much of Pyongyang's leadership, arguably see nuclear arms as legitimate and morally justifiable, considering their nation's threatened status.

As earlier highlighted, it is deduced that Pyongyang took a leaf from the development histories of the USSR and PRC, emulating them with a domestic nuclear weapons programme that it saw as a morally legitimate state right, and who's constructivist pro-nuclear norms would have been reinforced by the ability of nuclear arms to deter foreign adversaries as well as cultivate nationalistic prestige. Furthermore, considering U.S. reluctance to renounce pre-emptive nuclear attacks, the strong distaste for the DPRK amongst U.S. lawmakers, and continual U.S.-ROK military exercises stressing the latter's combined capabilities, the Kim regime's constructivist conceptualisation of pro-nuclear norms as "just" and "necessary" is buttressed given the ostensible American threat.

Finally, moral constructivist pro-nuclear norms are reinforced by the North Korean national ideology of *Juche* which stresses the manifest destiny of Pyongyang's authority on the Korean peninsula, and national self-defence imperatives. Indeed, nuclear arms fit nicely into *Juche* as they promote the

DPRK's version of nationalism and serve as security guarantors. However, the DPRK's moral argument undergirding nuclear proliferation rests on the realist threat from the U.S., which would be undermined by any termination of the U.S.-DPRK adversarial relationship.

6.7 Nascent North Korean Nuclear Disarmament and Economic Liberal Interdependence

After analysing the motivations for North Korean nuclear proliferation, we now turn to counter proliferation drivers present within Pyongyang. These are the flip side of the DPRK's nuclear weapons policy, exist simultaneously with atomic weapons development intentions, and account for North Korean nuclear disarmament progress seen from 2007 to 2008. Beginning with economic liberal interdependence as a counter proliferation driver, it was earlier elaborated that economic difficulties contributed to Pyongyang's decision to demonstrate nuclear munitions development by testing a nuclear device in 2006. This was meant to strengthen its position in the Six Party Denuclearisation Talks as a gamble to secure aid for a DPRK that was unable to independently cope with the liberally interdependent world economy.

Despite *Juche* promoted self-sufficiency, North Korean economic realities dictate otherwise. Indeed, the DPRK could only maintain economic health during the Cold War as it was indirectly subsidised by discounted fuel, spare parts and technology imports from the USSR and PRC.[380] When Soviet generosity ceased and Chinese largesse was curtailed in the early 1990s, North Korea was faced with economic sustainability issues as the agricultural and other industrial sectors, which needed oil as an essential input, were deprived of

[380] Natalya Bazhanova, *Economic Forces and the Stability of the North Korean Regime* in *The North Korean Nuclear Program: Security, Strategy and New Perspectives from Russia*, James Clay Moltz and Alexandre Y. Mansourov (eds.), Routledge, 2000.

fuel. Hence, endemic shortages of petroleum fuel for farming vehicles, for electricity generation to power irrigation systems, to process harvested crops, and to keep factories running arose. This had knock-on effects for the rest of the economy as the subsequent fall in food production created acute difficulties feeding the workforce and curtailing their productivity, while factories with enough labour were unable to sustain production. As such, securing fuel imports was important to Pyongyang, which can be seen in the disarmament concessions negotiated in February 2007.

To help set the stage for Pyongyang's flexibility during the Six Party Denuclearisation Talks in February 2007, the seeds of North Korean desperation need to be explained and can be found in the series of natural disasters from 1994 – 1997, beginning with severe hailstorms in 1994, serious flooding from 1995 – 96 and culminating with a tidal wave in 1997. These destroyed farmland, crippled national infrastructure and wiped out both harvests and grain stocks, creating the basis of a famine that lasted from 1994 – 1998, killing up to 3 million[381]. This continues to adversely affect North Korean economic sustainability, and indirectly impacts its usefulness to the liberal world economy, because the DPRK's youth who suffered through the famine emerged as adults who are arguably weaker and less productive, resulting in a less effective workforce. Also, the millions who perished and inability of the Kim regime to feed its population would have shrunk the North Korean workforce whilst discouraging women from birthing children into a society that could not

[381] The deaths from the DPRK's natural calamities are quoted from Barbara Crossette, *Korean Famine Toll: More Than 2 Million*, The New York Times, 20 August 1999, at http://www.nytimes.com/1999/08/20/world/korean-famine-toll-more-than-2-million.html. The details concerning the calamities and drastically weakened North Korean food security were paraphrased from Hazel Smith, *Hungry for Peace: International Security, Humanitarian Assistance, and Social Change in North Korea*, United States Institute of Peace Press, 2005, pp. 66 – 67.

feed them. Hence, not only would there be less labour inputs for export based manufacturing but the nation's ability to replace aging workers would be hampered, hobbling its ability to act as a low cost manufacturing base for the liberally interdependent global economy.

Furthermore, these disasters delivered a shock to North Korea's ability to generate electricity for civil, transport and economic infrastructure. Given the shortage of petroleum fuel due to the abatement of Russian and Chinese support, North Korea had to rely on domestic coal and hydroelectric power for subsistence electricity provision. Unfortunately, the floods wrecked up to 85% of the DPRK's hydroelectric capacity and ruined coal supplies, coal mines and coal transport facilities,[382] severely disabling North Korean electricity production. Even though the years after the last natural calamity in 1997 would have allowed the Kim regime sufficient time to restore coal infrastructure and hydroelectric facilities, Pyongyang's willingness to accept fuel in exchange for disarmament measures speaks much about the continued inability of the DPRK's electricity resources to meet economic needs amidst liberally interdependent realities.

6.7.1 Economic interdependence and North Korean nuclear disarmament negotiations

With the reality of ally economic abandonment and natural calamities scuttling all hopes of *Juche* inspired economic self-sufficiency, it would be obvious to Kim Il Sung and subsequently Kim Jong Il, that the DPRK would have to find means of surviving liberally interdependent global realities.

[382] David F. Von Hippel and Peter Hayes, *North Korean Energy Sector: Current Status and Scenarios for 2000 and 2005* in *Economic Integration of the Korean Peninsula*, Marcus Noland (editor), Institute for International Economics, January 1998, pp. 89.

Irrespective of pro-autarky forces amongst Pyongyang's leadership elite, Kim Jong Il and his closest advisors would have been cognisant of the need to obtain foreign assistance to reform and support the economy so as to assure national survival. Accordingly, since North Korea had nothing indispensable to offer the world, it used the one thing which the U.S., ROK and the West at large were most concerned about, its nuclear weapons programme, as a bargaining chip to apply leverage for disarmament benefits during the Six Party Talks in early 2007. The salience of the benefits given for sustaining the DPRK's economy in the increasingly interdependent global market will be subsequently analysed.

As a prologue to bleak economic realities cementing Pyongyang's negotiative objectives after its 2006 nuclear test, it should be noted that as deduced from North Korean policy documents from 2002 onwards, the Kim regime had accepted that economic reform would proceed using capitalist principles.[383] Accordingly, Pyongyang 1) sought to send North Korean foreign trade and foreign banking personnel abroad for training in liberal trade norms, principles and regulations,[384] 2) created a free trade zone in the town of Sinuiju near the DPRK-PRC border[385], and 3) founded the Kaesong industrial development zone in 2003 involving the governments of the DPRK and ROK with investment from South Korean businesses. However, despite these tepid reforms to adapt to liberal economic interdependence, it dawned on Pyongyang

[383] From 2002, there were DPRK press releases referring to "profitability" in economic development. For instance, a 15 February 2002 article from the Korean Central News Agency (KCNA), *"Spectacular Achievements in Construction"* mentioned this while another KCNA article on 29 January 2002, "*Full play to advantages of socialist economic management called for*", spoke of profitability being a component of "Juche based socialist economic management". Both articles can be found at http://www.kcna.co.jp/index-e.htm.

[384] Hazel Smith, *Hungry for Peace: International Security, Humanitarian Assistance, and Social Change in North Korea*, United States Institute of Peace Press, 2005, pp. 138.

[385] *NK Unveils 'Shinuiju Special Law'*, Korea Times, 27 September 2002.

that many limitations still shackled economic growth. These included the lack of functioning infrastructure, and the absence of laws to regulate a free market economy. While domestic commercial legal structures could be built, the shortcomings of North Korean transport, communications, power and industrial infrastructure could only be rectified by a through overhauling of these economically vital systems. Indeed, the DPRK's crumbling roads and bridges, antiquated telecommunications, malfunctioning electrical grid, and decrepit mines and factories[386] were hobbling Kim Jong Il's hope of economic rejuvenation.

Correspondingly, the Kim regime must have realised that the expenditure and resource outlays required for the comprehensive renovation of North Korean civil, economic and vital ancillary infrastructure required foreign investment and aid from wealthy donors along with loans from institutions such as the World Bank.[387] Hence, external assistance was essential to help the North Korean economy out of its post-Soviet era rut, and this policy exigency was at least partially responsible for the DPRK's nuclear proliferation aggrandisement leading up to the 2006 nuclear test, which upped the ante when North Korean negotiators bargained for nuclear disarmament benefits in 2007. Indeed, when Pyongyang received 50,000 tons of fuel and the removal of North Korea from the U.S.'s State Sponsors of Terrorism list in exchange for tangible disarmament and transparency measures as earlier mentioned, it can be seen how these benefits helped the North Korean economy better survive liberally interdependent realities.

[386] Hazel Smith, *Hungry for Peace: International Security, Humanitarian Assistance, and Social Change in North Korea*, United States Institute of Peace Press, 2005, pp. 149 – 150.
[387] Ibid, pp. 162.

Crucially, the fuel aid would not only have sustained export industries with electricity but also helped the agricultural sector by powering irrigation systems, crop processing machines, fueling farming vehicles and even provide enough electricity to keep vital fertilizer and pesticide factories open. This would help North Korea produce enough food to feed its workforce and sustain the productivity of labour inputs for export orientated factories, while helping North Korean agriculture regain self-sustainability. Additionally, the fuel concessions from disarmament helped free up oil import expenditure which could then be directed towards infrastructure repair and upgrading projects using imported raw materials. Lastly, the delisting of the DPRK as a terrorism sponsor counts towards rehabilitating North Korea's international reputation and improving its standing with global lending institutions like the World Bank, thereby broadening North Korea's potential pool of trading partners since it appears less like a rogue nation, and allowing Pyongyang to borrow funds to help refurbish its decaying economic and civil infrastructure. When all the beneficial effects of the terrorism de-listing and fuel aid are considered, it can be reasoned that the DPRK could more easily participate in the liberally interdependent world economy, both as a trading partner and investment destination, while the easier availability of national development loans, fuel assistance, and freed up import funds all promoted the removal of artificial limitations on North Korean productivity. Therefore, these concessions supported the DPRK's usefulness to the economically interdependent international community, once Pyongyang managed to get its national affairs in order, to effectively function as a regional manufacturing base, in the same way that the PRC and ROK began their development paths.

6.7.2 Economic interdependence norms and leadership Influencing nascent DPRK nuclear disarmament

Even as tangible evidence of North Korean economic policy, and nuclear disarmament negotiation objectives recognising liberal interdependence were covered in the last sub-section, it would round off analysis of economic liberal interdependence motivations driving moves towards nuclear disarmament from 2007 to 2008, if proof of leadership supporting liberal economic norms could be uncovered. Inasmuch as all North Korean media is government controlled and reflects the opinions of various leadership elites, evidence of such norms displayed by the Kim regime will be expressed through official media outlets.

Returning to Solingen's framework where political leaderships require supportive influential coalitions to govern, and both pro-economic reform and pro-military blocs vied for influence in Pyongyang, it can be deduced that the 2007 – 2008 period of nuclear compromise reflected the relative strengthening of pro-economic reform factions. This bloc would have supported moves towards nuclear disarmament because counter proliferation economic sanctions would hurt liberalist interests and hamper economic recovery. As can be seen below, high ranking North Korean figures like the Vice-Premier and even Kim Jong Il, made statements in support of economic development which are compatible with subtle arguments for liberally cooperative economic adaptation proposed by reformist factions. Since nuclear proliferation is morally incompatible with liberal economic cooperation, Pyongyang's approval of disarmament measures from 2007 to 2008 could be an attempt to draw support from these factions.

Examining official media pronouncements from 2000 to 2004, it can be seen that the North Korean leadership gradually became more amenable to liberal economic norms in their quest to rejuvenate the economy. Beginning in February 2000, North Korean Vice-Premier Cho Chang Dok openly declared that the "political, ideological and military might (of the DPRK) can be considered as having *already* reached that of a powerful state."[388] This statement was later attributed to Kim Jong Il and was interpreted by economic reformists within the regime to mean that enough emphasis had already been placed on political, ideological and military concerns, thus implying that economic imperatives should become the government's new focus.[389] This was confirmed by Cho when he added that, "we can also become a strong economic power within a few years if we concentrate our efforts on economic construction."

Next, the necessity of economic reforms to re-tool the economy to cope with liberally interdependent realities was strengthened when Kim Jong Il visited China in January 2001, touring the Shanghai stock exchange and U.S.-PRC General Motors joint venture plant. That he praised the efficacy of the PRC's economic reforms[390] can be interpreted to mean that he recognised the existence of liberal economic norms, and was cognisant of the need to secure the benefits of global economic interdependence for North Korea. After all, the stock market and joint-venture plant symbolised the mutually beneficial exchange of foreign investment for the opportunity to profit from low cost labour,

[388] Pyongyang Korean Central Broadcasting Service, 3 February 2000, Foreign Broadcast Information Service (FBIS), Open Source Centre, Central Intelligence Agency.
[389] Robert L. Carlin and Joel S. Wit, *North Korean Reform: Politics, Economics and Security*, Adelphi Paper 382, International Institute for Strategic Studies, Routledge, 2006, pp. 28.
[390] Don Oberdorfer, The Two Koreas: a contemporary history, New York: Basic Books, 2001, pp. 441.

land and other inputs. This was obliquely supported by a 2001 DPRK new year's editorial stating that:

> "National economic power is the basis of socialist strength, prosperity and rehabilitation. The principle of socialist politics is that an invincible military power and political and ideological power *should be supported, without fail, by strong economic power*. No task is more important for us than to build up a national economic power *that corresponds to the 21st century*."[391] (Italics added for emphasis.)

Even as lip service must be paid to realist concerns, the inescapable influence of global economic interdependence and the statement's focus on economic development for the 21st Century stresses the pursuit of growth within the liberal economic system, which would not be sanctioned by international norms if nuclear weapons were pursued.

Subsequently, despite accusations of uranium based nuclear weapons development in October 2002, the economic reformists in Pyongyang were able to defy pro-military defensive sentiments on 5 October with a media release promoting economic reform, and hinting acceptance of economically interdependent realities along with liberal economic norms. As quoted by the *Nodong Sinmun*:

> "The scientific character of our party's economic policy is clearly expressed in that it enables one to carry out economic work in a creative manner in accordance with the *changed environment and realistic conditions*."

[391] Joint editorial, *Let Us Open a Passage of Advance in the New Century with the Spirit of Having Triumphed in the Arduous March*, Nodong Sinmun, Choson Inmungun and Ch'ongnyon Chonwi, 1 January 2001.

Additionally, the *Nodong Sinmun* also mentioned that the conditions under which economic activities were carried out: "are *not fixed and unchangeable*. Economic activities under a new environment are to proceed with *new relationships and new rules*."[392] (Italics added for emphasis) Inasmuch as solidarity with liberal economic norms could not be openly expressed because international interdependence clashed with *Juche* sanctioned self-reliance, the references to the realistic changed environment, new relationships and new rules were as close to acknowledging global commercial practices as the reformers could manage.

Thereafter, the economic reformers reinforced their position with a press release reiterating Vice-Premier Cho's earlier stand that the North Korean military was already sufficiently developed, and that current policy impetus should be for economic development. The media pronouncement stated that, "boosting the economy *without delay* is an important demand for strengthening national might and improving the people's living standards."[393] (italics added for emphasis) The inner message behind this quote was that in relation to pro-military and by relation anti-liberalist interests, economic revitalisation could not wait and should not play second fiddle to any military-centric development plans. In the present, when interdependent economies are the norm, this can be interpreted as acceptance of *de facto* liberal norms.

Lastly, to pre-emptively rebut pro-military arguments, the economic reformists published a February 2004 article arguing that Pyongyang's overall national policy,

[392] Chong Son Ch'ol, *The Scientific Character of Our Party's Economic Policy*, Nodong Sinmun, 5 October 2002.
[393] Editorial, *Let Us Launch a Great Leap in Building Up the Economy Through a Bold Offensive*, Minju Choson, 12 March 2003, pp. 1.

> "combines defence build-up and economic construction with the issue of the people's living standards in the most correct manner, so that all of them can be successfully resolved at the highest possible level."[394]

Therefore, while not rebutting militarist arguments, it is clearly stated that economic expansion, which supports citizen welfare is equally important and should morally be considered together.

Consequently, from the subtle statements officially expressed, it can be deduced that the leadership faction supporting economic reform was significant. Bearing in mind that North Korean economic recovery is unlikely to be achieved via autarky, officials supporting economic growth and increased citizen welfare are also by association, likely to espouse liberal economic interdependence norms. But despite the desire to engage in mutually beneficial trade, investment and economic cooperation, current anti-nuclear proliferation norms would preclude cooperative commercial relations between North Korea and the world at large. Consequently, it was likely that the liberal interdependence supporting economic reformists lent their influence to the nuclear disarmament compromises negotiated in 2007, while some nationalist economic reformers might have regarded the 2006 nuclear test as a means to encourage the DPRK's adversaries to negotiate fairly.

Indirect proof that liberal economic norms significantly influenced North Korean moves towards nuclear disarmament can be seen in the extent to which Pyongyang accommodated U.S. concerns about the former's nuclear programme in return for relatively less in compensation. For surrendering 18,000 papers regarding North Korea nuclear activities in 2008 and demolishing

[394] Dr Kim Chae So, *Socialist Economic Management that Realizes the Military First Principle*, Kyongje Yongu, 10 February 2004.

a cooling tower at its sole nuclear reactor (which produced the raw material for nuclear bomb cores), the DPRK only received 50,000 tons of fuel aid and its removal from the U.S. State Sponsors of Terrorism list. Essentially, Pyongyang demonstrated much transparency and mothballed a critical part of its warhead making infrastructure, without receiving any aid or foreign investment which would have directly upgraded its civil or industrial infrastructure, while there were still U.S. import tariffs drastically limiting commercial dealings with the DPRK[395]. Finally, it reveals something about Pyongyang's disarmament sincerity during the 2007 – 2008 period when it can be retrospectively shown that its reactor remained closed from 2008 to 2013, a substantial gap of 5 years.[396]

6.8 Realist Considerations in Nascent North Korean Disarmament

But even if economic aid to help the DPRK survive in the liberally interdependent international paradigm was offered, security based realist anxiety still remained a serious concern. Fundamentally, the economic reformers could be promoting a nuclear disarmament agenda which would remove obstacles to North Korea receiving aid/assistance, and implement infrastructure upgrades for liberal economic survival, but national security hawks would try to scupper such disarmament as they perceive an enduring realist threat. As such, to account for nuclear disarmament flexibility exhibited by the Kim regime in early 2007, it would be prudent to analyse how global strategic changes affected Pyongyang's threat assessment.

[395] Being economically ostracized by the world's largest economy and sole superpower also implies being commercially ostracized by many U.S. allies as the latter follow Washington's lead on many issues.
[396] *North Korea 'to restart Yongbyon nuclear reactor'*, BBC News Asia, 2 April 2013, at http://www.bbc.com/news/world-asia-21999193.

Since the Korean War, the DPRK has seen the U.S. as its primary threat with the ROK as a secondary concern. The ROK can still be deterred using numerical superiority since Seoul is within artillery range of KPA forces, effectively holding the South Korean capital hostage. However, the DPRK is no match for technologically advanced U.S. forces deployed in bulk against it. Hence, from Kim Jong Il's perspective, the only two ways to address security anxiety vis-à-vis the U.S. is through the defensive realist acquisition of a nuclear deterrent, which carries significant costs, or improved relations with Washington, which lessens the threat to North Korea, negates the necessity for classical realist power balancing, and carries significant moral constructivist prestige benefits via nuclear disarmament.

With the latter goal in mind, the Kim regime was eager to strike a tension reducing deal with the U.S. from 1999 to 2000. Factoring in the concessions made by Pyongyang during this period, it can be seen that the latter was willing to give up much in order to discount the former as a realist existential threat. Despite these negotiations not having a direct link to the DPRK's nuclear programme, the threat reduction objective remains the same and has salience for denuclearisation progress from 2007 to 2008.

Following the test of a North Korean Taepodong 1 rocket which had a range of 2000 km[397], the U.S. was greatly concerned and sent former Secretary of Defence, William J. Perry to Pyongyang on 25 May 1999 to offer Kim Jong Il a proposal for better U.S.-DPRK relations. This involved the full normalisation of diplomatic and economic relations with the U.S., in return for the complete halt of all DPRK missile exports, while ceasing the development, production, testing

[397] *Missile Threat: A Project of the George C. Marshall and Claremont Institutes*, 4 February 2013, at http://missilethreat.com/missiles/taepo-dong-1/?country=north-korea#north-korea.

and deployment of all long range missiles. Additionally, Perry suggested that the North Koreans could take the initial step of placing a moratorium on further missile tests while the U.S. would ease economic sanctions[398]. Subsequently, Pyongyang agreed to the moratorium on September 1999 and in return, sanctions banning most U.S. exports and imports from the DPRK were lifted[399]. (However, it is worth nothing that other U.S. tariff and legal barriers prevented full trade normalisation with North Korea.)

Thereafter, negotiations progressed with Kim's emissary, Vice Marshall Jo Myong Rok visiting Washington in October 2000 where he invited President Clinton to visit Pyongyang so that bilateral issues could be personally resolved. In preparation for this trip, Secretary of State Madeleine Albright visited Pyongyang on 23 October where Kim offered to give up further production and deployment of long range missiles while also implementing a ban on missile sales. In return, he was prepared to accept compensation in the form of food, clothing and fuel. Lastly, the most important compensation would be the presence of President Clinton in Pyongyang to sign the agreement and legitimise the DPRK's sovereignty[400]. However, Clinton could not conclude this agreement as his term of office was ending.

Drawing parallels between the developments from 1999 to 2000 and the nascent denuclearisation steps seen from 2007 to 2008, it can be deduced that Pyongyang was willing to trade disarmament, like forgoing missile testing and giving up missile production, deployment and sales, for tension reducing

[398] U.S. proposal for DPRK missile limitations paraphrased from Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 420 – 423.
[399] Selig S. Harrison, *Korean Endgame: A Strategy for Reunification and U.S. Disengagement*, Princeton University Press, 2002, pp. 228.
[400] Visit by Jo Myong Rok and counter visit by Albright to receive Kim Jong Il's offer paraphrased from Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 436, 438 and 439.

measures like the lifting of interstate commerce prohibitions, humanitarian aid and the normalisation of political and economic relations. Similarly, the Kim regime was later willing to reveal much about its nuclear activities and significantly curb its nuclear weapons programme in exchange for fuel and international de-stigmatisation via terrorism sponsorship delisting. These two periods reveal that Pyongyang is willing to countenance threat reduction rather than defensive realist nuclearisation as an alternative national security approach.

Furthermore, the willingness to engage the U.S. in spite of contemporary nuclear tensions, can be seen even after Pyongyang was accused of starting a uranium based nuclear weapons programme in 2002, when on 3 November 2002, the DPRK's UN ambassador, Han Song Ryol stated that, "Everything will be negotiable, including inspections of the enrichment program...our government will resolve all U.S. security concerns through talks if your government has a will to end its hostile policy."[401] This can be seen as a foretaste of North Korean negotiative flexibility in early 2007.

6.8.1 The role of interdependence motivating nascent DPRK disarmament

Cognisance of Pyongyang's active policy to ameliorate the U.S. threat to its existential security via disarmament concessions is useful but only covers the domestically motivated side of initial North Korean nuclear disarmament. In order to holistically comprehend the Kim's regimes flexibility during the 2007 – 2008 period, it would help to analyse the effect of Washington's global strategic decisions on Pyongyang from 2001 until the Six Party Denuclearisation Talks in February 2007.

[401] Philip Shenon, *North Korea Says Nuclear Programme can be Negotiated*, New York Times, 3 November 2002, pp. A1.

Inasmuch as there is no evidence that North Korean moves towards disarmament influenced any other nuclear proliferators such as India, Pakistan or Israel, or that the latter had any impact on DPRK nuclear policy, this sub-section will first address on-going international conflicts during 2001 – 2007 and how they may have affected the Kim regime's nuclear decision making.

Although the U.S. 2002 Nuclear Posture Review authorised the use of nuclear weapons against the DPRK and President Bush's 2002 State of the Union Address labelled North Korea as belonging to an "Axis of Evil", the latter had less to fear from the former in the initial years of the 21st Century, than from 1991 to 2000 when it felt the effects of socialist bloc abandonment. The defining event which relieved security pressure on North Korea was the *Al Qaeda* attacks on U.S. soil on 11 September 2001. This provided the *Casus Belli*[402] for the U.S. led invasion of Afghanistan in Operation Enduring Freedom (OEF) in October 2001, as the latter's Taliban government provided refuge for Osama Bin Laden and his Al Qaeda terrorist organisation, which had planned and executed the 11 September attacks. Moreover, within 2 years in March 2003, another U.S. led coalition invaded Iraq in Operation Iraqi Freedom (OIF) due to suspicions that Baghdad was developing WMDs. Most importantly for Kim Jong Il and his national security planners, the U.S. military, their most feared adversary, was from 2001 until the early 2007 denuclearisation negotiations, preoccupied by two major international conflicts, making it unlikely that Washington would devote the resources to attack North Korea.[403] Under the circumstances, the Taliban, Al Qaeda and anti-American resistance forces in

[402] Casus Belli is latin for "cause for war" or justification to go to war.

[403] As of March 2015, the U.S. was still involved in Afghanistan under *Operation Freedom's Sentinel* (OEF in the Afghan theatre officially concluded in December 2014), while OIF lasted until December 2011. Notwithstanding the U.S.'s status as the world's sole superpower, its military doctrine is predicated in the ability to fight two and not three major conflicts around the globe.

Iraq, indirectly relieved Pyongyang's security anxiety by occupying the U.S.'s preponderant military, lessening the realist threat to North Korea, and giving moderate Kim regime factions a window of opportunity to propose nuclear disarmament compromises. Furthermore, risk adverse DPRK policymakers might have believed that it was better to arrive at a denuclearisation *quid pro quo* with Washington in 2007, rather than chance future negotiation with a less compromising U.S. which had resolved its conflicts, and could strong-arm Pyongyang with an unfavourable realist balance of power.

To substantiate this hypothesis, it is pertinent to note the position of former U.S. Assistant Secretary of State Gallucci that the North Koreans were very wary of the security threat posed by the U.S., as they watched the 1991 U.S. led Gulf War with apprehension. Thus, the Kim regime,

> "clearly pays attention to what the United States does in a political-military way, elsewhere in the world. Hence, it is not unreasonable to hypothesise that they were watching how engaged the U.S. was in Western Asia and the Middle East, thereby inferring that America was too occupied to get engaged in another theatre of conflict in North East Asia. Therefore, it was safe for Pyongyang to engage with Washington"[404]

Also, as deductive corroboration for Pyongyang's aforementioned "better now than later" negotiative stance, Gallucci also remarked that North Korea might have believed that "the U.S. was distracted and thus more willing to grant concessions [for denuclearisation] so that Washington would *not* have to deal with security concerns on *both* its left and right flanks."

[404] Quoted from the author's interview with former Assistant Secretary of State for Political-Military Affairs, Ambassador Robert L. Gallucci on 1 October 2014.

Next, another indirect interdependence related factor which likely contributed to Pyongyang's accommodating disarmament diplomacy in 2007 was Pyongyang's realisation that with the end of the cold war, the DPRK could no longer depend on old friendships in the former socialist bloc to avoid diplomatic isolation. Hence, from 1999 onwards, the Kim regime re-established dormant relations with China, forged fresh relations with Russia and resumed Japan-North Korean normalization talks[405], while establishing diplomatic relations with Italy, Australia and the UK among others from 2000 to early 2001[406]. Additionally, Kim Jong Il was keen on closer DPRK-ROK relations as seen from the Kim Dae Jung-Kim Jong Il summit from 13 to 15 June 2000 which even carried forth into the administration of the next South Korean president, Roh Moo Hyun when both Roh and Kim met for a summit meeting in Pyongyang from 2 – 4 October 2007[407].

Inferring a connection between Pyongyang's attempt to normalise North Korea's international diplomatic profile, and its willingness to negotiate an initial disarmament compromise so soon after its first nuclear test, (there was only an approximate 4 month gap between the nuclear test in October 2006 and the disarmament talks in February 2007) it can be posited that the Kim regime wished to portray the DPRK as a reasonable global citizen after shoring up its bargaining position. Examining Pyongyang's behaviour as an interdependent diplomatic relationship between foreign states who chose to befriend North Korea and the latter, it is deduced that Kim and his advisors were trying to justify the diplomatic investment made by the former in their state. Concerning

[405] Don Oberdorfer, *The Two Koreas: A Contemporary History*, Basic Books, 2001, pp. 425.
[406] Ibid, pp. 435.
[407] *DPRK, ROK leaders meet for summit*, China Daily, 2 October 2007, at http://www.chinadaily.com.cn/world/2007-10/02/content_6150814.htm.

national security, it was not in Pyongyang's interest to regress into diplomatic isolation as North Korea's adversaries could more easily build an anti-DPRK coalition.

6.8.2 Norms, leadership and the realist analysis of DPRK nuclear disarmament

From the aforementioned, it can be illustrated that Pyongyang was willing to countenance an approach to the realist threats that it faced, which utilised threat reduction in return for disarmament, taking advantage of adversary preoccupation with other conflicts in order to negotiate under less threatening conditions, and possibly displaying negotiative flexibility in order to validate others' diplomatic faith in Pyongyang. Inasmuch as defensive realist nuclear arms development can be perceived as a concrete manifestation of realist norms, the attempt to secure national security, by eliminating existential threats through negotiations that exchange disarmament for diplomatic and economic normalisation, can be classed as evidence of counter realist norms. As possibly championed by certain Kim regime factions, North Korean leadership subscription to counter realist nuclear disarmament norms can be corroborated by selected terms of the 1994 Agreed Framework, the Joint Statement of Principles which Pyongyang signed in 2005, and a North Korean news editorial in 2011 which argued that a U.S.-DPRK peace treaty would provide substantial impetus for successfully concluding negotiations over DPRK nuclear disarmament.

Referencing the October 1994 Agreed Framework, Pyongyang agreed to freeze its nuclear programme, comply with all IAEA non-proliferation requirements and commit to eventual decommissioning of all DPRK nuclear installations in return for electricity generating light water reactors, fuel oil aid,

overall improvement in U.S.-DPRK ties and U.S. assurances against the threat and use of nuclear weapons. Even as the U.S. and its regional allies failed to deliver much of their side of the bargain, it is telling that Pyongyang froze its plutonium based nuclear programme and cooperated with IAEA inspectors for about 8 years from 1994 to 2002, until accusations of uranium enrichment for weapons purposes arose. While the weapons producing capacity of Pyongyang's current uranium programme is anyone's guess, analysis of CIA reports concerning the actual extent of DPRK uranium enrichment reveal that Pyongyang's capabilities were overestimated in 2002 and no functional uranium programme emerged, 5 years after the initial disclosure as at 2007[408]. Hence, setting aside uranium enrichment as a relatively minor issue in 2002,[409] the 8 years of compliance with the Agreed Framework serves as proof that Pyongyang actually believed in the efficacy of trading disarmament for threat reduction via normalisation of U.S.-DPRK relations, and infers the existence of leadership backed counter realist norms.

Turning to the Joint Statement of Principles signed by the Kim regime in September 2005, North Korea agreed to complete nuclear disarmament and resumption of NPT membership in exchange for normalised relations with two principal adversaries, the U.S. and Japan, a peace treaty concluding the Korean War and negotiations on LWR provision. Notwithstanding eventual terminal impediments to the Statement's implementation, such as Pyongyang's insistence on being granted LWRs before nuclear disarmament, due to its

[408] Carol Giacomo, *N.Korean Uranium Enrichment Programme Fades as Issue*, Reuters, 10 February 2007 at http://www.reuters.com/article/2007/02/10/idUSN09302593.

[409] According to noted nuclear scientist Siegfried Hecker, the North Koreans admitted to only completing construction of a facility for full scale industrial enrichment of Uranium in late 2010. Siegfried S. Hecker, *What I Found in North Korea: Pyongyang's Plutonium Is No Longer the Only Problem*, Foreign Affairs, 9 December 2010, at http://www.foreignaffairs.com/articles/67023/siegfried-s-hecker/what-i-found-in-north-korea.

distrust of the U.S. and Japan, the fact that Pyongyang signed the Statement even after the acrimonious dissolution of the Agreed Framework in 2002, indicates DPRK leadership faith in the practical virtues of swopping disarmament for threat amelioration. Interpreting the Joint Statement of Principles as evidence of counter realist norms on the part of Pyongyang, and factoring in the 2006 nuclear test as a demonstration to shore up North Korean negotiative weight, the substantive disarmament progress from 2007 to 2008 can also be seen as a manifestation of counter realist norms exchanging denuclearisation (the partial demolition of the Yongbyon reactor), for threat diminishment (delisting the DPRK as a terrorism sponsor).

Finally, as an indication of counter realist norms, it is worth nothing that on 27 July 2011, an editorial from the Pyongyang based Korean Central News Agency stridently proposed that a peace treaty with the U.S. would "go a long way toward resolving a deadlock over Pyongyang's pursuit of nuclear weapons".[410] Although North Korea had by then tested two nuclear devices in 2006 and 2009, there still existed the ideational motivation, at least amongst moderate Kim regime factions, that national security could be assured via contractual threat elimination (a peace treaty), instead of classical realist balancing (a nuclear deterrent).

6.9 Moral Constructivism's Role in nascent DPRK Nuclear Disarmament

Referencing the last discussed point about counter realist norms buttressing North Korean nuclear disarmament, this cause and effect relationship presupposes the existence of international nuclear non-proliferation norms. Without the moral constructivist ideational consensus that nuclear

[410] Sam Kim, *North Korea demands peace treaty with US*, Associated Press, 27 July 2011, at https://sg.news.yahoo.com/north-korea-demands-peace-treaty-us-032306308.html.

armaments are abhorrent and nuclear disarmament admirable, nuclear munitions would be regarded as no different from other explosives, and there would be no value to relinquishing them. For North Korea, its nuclear warheads would not be able to command the “barter value” of a U.S.-DPRK peace treaty.

Even if militant hawks in Pyongyang wish it were not the case, North Korea is still subject to global nuclear non-proliferation norms. While Pyongyang proudly proclaims its nuclear weapons legitimacy, the international community refuses to recognise the DPRK as a nuclear armed state. Indeed, apart from the 5 original nuclear weapons powers comprising the UNSC, the fact that tacit nuclear recognition has only been given to India, Pakistan and Israel attests to the strength of these norms.

6.9.1 Interdependence, structure and constructivism in DPRK nuclear disarmament

As explained, North Korea is subject to disarmament influence from universal non-proliferation norms, and because its only significant period of denuclearisation from 2007 to 2008 did not result in complete nuclear disarmament, it stands to reason that the DPRK does not exert any moral constructivist disarmament influence on any other nuclear proliferator. Therefore, since interdependence is a non-issue for moral constructivist drivers of North Korean nuclear disarmament, only external structural influences of nuclear non-proliferation norms will be examined. Specifically, the effects of the Non-Proliferation Treaty (NPT) and the Strategic Arms Reduction Treaty (START), for strengthening nuclear non-proliferation norms such that Pyongyang could not disregard them, will be explored to clarify the disarmament based structural environment facing the DPRK.

Beginning with the origins of formalised nuclear non-proliferation norms, the NPT, which went into force in 1970, established the worldwide understanding that nuclear weapons are existentially threatening. Hence, the treaty aims to prevent the spread of nuclear weapons, promote nuclear disarmament and facilitate the transfer of peaceful nuclear technology. Such norms based principles cast Pyongyang's nuclear weapons development as aberrant, deserving of strict punitive measures to induce nuclear roll-back. Crucially, the NPT was renewed indefinitely in 1995,[411] revealing the strength of universal support for nuclear non-proliferation norms, which Pyongyang has to confront in the global structure.

Moreover, the DPRK had to face nuclear disarmament momentum generated by nuclear arms cutbacks negotiated between the U.S. and USSR/Russia through the Strategic Arms Reduction Treaty (START) as well as its later variant, New START. As previously mentioned, START, which was signed on 31 July 1991 and expired on 5 December 2009, committed the two most heavily armed nuclear states to curtail their nuclear arsenals to no more than 6000 warheads each[412]. Significantly, this generated much nuclear disarmament momentum since the U.S. had a stockpile of 9150 warheads while Russia alone (not counting ex-Soviet warheads based in Ukraine, Kazakhstan and Belarus) had about 10,100 warheads, which would have meant a decommissioning of 3150 U.S. and 4100 Russian warheads. It is inconceivable that Pyongyang could ignore the indirect norms based disarmament pressure exerted by such monumental nuclear warhead decommissioning, since the U.S.

[411] *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)*, United Nations Office for Disarmament Affairs, at http://www.un.org/disarmament/WMD/Nuclear/NPT.shtml.
[412] *Strategic Arms Reduction Treaty Text (START 1)*, Treaty Compliance, Office of the Under Secretary of Defence for Acquisition, Technology and Logistics, at http://www.acq.osd.mil/tc/treaties/start1/text.htm#article17.

could not be accused of moral hypocrisy, in a START supported pro-disarmament environment. As for New START, this was signed by Washington and Moscow on 8 April 2010[413], and obliged both sides to slash their deployed nuclear warhead arsenals to 1550 each, which is about 74.2% lower than the target set for the original START[414]. This in turn contributed to the nuclear disarmament favouring environment facing North Korea.

6.9.2 The role of agency and leadership in the DPRK's non-proliferation norms

START and New START both represent concrete nuclear disarmament manifestations of the NPT which is the penultimate legal enunciation of non-proliferation norms. Inasmuch as it would be difficult for Pyongyang to ignore such norms and defy the moral constructivist consensus against nuclear weapons, continued nuclear arms development is still possible if backed by enough political will. Hence, when parsing Pyongyang's nuclear disarmament flexibility from 2007 to 2008, it can be deduced that the Kim regime must, to some extent, possess latent nuclear disarmament norms, and that Kim Jong Il and his advisors perceived the aforementioned period to be the best time for disarmament compromises.

Denuclearisation is not commonly associated with DPRK nuclear weapons motivations, but North Korean participation in nuclear disarmament negotiations is arguably a sign that, on some level, Pyongyang believes in the morality of military denuclearisation. Confirming baseline adherence to denuclearisation norms is the 1991 DPRK-ROK "Joint Declaration on the Denuclearisation of the Korean Peninsula," pledging not to possess nuclear weapons or the means to

[413] U.S. and Russian leaders hail nuclear arms treaty, BBC News, 8 April 2010, at http://news.bbc.co.uk/2/hi/europe/8607985.stm.
[414] Michael E. O'Hanlon, *New START Shouldn't Be Stopped*, The Brookings Institution, 18 November 2010, at http://www.brookings.edu/research/opinions/2010/11/18-new-start-ohanlon.

process fissile material.[415] This declaration is important for constructivist analysis because security and economic reasons go against a DPRK signing. For instance, by 1991 the military technological gap favouring the ROK had widened considerably, and it would have been illogical for Pyongyang to rule out a nuclear strategic equalizer.[416] Also, losing Soviet patronage increased the value of a nuclear weapons program as a bargaining chip to win economic aid, but the joint declaration said nothing about the ROK granting economic concessions to the DPRK.

Next, before Kim Il Sung died in 1994, he made a final request that the Korean peninsula be nuclear free.[417] Because of the concentrated power in his hands, such a request became an edict, leading to the Agreed Framework. More importantly, despite earlier manipulation of the nuclear program to extract U.S. concessions, Kim would have been less preoccupied with material or *realpolitik* concerns in his last days and more concerned about normative factors associated with his moral legacy. Proving the longevity of Kim's request, former Premier Pak Pong-ju said in 2005 that:

> "Denuclearising the whole Korean peninsula is the great leader Comrade Kim Il Sung's teaching and our republic's final goal. The government of the republic consistently holds fast to its position for resolving the nuclear issue peacefully through dialogue and

[415] B-K Kim, *Step by Step Nuclear Confidence Building on the Korean Peninsula: Where Do We Start?*, Institute for Science and International Security, 23 July 2001, pp. 73–86, pp. 74, at http://www.isis-online.org/uploads/conferences/documents/bkkim.pdf.

[416] By 1989, the ROK Air Force had bought advanced F-16 fighter bombers, which outclassed anything in the North Korean air combat fleet. Similar advancements were also made by the ROK Navy and Army over their DPRK counterparts.

[417] *N. Korea: Weapons Are to Protect from U.S.*, Fox News, 11 July 2005, at http://www.foxnews.com/story/0,2933,162121,00.html.

> negotiation, and it will strive tirelessly to realize the denuclearization of the Korean peninsula."[418]

Subsequently, Kim Jong Il stated in a 2011 interview that:

> "The denuclearisation of the Korean peninsula is a testament of the great President Kim Il Sung, and it is the invariable position of the government of our Republic. [. . .] Resuming the Six-Party Talks without preconditions [. . .] and thereby implementing the denuclearisation of the entire Korean peninsula, this is the unchangeable and high-principled position of ours."[419]

Despite countervailing rhetoric, it is evident that, DPRK nuclear disarmament is still a desired norm and underpins future disarmament progress by upholding the belief that nuclear arms are fundamentally undesirable.

Additionally, "face," or reputation, should not be discounted in East Asian politics, especially for the authoritarian Pyongyang regime, which places a premium on how much the external world respects the "great leader" (*suryŏng*). Even if the international community might see the Kims as rogue leaders, the regime does not see themselves that way and would welcome the prestige of a successful nuclear disarmament deal. Certainly, the DPRK's leaders are cognizant that resolution of the nuclear weapons proliferation issue is a principal means to win legitimacy and maintain access to the international community.

In the face of Pyongyang's nuclear arms development intransigence, it would be difficult to believe that the Kim family could subscribe to non-proliferation norms. However, Pyongyang's behaviour in 1991 along with the

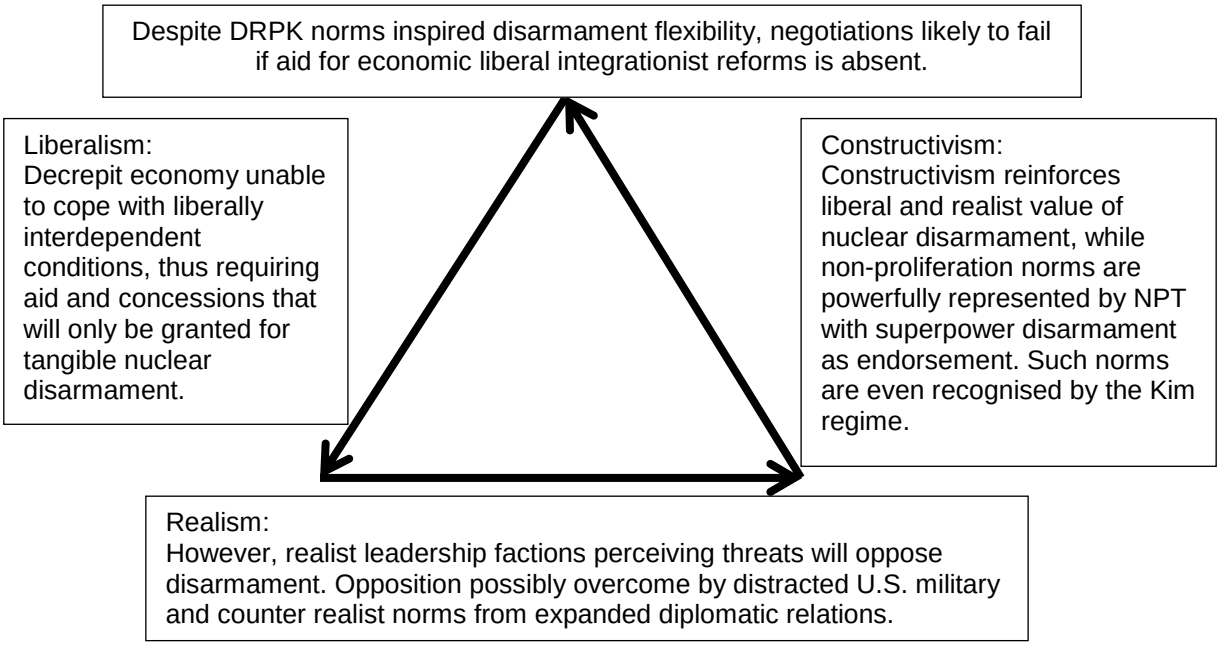
[418] *Text of North Korean PM's Anniversary Speech*, Access My Library, 12 September 2005, at http://www.accessmylibrary.com/article-1G1-136108913/text-north-korean-pm.html.
[419] *Kim Jong Il Grants Interview for First Time in over Nine Years*, ITAR-TASS, 19 October 2011, sourced from http://www.itar-tass.com.

statements of DPRK apex leaders in 1994 and 2005 do help to account for leadership support in the optimistic 2007-2008 period, while Kim Jong Il's promotion of nuclear disarmament norms in 2011 provides hope that Kim Jong Un might be willing to strike a grand denuclearisation bargain.

6.10 Constructivism, Realism and Liberalism in a North Korean Nuclear Disarmament Model

Inasmuch as the previous sections have established the efficacy of liberalism, realism and constructivism as piecemeal drivers of North Korean nuclear disarmament measures from 2007 to 2008, it can be shown that these theoretical dimensions feed into one another in an overlapping tripartite DPRK disarmament model, as shown in Diagram 10.

Diagram 10: Tripartite North Korean Nuclear Disarmament Model



Revisiting the liberal analysis of North Korean nuclear disarmament motivations, Pyongyang became increasingly desperate due to economic decay caused by loss of support from socialist patrons in the early 1990s, and natural disasters from 1994 to 1997, wrecking agriculture and crippling power generation capacity. When coupled with decaying transport, communications

and industrial infrastructure, it was obvious that the DPRK was unable to survive in a liberally interdependent global economy.

Accordingly, Pyongyang used the 2006 nuclear test to set up negotiations, quite possibly supported by economic reformists, which won the DPRK fuel aid to sustain the agricultural sector and export industries, and delisting as a terrorism sponsor, which would rehabilitate the DPRK's reputation, improving trade and loan prospects. All of these contributed to North Korea's economic sustainability, given liberally interdependent realities.

Yet, even as nuclear disarmament to effect economic reforms, serves North Korea interests in the long run, conservative realist factions within Pyongyang would resist such disarmament unless security threats are addressed. Coincidentally, a less conflictual security environment presented itself to the DPRK, courtesy of U.S. foreign policy, when the latter invaded Afghanistan in 2001 and Iraq in 2003. With U.S. forces preoccupied, there was less military power available for Washington to coerce Pyongyang, easing the Kim regime's realist concerns and allowing some breathing room for the nuclear disarmament compromises seen from 2007 to 2008, which were partially intended to ameliorate the U.S. threat.

Additionally, the rekindled diplomatic links with China and Russia, and new relations with European Union states, amongst other countries from 1999 onwards, implied a change in policy away from a realist siege mentality and towards amicable international relations. Accordingly, Pyongyang might well have decided to adopt a more agreeable nuclear policy so as to validate the faith that other countries had in the former.

With respect to moral constructivism, this contributes to the explanatory efficacy of the abovementioned economic liberal interdependence and counter realist frameworks as it is anti-nuclear weapons norms that gives nuclear weapons programmes their value to be exchanged for economic and security benefits. Moreover, moral constructivist anti-nuclear norms deserve analysis because they are buttressed by the weighty ideational influence represented by the NPT, and embodied by START and New START. As evidence of the importance of anti-nuclear arms norms, even Kim Il Sung and Kim Jong Il expressed nuclear non-proliferation and disarmament norms with declarations pledging to work towards the denuclearisation of the Korean peninsula, thereby helping account for disarmament progress seen from 2007 to 2008, and suggesting hope for future denuclearisation.

Lastly, constructivism feeds back into economic liberal interdependence as the DPRK is unable to independently survive liberal economic realities, requiring much external aid and assistance. Even if North Korean nuclear disarmament can be given fresh impetus by a moral constructivist disarmament epiphany on the part of Kim Jong Un, disarmament negotiations will flounder if the DPRK's liberal economic interdependence reforms are not assisted with appropriate compensation.

When examining the drivers for Pyongyang's nuclear weapons policy, it bears mentioning that they are similar to both the South African and Ukrainian cases. This is because the DPRK's nuclear development/disarmament framework also factors in changes in the emphasis on independent variable realist and constructivist policy inputs, as well as shifts in economic policy focus over time, leading to an altered dependent variable, which for North Korea was

substantial nuclear disarmament progress from 2007 to 2008. The changes were:

1) The decreased realist salience of the U.S. threat, despite statements made during the Cold War and Nuclear Posture Review, due to the diversion of overall U.S. strategic power to Afghanistan and Iraq from 2001 onwards. Additionally, the greater diversity and expansion of the DPRK's foreign relations probably helped partially dispel its realist siege mentality.
2) The two-faced nature of economic liberal interdependence drivers for nuclear proliferation and disarmament. These are two sides of the same coin involving the use of nuclear crises to bargain for economic concessions. The difference is that repeated nuclear arms brinkmanship pushes the DPRK up the nuclear munitions development ladder while successful implementation of disarmament *quid pro quos* effects economic liberal interdependence reforms, giving Pyongyang a stake in actualising nuclear roll-back.
3) Despite the probable use of the USSR and PRC as constructivist nuclear arms legitimising models, the innate deterrence and prestige value of nuclear arms, and the nuclear development norm supported by *Juche*, it was the non-proliferation norms influence of the NPT, and the moral momentum of U.S.-Russian nuclear disarmament that might have swayed Pyongyang towards nuclear disarmament compromises.

Thus, the trilateral realist-liberalist-constructivist structure explaining nuclear weapons policy is able to survive major shifts in policy orientation from pro-development to disarmament advocacy. In other words, nuclear munitions

development and disarmament are highly contingent decisions and this further validates the eclectic interlinked tripartite framework.

The next and last chapter of this dissertation will analyse the tripartite theory nuclear arms policies of South Africa, Ukraine, and North Korea so as to identify critical commonalities, and derive policy relevant realist-liberalist-constructivist models governing both nuclear weapons development or retention and disarmament or relinquishment. These two models will be applied to the most recent developments of the North Korean nuclear saga to evaluate the probability of future disarmament, and propose a denuclearisation compromise package with a decent chance of success.

Chapter Seven – Conclusion: Policy Relevant Tripartite Theory Nuclear Policy Models and their Application to North Korea and Iran

7.1 Common Realist Elements underpinning South African, Ukrainian and North Korean Nuclear Weapons Retention or Development

Comparing the South African, Ukrainian and North Korean case studies, it can be shown that significant realist commonalities exist across their nuclear arms development/retention motivations.

As with the other exemplars, the South African nuclear weapons programme had a national security based impetus, driven by a defensive realist need to achieve a classical realist balance of power against superpower supported adversaries. In Pretoria's case, its *apartheid* policies brought it into direct conflict with Soviet supported states on its northern frontier, namely Cuban reinforced Angola and Mozambique, which backed SWAPO and sheltered the ANC respectively. Additionally, Pretoria's egregious abuses against black South Africans lead to unilateral British and American weapons embargoes in 1962 and 1963 respectively, while international opposition to South African control of Namibia resulted in a global arms embargo implemented in 1977. Therefore, from Pretoria's perspective, it was fighting the Southern African front of the Cold War without the benefit of any interdependent security relationships with great powers, whilst being deprived of external materiel support, even as its enemies were buttressed by the USSR. When viewed via realism, the resultant siege mentality amongst the South African leadership lead by P. W. Botha, who had pro-nuclear munitions proclivities,

would justify the defensive realist rationale behind the 1979 decision to build seven nuclear bombs.

Turning to Ukraine from 1991 to 1994, the realist reasons sustaining the arguments of pro-nuclear arms retention factions are similar to the motivational drivers fuelling South African nuclear bomb development. Concerning national security threats which would be deterred by the defensive realist retention of nuclear weapons, Kiev had to contend with potential Russian expansionism. Apart from Russia's traditional disdain for Ukrainian independence, there were fears that Russia intended to annex Ukraine. This was backed up by comments made by then Russian foreign minister, Andrei Kozyrev downplaying Ukrainian statehood and asserting that the latter's defence should be solely handled by Russia. Thus, concrete worries over losing its newfound statehood lent credibility to calls for nuclear weapons retention as a classical realist means to balance Russian military might and deter the latter from quashing Ukrainian self-determination.

Also, like Pretoria, Kiev could not rely on any allies or interdependent security relationships to provide defensive realist assurances against Russian aggression, since expedited NATO or EU membership was impossible, so soon after independence following the USSR's liquidation. Furthermore, existential anxiety supporting pro-nuclear weapons norms was reinforced by overwhelming conventional Russian military superiority *vis-à-vis* Ukraine, without the prospect of being able to rapidly build up defences to achieve even partial parity. All of these factors buttressed the case for nuclear arms retention championed by minority *Rada* lawmakers.

Regarding North Korea, its realist narrative to pursue nuclear armament shares common ground with South African and Ukrainian pro-nuclear weapons sentiments. Referencing the existential threat justifying the defensive realist adoption of nuclear munitions, analysis reveals that the Kim regime, to varying extents, still perceives a state of war with the U.S.-ROK alliance. This threat backed up by U.S. military preponderance was made more worrying by U.S. statements and plans in 1975 and 2002 respectively, that Washington was prepared to authorise nuclear strikes against North Korea. Moreover, as the U.S. shows no sign of being willing to sign a peace treaty with the DPRK to formally conclude the 1950 – 1953 Korean War, and American political opinion still expresses strong disdain for Pyongyang, the latter has persistently chosen to adopt the risk adverse posture of nuclear deterrent development as insurance against U.S. belligerence.

As for the lack of interdependent security relationships and the inability to attain a classical realist balance of conventional military power against its adversaries, the end of the Cold War left North Korea with the PRC as its sole remaining ally. When coupled with uncertainty that Beijing would actually honour nuclear umbrella coverage over the DPRK, it can be reasoned why Pyongyang doggedly sought the strategic reassurance of its own nuclear warheads. This argument also gains credibility as North Korea could not match the ROK's growing military sophistication, to say nothing of the U.S., relegating the DPRK to inferiority in the balance of power, which the Kim regime would not tolerate, possibly reinforcing its pro-nuclear attitude.

Correspondingly, across the South African, Ukrainian and North Korean cases, it can be seen that 1) strong military threats from superpowers or

superpower supported client states, 2) the lack of allies to ensure a more even balance of power, 3) the inability to achieve conventional classical realist military parity, and 4) pro-nuclear weapons leadership or leadership elements, are the principal realist reasons why nuclear weapons are developed or their retention promoted.

7.2 Economic Liberalist considerations supporting Nuclear Weapons

Examining the three central case studies, it is evident that they do not share identical economic counter liberal interdependence rationalisations substantiating nuclear armaments development. While South Africa and Ukraine could depend on economic autarkic potential to support nuclear weapons proliferation, North Korea was far from self-reliant, and advanced its nuclear programme both as a coercive negotiative tool to extract economic aid, and to exert realist deterrence. However, despite differences between the economic explanations supporting pro-nuclear arms motivations, it will be later elaborated that these case study findings can prove useful when assessing the likelihood of North Korean denuclearisation.

When addressing economic counter liberalist arguments favouring nuclear munitions, economic autarkic resilience becomes useful, as warhead development or retention usually attracts isolative sanctions forcing self-reliance. For South Africa, its economy's strength and diversity even in the late 1970s, meant that there was sufficient autarkic capacity to withstand economic censure if its atomic warheads were discovered. Fundamentally, South Africa was well endowed with natural resources and could manufacture necessities. Also, economic statistics reveal that Pretoria was able to weather the political costs of rising unemployment and inflation from anti-*apartheid* sanctions,

implying that economic nuclear proliferation penalties could similarly be shrugged off.

Next, the influence of the South African military under President Botha might have encouraged an elite mindset prepared to forgo the benefits of liberally interdependent commerce, since the military's power would be better preserved under insular and autarkic conditions, indirectly leading to support for nuclear munitions as economic sanctions would be less politically impactful.

As for Ukraine, it shared similar political-economic traits, which strengthened the debating position of minority pro-nuclear arms factions in Kiev. Like Pretoria, Kiev directed an economy which had autarkic potential as it had a capable agricultural sector, modern industries and even coal and hydroelectric power. Thus, though Ukraine was significantly dependent on nuclear power generation, it could maintain a subsistence economy if subjected to economic sanctions for nuclear warhead retention.

Also, like South Africa, Ukraine had political factions who were uncomfortable with economic liberal interdependence, and would have been prepared to champion nuclear munitions retention despite economic censure. These were former Soviet industrial and political elites who preferred to preserve the political-economic system and maintain their societal status rather than embrace liberally interdependent global realities. Their support for nuclear arms retention was a by-product of this conservatism, and any counter proliferation enforced autarky would have been tolerated by a population used to Soviet poverty and economic insularism.

Referencing counter liberalist norms and leadership, the same ex-Soviet leaders would have found it difficult to relinquish deeply ingrained communist

indoctrination advocating state regulation of international trade and prohibitions against foreign economic participation. Consequently, many of Kiev's elites including parliamentarians would have been resistant to international liberal economic interdependence, and its benefits would have little influence convincing them to subscribe to nuclear arms relinquishment.

However, North Korea is different and analysis reveals that it was not counter liberalist autarkic potential that promoted nuclear warhead development decisions, but rather the lack of self-sufficiency and inability to cope with the liberally interdependent environment, which led to advancement of nuclear proliferation as a form of coercive bargaining. Notwithstanding Pyongyang's perception of nuclear weapons as a guarantee against foreign aggression, economic collapse would also be equally threatening. Hence, with little else that was prized by the international community, Pyongyang used nuclear arms escalation to bargain for economic concessions facilitating liberally integrative economic survival.

Essentially, worsening trade figures upon cessation of socialist bloc economic aid in 1991 indicated that North Korea was importing far more than it was exporting. The economy was unable to provide essential goods, proving autarkic failure, while being unable to earn foreign currency as the DPRK's products were unwanted, evincing inability to adapt to global liberal economic interdependence. Consequently, the overpowering of export revenue by import expenses implied the depletion of North Korean foreign currency reserves, and the eventual sale of the DPRK's productive capital to pay import bills. This meant not only the eventual relegation of North Korean international commerce

to inefficient barter trade but the ultimate decay of the DPRK's capability to export its way out of economic decrepitude.

But despite the fact that nuclear rogues are shunned in the global economy, precluding them from liberal interdependence benefits due to global non-proliferation norms, Pyongyang instigated nuclear crises that not only entrenched the DPRK's nuclear status but also promoted its demands for economic benefits as a disarmament pre-condition in later denuclearisation negotiations. A good example of coercive nuclear bargaining, to obtain concessions for promoting liberally interdependent economic subsistence, was the 1994 Korean nuclear crisis. Essentially, the Kim regime instigated the 1994 nuclear crisis and signed the 1994 Agreed Framework in order to receive proliferation resistant light water nuclear reactors for energy generation, generous annual fuel aid, and the normalisation of U.S.-DPRK economic relations. Consequently, the fuel aid would have eased North Korean import expenditure as this necessity would not have to be bought, the nuclear reactors would help power the export sector to improve trade competitiveness, and better commercial ties with the U.S. would brighten trade potential.

But upon returning to the assessment of counter liberalist norms and leadership as a motivator for North Korean nuclear development, similarities can once again be seen between the normative leadership frameworks of Pretoria, Kiev and Pyongyang. Like the former two cases, conservative factions that regarded liberal economic interdependence as detrimental to their interests did possess and exercise influence within the Kim regime. Therefore, to account for counter liberal leadership norms driving periods of nuclear intransigence, it would help to understand that the Kim regime derives support from the military,

which backs nuclear weapons as they enhance the prestige of the latter as nuclear arms operators, while preserving military claims over economic resources. Simply put, economic sanctions punishing nuclear proliferation actually serve military interests, as economic restructuring facilitating business with liberally interdependent economies would be rendered moot, allowing the military to retain their claim to national resources. Hence, the military indirectly bolsters North Korean nuclear proliferation, as shown from media rhetoric in chapter 6.

Summarising the role of liberal economic interdependence in nuclear weapons development/retention, it can be concluded that nuclear weapons aspirants either have autarky capable economies able to weather nuclear proliferation sanctions, or lack economic self-sufficiency coupled with the inability to adapt to the interdependent world economy, subsequently using nuclear proliferation as a coercive economic negotiation tool. When addressing counter liberalist norms and leadership favouring nuclear armament, all three case studies reveal that conservative leadership factions, either former authoritarian communists or military would support pro-nuclear norms because any insularism enforcing economic sanctions would preserve their prestige and economic influence. Correspondingly, the ineffectiveness of sanctions for coercing changes in foreign policy, given the ability to shift the economy towards greater autarky,[420] and the need to uphold nationalist credentials amongst the leadership of the targeted nation,[421] can be seen in the current

[420] Richard Connolly, *How harsher sanctions could help Putin turn Russia back into the Soviet Union*, The Conversation, 24 July 2014, at http://theconversation.com/how-harsher-sanctions-could-help-putin-turn-russia-back-into-the-soviet-union-29615.

[421] Abdelmalek Alaoui, *From Russia to Africa: Why Sanctions are Ineffective Against Toxic Leadership*, 24 February 2015, at http://www.forbes.com/sites/abdelmalekalaoui/2015/02/24/from-russia-to-africa-why-sanctions-are-ineffective-against-toxic-leadership/.

ineffectual sanctions against elements of Russia's leadership, for its regional military adventurism.

7.3 Moral Constructivist Legitimisation of Nuclear Weapons

Arguably, Pretoria, Kiev and Pyongyang all share common traits regarding the moral constructivist legitimisation of pro-nuclear arms norms by certain leadership factions. Essentially, they were influenced or inspired by the example set by pre-existing nuclear armed states, exercise independent agency or perception of an existentially threatening structure or environment, and have leadership backing for nuclear munitions that was either implied (South Africa), enjoyed support from various quarters (Ukraine) or openly enunciated (North Korea).

Examining South Africa, it is posited that its principal ally, Israel influenced pro-nuclear arms norms in the former as Pretoria regarded the Israelis as having identical strategic mindsets. If Tel Aviv selected a nuclear deterrent to render an Arab onslaught unfeasible, it would be morally justifiable for Pretoria to develop atomic weapons against an overwhelming black assault. Inasmuch as Israel was prepared to facilitate South African nuclear development, this also implied the former's endorsement of normative legitimacy for the latter's atomic warheads.

Turning to the structure and agency supporting South African nuclear norms, Western strategic abandonment and being cornered in Southern Africa by hostile Soviet client states with limited strategic depth[422], presented a structure which according to Pretoria's exercise of agency, was threatening to national security. When exacerbated by the perceptual fear that South African

[422] Strategic depth refers to the extent to which a state can withdraw its military into its own territory in order to regroup and launch a counterattack on invading forces after suffering initial setbacks.

resources would be unable to sustain heightened defence spending, this structure-agency combination promoted the self-defence based moral constructivist legitimacy of pro-nuclear norms.

As for leadership and pro-nuclear norms, Prime Minister Botha's leadership of the committee that approved nuclear warhead building, his fixation with national security (of which nuclear arms make the ultimate guardian), and his authoritarian leadership all point to his approval of nuclear weapons legitimacy. Indeed, his moniker as "patron saint" of the South African nuclear armaments programme is ample proof.

Moving onto Ukraine, similarities can again be seen as former Soviet elites would have been influenced by the legitimacy of the USSR's nuclear arsenal, believing that their inherited nuclear munitions should also be seen as proper because Ukraine was a Soviet successor state. Also, another Soviet legacy propping up moral constructivist pro-nuclear norms, was the deterrence and prestige benefits from owning nuclear armaments, as retaining part of the deference and respect given to the USSR was attractive to certain quarters in Kiev.

Analysing the roles of structure, agency and leadership accounting for minority belief in pro-nuclear retention norms in Ukraine, it can be illustrated that the structure facing the aforementioned is also similarly threatening, like the environment that Pretoria faced. Crucially, there exists a historical structure interpreted via agency which incorporates traumatic institutional memory. Specifically, the millions of Ukrainians killed or enslaved by the Germans in World War Two, along with the hundreds of thousands who were slaughtered due to post war Soviet vindictiveness, would have motivated some

policymakers to subscribe to pro-nuclear retention norms, ensuring Ukrainian self-preservation. This is supported by the fact that a majority of polled political, administrative and commercial elites favoured nuclear weapons retention.

With reference to North Korea, its moral constructivist pro-nuclear norms and nuclear arms development decision was also externally influenced. With the USSR and PRC as models who built nuclear arms without global opprobrium, Pyongyang might have assumed that it could obtain world acquiescence for its nuclear arms. As with the Ukrainian pro-nuclear lobby, the circumspection which the USSR's and PRC's adversaries treated them, and the enduring prestige accorded to Russia despite declining national strength, probably encouraged Pyongyang's nuclear ambition.

Next, there also exist similarities between the structure and agency formation of North Korean pro-nuclear norms and the environment and perception factors applicable to South Africa and Ukraine. Simply put, the DPRK has the U.S. for an adversary, which has resisted signing a non-aggression treaty, reserves the option to deploy nuclear arms against the former, and exhibits clear disdain for North Korea. Furthermore, paranoia and strategic isolation felt by the Kim regime is exacerbated by annual U.S.-ROK military exercises which demonstrate the latter's military preponderance. Assessing the security structure through Pyongyang's exercise of agency, there are no grounds for the DPRK to assume benign U.S. intent, as the latter has enunciated and demonstrated itself to be an acute threat, thereby reinforcing North Korean pro-nuclear norms. Moreover, the DPRK's ideology of *Juche*, which preaches North Korean manifest destiny, bolsters agency driven moral

constructivist nuclear legitimisation, as nuclear munitions are styled as rightful tools defending national interests and sovereignty against difficult odds.

Finally, like Pretoria and Kiev, there exists evidence that Pyongyang endorses pro-nuclear arms norms since the latter openly makes statements as if nuclear warheads are an established part of its military. From implied threats to South Korea in 1994 and 2011, to nationalist comments legitimising the 2006 nuclear test, and a 2013 declaration justifying the value of nuclear enabled self-defence, Pyongyang has signalled that nuclear weapons are a national entitlement.

Holistically comparing the moral constructivist arguments for nuclear arms across the three prime cases, it can be substantiated that pro-nuclear arms norms were 1) encouraged via positive overseas influences from allies or admired patron/model states, 2) fostered by a hostile structure characterised by historical trauma or clear and present danger, and reacted to by agency perceiving existential peril, and 3) supported by prominent leaders, backed by certain factions and openly endorsed by the government.

The next section will synthesise the generic security based realist, economic liberalist and moral constructivist drivers of nuclear proliferation into a framework for evaluating the likelihood of nuclear arms development or retention. This will then be applied to North Korea to assess future nuclear disarmament potential.

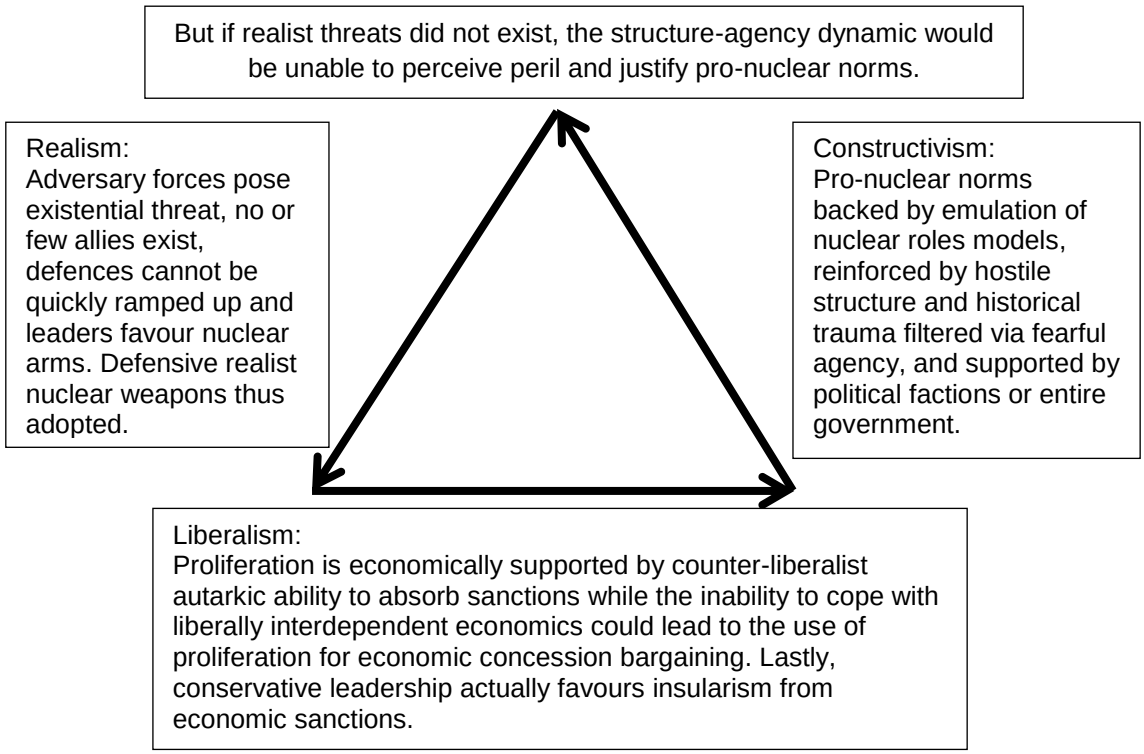
7.4 A Realist, Liberalist and Constructivist Framework assessing the likelihood of the DPRK's Nuclear Disarmament

The key factors fuelling nuclear arms programmes or weapons retention are represented by Diagram 11 below. Basically, overwhelming military threats

without the assurance provided by interdependent ally relationships, and the inability to domestically expand defence capabilities to effect classical realist balance vis-à-vis enemy states, are the main reasons why political leaders or factions advocate defensive realist nuclear arms building or retention policies.

However, national security is not the only consideration as a functioning economy is equally important. Hence, nuclear proliferants either possess autarkic capabilities enabling them to weather counter-liberal interdependence economic sanctions coercing nuclear disarmament, or have non-autarkic economies but plan to use nuclear proliferation to bargain for benefits facilitating survival in the liberally interdependent global economy. Additionally, conservative leadership elements would back pro-nuclear norms because economic sanctions would impose counter liberalist insularism, strengthening their status and claims to local resources.

Diagram 11: Consolidated Framework Assessing Nuclear Proliferation



But even as realist and economics based liberalist circumstances favour nuclear proliferation, the decision to build/retain nuclear weapons requires a mindset that subscribes to the moral constructivist legitimacy of pro-nuclear norms. Such norms are cultivated by a desire to emulate other nuclear armed states, promoted by a threatening structure incorporating historical trauma and perceived through agency anxious about state survival, and directly or indirectly advocated by national leaderships or political elements. Interestingly, the constructivist angle feeds back into realism as the lack of a realist threat will deprive fearful leaders of a dangerous structure to perceive survivalist anxiety.

Utilising this framework to evaluate the prospects for future North Korean denuclearisation might raise issues of methodological validity, as the DPRK was used in the framework's formulation. However, as the three case studies are the only suitable ones in the international system as explained in chapter 1, this issue is unavoidable.

Beginning with realism, it can be seen that the U.S.-ROK alliance still remains a prime threat to North Korea, as U.S. President Barak Obama has framed the DPRK as an adversary by stating that the latter poses a threat not just to the region but to the U.S. as well.[423] Likewise, the ROK does not seem eager to make peace with DPRK since Seoul rejected Pyongyang's 1 July 2014 proposal to halt all hostile military activities, including U.S.-ROK military exercises by declaring that, "North Korea's proposal is nonsensical and lacks sincerity….North Korea must show sincerity in resolving the nuclear issue, which poses a fundamental threat to peace on the Korean peninsula".[424]

[423] *Obama says North Korea poses threat to region and to U.S.*, Reuters, 25 April 2014, at http://www.reuters.com/article/2014/04/25/us-korea-north-china-idUSBREA3O0T320140425.
[424] *S Korea snubs North's new peace offer as "nonsensical"*, Agence France Presse, 1 July 2014, at http://news.asiaone.com/news/asia/s-korea-snubs-norths-new-peace-offer-nonsensical.

As for the DPRK's dearth of interdependent security relationships or allies, it should be noted that its only treaty ally, the PRC is starting to diplomatically drift away from the former. This can be seen in the summit meeting between President Xi of China and President Park of South Korea from 3 – 5 July where Beijing and Seoul jointly called for the denuclearisation of the Korean peninsula.[425] More importantly, this is a political snub towards Pyongyang as Xi has had two summits with Park while Kim Jong Un of North Korea has yet to meet Xi. This could point towards China's increasing frustration at the DPRK's use of nuclear brinkmanship.

Turning to economic concerns, the North Korean economy has improved over the last year, but given its relative isolation from global commerce and investment, this implies significant PRC economic involvement in the DPRK as China remains North Korea's most impactful trade customer and foreign investor. When coupled with the 2014 food crop reduction due to drought[426] and North Korea's persistent inability to feed its population due to natural disasters or economic mismanagement, it can be reasoned that the DPRK has not managed to adapt to liberally interdependent global economic realities, and still faces potential collapse without Chinese help or external aid. Hence, it is clear that self-sufficient autarky ***à la* South Africa or Ukraine is unachievable** and sustained economic progress elusive.

Lastly, influential factions in Pyongyang still subscribe to the moral constructivist legitimisation of pro-nuclear norms since the National Defence Commission of the DPRK appealed to the ROK not to be alarmed with North

[425] *China, South Korea summit pushes North over nuclear weapons*, Agence France Presse, 3 July 2014, at http://news.asiaone.com/news/asia/china-s-korea-summit-pushes-north-over-nuclear-weapons.
[426] James Pearson, *North Korea army mobilized as rivers run dry in worst drought in years*, Reuters, 23 June 2014, at http://www.reuters.com/article/2014/06/23/us-northkorea-drought-idUSKBN0EY0ZC20140623.

Korean nuclear munitions, claiming that they were a "valuable common asset".[427]

Evaluating North Korean denuclearisation prospects, it can be reasoned that the DPRK is unlikely to give up its nuclear weapons but might engage in nuclear brinkmanship in order to bargain for economic concessions. However, denuclearisation need not be written off as negotiations which tangibly and conclusively address Pyongyang's realist fears, liberalist needs and constructivist considerations, could still preserve hope of effecting nuclear arms relinquishment.

7.5 Realist Similarities uniting South African, Ukrainian and North Korean Nuclear Disarmament

To tailor a negotiative approach that has a fighting chance of denuclearising North Korea, the common factors driving South African nuclear disarmament, Ukrainian nuclear arms relinquishment and North Korean nuclear policy compromise should be analysed to derive a common disarmament framework.

Regarding realism, analysis indicates that after the South African military fought Soviet and Cuban supported Angolan forces to a stalemate from 1987 to 1988, both sides realised that neither could win a decisive victory. When coupled with waning Soviet support due to exhaustion from Moscow's war efforts in Afghanistan, and the impending end of the Cold War, Pretoria, Luanda and Havana decided that it was in their best interest to sign a peace agreement in New York on December 1988. As the New York Accords provided for the exit of all foreign forces from Angola and independent statehood for Namibia, South

[427] *S Korea snubs North's new peace offer as "nonsensical"*, Agence France Presse, 1 July 2014, at http://news.asiaone.com/news/asia/s-korea-snubs-norths-new-peace-offer-nonsensical.

Africa no longer had to deal with an internal security threat from SWAPO (as they eventually became the government of Namibia) nor the fear of a Soviet backed combined Angolan-Cuban assault. Hence, the principal invasion threats to South Africa receded and Pretoria's nuclear warheads lost their defensive realist rationale.

Also, while the end of SWAPO, Angolan forces, and Cuban troops as realist threats made the lack of interdependent security relationships irrelevant, the subsequent apartheid abolition negotiations opened the possibility for reintegration into the international community, which required nuclear weapons programme decommissioning.

As for counter proliferation norms and President De Klerk's leadership in effecting South African nuclear disarmament, the dramatically improved realist paradigm helped weaken pro-nuclear norms, which allowed De Klerk, who espoused non-proliferation values, to resolutely and expeditiously decommission Pretoria's nuclear arms programme. If pro-nuclear leaders like P. W. Botha were still in office, nuclear disarmament would have been resisted.

Turning to Ukraine, the amelioration of the Russian threat was a major realist pre-condition that had to be met before nuclear relinquishment could be approved by Kiev. With the neoclassical realist inability to even partially match Russia's overwhelming military strength, Ukraine's inherited nuclear munitions became a defensive realist assurance against Russian expansionism. Hence, if aggression from Moscow could be precluded, nuclear arms relinquishment could be achieved.

Considering this, one of the interdependent mechanisms which won Kiev's nuclear disarmament consent was a joint agreement on security, compensation

and assistance which was signed in Moscow on 14 January 1994. One of the *quid pro quos* of the agreement was that all nuclear weapons in Ukraine would be transferred to Russia for decommissioning in return for security assurances that Washington and Moscow would give Kiev once the Ukrainian *Rada* ratified START and joined the NPT. As these latter obligations were fulfilled on February and November 1994 respectively, Ukraine received security assurances not only from the U.S. and Russia but also from Britain, France and China.

But even if realist threats could be discounted, the importance of counter realist norms needs to be examined. Basically, the aforementioned security assurances helped to supress the influence of deterrence based realist norms, while promoting counter realist norms supporting non-proliferation, based on a threat reduction rather than threat balancing realist outlook.

Lastly, nuclear relinquishment depends on leadership cooperation. Inasmuch as the South Africans had De Klerk as their disarmament leader, the Ukrainians needed both their executive branch leaders (President Kravchuk and his ministers) to propose relinquishment as well as the legislative branch (parliament) to approve it. Based on detailed language used by the *Rada* when it ratified START in 1994, the objective of obtaining security assurances so as to protect sovereignty and independence was very important. Hence, the value of nuclear arms for defensive realist purposes needed to be replaced by the contractual worth of security assurances.

Referencing North Korea, it too adopted an alternative realist mindset involving threat reduction via exchanging nuclear non-proliferation measures for improved relations with its adversaries. Instead of balancing against the U.S.

threat by developing a nuclear deterrent, from 2007 to 2008, Pyongyang choose to freeze its nuclear weapons programme, demolish a cooling tower at the sole North Korean nuclear reactor capable of producing bomb making plutonium, and revealed confidential nuclear programme documents to the U.S., in return for fuel aid and removal from Washington's State Sponsors of Terrorism list. Delisting as a terrorism sponsor would give U.S. lawmakers less reason to recommend coercive measures against the DPRK and represent a de-escalation of U.S.-DPRK tensions.

Next, it is posited that North Korean denuclearisation flexibility from 2007 to 2008 was at least partially due to a weakened U.S. threat from 2001. Following the *Al Qaeda* attacks on 11 September 2001, the U.S. lead an invasion of Afghanistan against its *Al Qaeda* sheltering Taliban government. Subsequently, in March 2003, another U.S. lead coalition invaded Iraq on grounds that Baghdad was building WMDs. From Pyongyang's viewpoint, the U.S. military was distracted by two major campaigns and would be strapped for resources to initiate belligerence. Correspondingly, the classical realist balance of power on the Korean peninsula was more favourable to North Korea, and it seemed advisable to negotiate denuclearisation compromises with the U.S. in 2007, instead of in the future when Washington was less pre-occupied.

Additionally, an interdependence related factor which possibly contributed to Pyongyang's disarmament flexibility was the reality that North Korea had to rekindle old relationships with China and Russia, and establish new international links in order to avoid diplomatic isolation, which lead the DPRK to establish relations with Italy, Australia and the UK among others from 2000 to early 2001. As such, the Kim regime's receptivity to disarmament compromise

in February 2007 so soon after the October 2006 nuclear test, could have been due to the need to validate the foreign policies of those states that befriended North Korea while complicating efforts to assemble an anti-DPRK coalition.

Lastly, classifying attempts to secure national security via the exchange of disarmament for diplomatic and economic normalisation, as manifestations of counter realist norms, it can be seen that at some level, Pyongyang's leadership does recognise counter realist norms supporting military denuclearisation. The Joint Statement of Principles signed by the Kim regime in 2005 serves as proof of this, because the DPRK agreed to complete nuclear disarmament and resumption of NPT membership in exchange for normalised relations with the U.S. and Japan, a peace treaty concluding the Korean War and negotiations on LWR provision. Despite the Statement not being implemented because Pyongyang insisted on being given LWRs before disarmament, and North Korea anger due to the U.S. instigated freeze of US$25 million of the former's funds in Macao, the fact that Pyongyang signed the Statement even after the acrimonious dissolution of the Agreed Framework in 2002, indicates DPRK leadership faith in the virtues of swopping disarmament for threat amelioration. Also, factoring in the 2006 nuclear test as a demonstration to reinforce negotiative weight, the substantive disarmament progress from 2007 to 2008 can be seen as a substantiation of counter realist norms exchanging denuclearisation (the partial demolition of the Yongbyon reactor), for threat diminishment (delisting the DPRK as a terrorism sponsor).

Comparing the realist analysis of South Africa, Ukraine and North Korea in order to discern similarities useful for policy relevant analysis, all three cases exhibit a substantial weakening of the realist threat from their chief adversary,

leading to the lessened relevance of nuclear weapons as a classical realist balancer/deterrent. Hence whether it was 1) peace through a signed accord with Soviet backed Angola along with Angola's Cuban ally in South Africa's case, 2) security guarantees given by Russia and the U.S. to Ukraine, or 3) trading nuclear disarmament measures for concessions denoting lessened hostility while the adversary is militarily preoccupied from Pyongyang's perspective, nuclear armaments lose their defensive realist *raison d'etre* without an overpowering enemy to confront. Also, the diminished existential peril led to situations where counter-realist norms emphasising threat reduction rather than threat balancing, fostered nuclear disarmament outcomes, as in the Ukrainian and North Korean cases, while in South Africa, a less virulent realist environment encouraged non-proliferation norms championing nuclear weapons decommissioning. Specifically, 1) the security assurances given to Ukraine allowed threat reduction based counter-realist norms to gain prominence, creating a milieu where the Ukrainian *Rada* felt secure enough to approve executive branch proposed nuclear relinquishment, while 2) proof that Pyongyang possesses counter realist norms can be seen in the Joint Statement of Principles signed in 2005 where it agreed to nuclear disarmament in exchange for peaceful relations with the U.S. and Japan along with LWRs. 3) As for South Africa, a degraded realist threat allowed non-proliferation norms advocates like President De Klerk to rapidly implement military denuclearisation.

7.6 The Economic Liberal Interdependence Commonalities within South African, Ukrainian and North Korean Nuclear Disarmament Policy

Examining the disarmament phases of all three exemplars, it can be seen

they experienced economic difficulties which were best remedied by cooperation with the liberally interdependent world economy. However, since nuclear non-proliferation norms would preclude participation in and benefitting from liberal economic integration, each case analysed below implemented either complete nuclear disarmament or steps towards nuclear arms relinquishment, so as to promote economic sustainability.

With emphasis on South Africa, the economic sanctions imposed due to *apartheid* had a deleterious effect, slowing foreign investment and hobbling export prospects, notwithstanding the pre-existing logics of autarky. When coupled with the financially draining counterinsurgency campaign against SWAPO in Namibia, and support for RENAMO and UNITA rebels in Mozambique and Angola respectively, not to mention the cost of combat operations in Angola, the South African economy was shackled and stunted. Without cheaper imports or the opportunity to export and provide jobs in internationally competitive industries, the autarky imposed on South Africa was fostering economic decay. Correspondingly, the nuclear weapons programme needed to be eliminated so as not to hinder any future liberally interdependent economic benefits.

Regarding the South African nuclear sector, its nuclear weapons programme prevented South Africa from joining the NPT, which would have given it economically advantageous access to peaceful nuclear energy technology, and provided opportunities to export uranium for crucial foreign currency. Moreover, nuclear arms elimination and NPT membership would enable the importation of affordable nuclear fuel for South African nuclear reactors reinforcing the electrical grid. As for the non-nuclear economy, military

denuclearisation would facilitate the export of globally competitive products like agricultural goods and technologically advanced defence equipment. With access to world markets and foreign investment in the liberally interdependent world economy, South Africa could be a competitive export partner and foreign exchange earner, *sans* possession of nuclear munitions.

But other than the need for economic recovery, the efficacy of liberal economic interdependence to effect such recovery, and the incompatibility of nuclear proliferation with these two factors, there remains the issue of analysing liberal interdependence norms and leadership as drivers of South African atomic disarmament. With reference to Pretoria's disarmament dynamics, it can be proven that such norms and De Klerk's leadership were interlinked. From his writings and speeches, it can be substantiated that he was focused on economic recovery to better the lot of South Africans, convinced that liberal integration with the world economy was the acceptable way to achieve this, and believed that nuclear weapons prevented South Africa from realising its full potential via mutually beneficial economic links.

Perceiving Ukrainian nuclear disarmament through liberal economic lenses, it shares commonalities with South Africa in that economic malaise provided the impetus for disarmament, via the economic compensation which would facilitate liberally interdependent economic revitalisation. While Pretoria confronted economic stagnation brought on by anti-*apartheid* sanctions, Kiev dealt with a moribund economy, supressed by decades of Soviet mismanagement, which struggled with liberally interdependent commercial realities.

With this in mind, Kiev attached much importance to receiving fair economic aid and compensation in return for nuclear arms decommissioning/relinquishment, to promote economic restructuring for internationally competitive trade and foreign investment attraction. To illustrate the Ukrainian need for economic *quid pro quos* to approve nuclear disarmament, it should be noted that Ukraine received at least $770 million in aid from the U.S. and 100 tons of LEU fuel from Russia before the *Rada* was willing to unconditionally ratify START and approve Ukrainian NPT membership in 1994. Hence, not only did Ukraine acquire resources to buttress industrial survival for participation in the interdependent global economy, the compensation for disarmament progress also establishes an interdependent relationship between the great powers (U.S. and Russia) on one hand and Ukraine on the other, with the former depending on the latter to disarm in good faith, while the latter depends on the former valuing disarmament sufficiently to grant concessions and compensation.

Lastly, it would round off analysis into the role of economic liberal interdependence in Ukrainian disarmament, if the presence and impact of liberally interdependent norms and leadership could be clarified. From available evidence, it can be inferred that Kiev followed liberal economic interdependence norms as they fulfilled national objectives by fostering economic progress. Such norms were then connected to non-proliferation policy because global norms frowned on nuclear weapons retention, precluding international economic cooperation.

Revisiting the LEU nuclear fuel compensation provided by Moscow, and the millions of US$ in economic aid sent by Washington, the importance of the

LEU compensation and economic aid for reinforcing liberal economic norms, was that the LEU could help ensure power dependability for Ukrainian industry, thus reassuring foreign investors and export customers, while the economic aid could subsidise industrial re-structuring to improve competitiveness in liberally interdependent global trade. These impacted Ukraine's usefulness as an industrial partner and allows inference of leadership subscription to liberal economic norms. Finally, inferential evidence that Kiev understood the link between compensation/aid and non-proliferation norms, can be seen in the *Rada* fully ratifying START in February 1994 and acceding to the NPT in November 1994, which were a mere 1 and 10 months after the joint agreement on security, compensation and assistance was signed in Moscow on January 1994.

Analysing economic liberal interdependence motivations behind North Korean nuclear disarmament compromises, it can be seen that severe economic woes were significantly responsible for the nuclear *quid pro quos* agreed to in early 2007 and carried out until 2008. Apart from the curtailment of vital discounted petroleum from the socialist bloc in the early 1990s, which sent the agricultural sector along with the rest of the economy into a tailspin, North Korea was lashed by catastrophic natural disasters from 1994 to 1997. These destroyed farmland and vital infrastructure along with harvested crops and food reserves, leading to a famine which killed up to 3 million. The famine impaired the DPRK's adaptability to the liberally interdependent global economy as the workforce shrunk, became less productive due to malnourishment and had less capacity to undertake low cost export manufacturing. Furthermore, these natural calamities handicapped North Korean non-petroleum electricity

generation capabilities as hydroelectric facilities were largely damaged, coal mines flooded and coal transportation systems supplying coal fuelled power stations crippled. With an energy dependent economy, this retarded efforts to recover from the aforementioned catastrophes, let alone implement reforms for interdependent international commerce.

But even if North Korea had been spared Mother Nature's wrath, the former's economy was fundamentally ill-suited for international economic co-operation since the DPRK's transport, communications, power and industrial infrastructure was decrepit and in need of urgent upgrades. However, the funding required for such extensive overhauling needed to come from foreign sources such as the World Bank, and in the context of the reciprocative compensation – disarmament process during 2007 – 2008, represents the interdependent relationship between the DPRK and the U.S.-ROK alliance where the former depends on the latter for economic help to cope with liberally interdependent realities, and the latter counts on the former to take steps towards military denuclearisation.

While the substantive denuclearisation steps implemented by Pyongyang can be referenced from chapter 6, the economic significance of the 50,000 tons of fuel that North Korea received, and its removal from the U.S.'s State Sponsors of Terrorism list, bears repeating. Essentially, the fuel helped keep export orientated factories open while allowing agricultural equipment and facilities to remain operational. Thus, the collapse of the DPRK's export revenue could be avoided and the export orientated workforce sufficiently fed to sustain productivity. As for savings from not having to import fuel, these could be used for infrastructure overhauling. Lastly, delisting as a terrorism sponsor helps

improve North Korea's reputation with global lenders like the World Bank, strengthening the former's chances of successfully loaning funds to renovate its crumbling infrastructure, while widening the DPRK's pool of potential trading partners. Factoring in all the benefits received, North Korean could more readily partake in liberally cooperative trade, be more attractive to investments and enjoy a greater likelihood of realising its full economic potential *sans* inactive factories, hungry workers and rotting infrastructure.

Turning to evidence of inferred norms supporting liberal economic cooperation by pro-economic reform factions within the Kim regime leadership, it can be reasoned that such factions succeeded in exercising influence during the 2007 – 2008 period as senior regime figures like the Vice-Premier and even Kim Jong Il, in recent years, expressed support for economic development which can be linked to indirect rationalisations for liberally interdependent economic adaptation. Parsing statements made via Pyongyang's media, it was expressed in October 2002 that economic policy was to be formulated in a "creative manner" under a "changed environment and realistic conditions" and that economic activities had to factor in "new relationships and new rules". Inasmuch as world economic realities dictated that liberal interdependence norms held sway over global commercial relations, such statements could be interpreted as acceptance of such norms by reformist elements in Pyongyang, where open talk of economic liberalism was *verboten*. Additionally, reformist arguments framing economic reform as being on par with military development were made as recently as 2004. As liberal economic adaptation was the only realistic route to economic recovery, these comments were a *de facto* acknowledgment of liberal norms.

When analysis across all three case studies is considered, it becomes evident that economic crisis and the realisation that recovery is only possible via cooperation with the liberally interdependent global economy, sows the seeds of cooperative liberal integrationist intent. Irrespective of whether 1) pre-existing sanctions and military burdens stunted the economy in South Africa's case, 2) Soviet management induced economic impoverishment for Ukraine, or 3) a combination of vital petroleum deprivation, damage from natural calamities and neglect of crucial infrastructure, hobbled the DPRK's economy, Pretoria, Kiev and Pyongyang all knew that nuclear disarmament had to be effected to remove obstacles to liberal interdependence promoted economic reconstruction.

Next, these three nations also understood the interdependent relationship between nuclear disarmament and benefits facilitating liberal interdependence linked economic recovery. Both are intertwined and in most cases, global non-proliferation norms prevented the latter from occurring without obligatory implementation of the former. Hence, 1) the access to electricity generating nuclear technology, affordable nuclear fuel and lucrative export earnings for South Africa, 2) economic aid and nuclear fuel compensation to improve global commerce compatibility for Ukraine, and 3) fuel aid and terrorism list de-stigmatisation to promote economic sustainability and support infrastructure repair in North Korea's case, formed an interdependent link with complete or seriously attempted military denuclearisation.

Lastly, the leaders in Pretoria, Kiev and Pyongyang, to varying extents, all display cognisance of and subscription to liberal economic interdependence based norms as essential to economic revival. Inasmuch as international non-proliferation norms are inextricably linked to interdependent commercial

cooperation, this created a counter proliferation impetus that could not be ignored. The next subsection will address the moral constructivist motivations underpinning nuclear disarmament measures.

7.7 Moral Constructivist motivations underpinning South African, Ukrainian and North Korean Nuclear Disarmament or Compromise

With an eye towards moral constructivist substantiations behind the nuclear demilitarisation of South Africa and Ukraine and the surprising disarmament compromises agreed to by Pyongyang from 2007 to 2008, basic congruence can be detected as will be elaborated below.

For South Africa, having F. W. de Klerk in charge meant that there was a focus on denuclearisation norms within the executive branch where none previously existed under P. W. Botha. From De Klerk's statements championing nuclear disarmament and his decisions authorising nuclear arms programme decommissioning, his principled counter proliferation ideals are seen. Additionally, the prestige benefits from autonomous nuclear disarmament, as a result of nuclear non-proliferation norm preponderance, was difficult to ignore. The accolades which South Africa received for giving up its atomic warheads would have been a welcome addition to the praise received for ending *apartheid*.

Turning to the effects of structure or environment on Pretoria's non-proliferation outlook, it can be reasoned that Soviet weakness as evinced by the inability to preserve communism in Europe, the lack of wherewithal to prevail against Afghan insurgents, and even Gorbachev's December 1989 declaration of the *de facto* end of the Cold War, all pointed to the USSR's impending withdrawal of support for Angola and Mozambique. When this was combined

with the end of Soviet sponsorship for the ANC or the communist cause in South Africa, it became clear that there was no longer an external realist threat propping up pro-nuclear arms norms in Pretoria, and that the siege mentality of being pressured from within and without, which sustained these norms, was being eroded. Additionally, extensive Soviet nuclear cutbacks under START helped reinforce counter proliferation norms.

As for the influence of leadership perception or agency on South African nuclear disarmament norms, De Klerk's characteristics and the nature of Pretoria's parliamentary leadership need to be revisited. Chiefly, De Klerk's flexibility towards policy changes, personal distaste for nuclear munitions and willingness to ensure complete nuclear relinquishment transparency indicates predisposition towards non-proliferation norms. Also, when the reformist natures of De Klerk's senior parliamentary colleagues are considered as being receptive to nuclear weapons abnegation, and are factored in together with De Klerk's anti-nuclear armaments proclivities, these interacted with the more benign international structure of the late 1980s to bring about South African atomic demilitarisation.

Shifting focus to Ukraine, it also had an ideational constructivist base for nuclear relinquishment but instead of it being championed by the head of state, Ukraine's non-nuclear arms norms were rooted in legal foundations. Indeed, the Ukrainian Declaration of State Sovereignty in 1990 ruled out nuclear weapons ownership in any form and their parliament emphasised this by pledging the decommissioning of all nuclear arms on Ukrainian soil once important financial, security and other caveats were met. Additionally, Kiev singed the Alma Ata Declaration which pledged the dismantlement of all nuclear weapons within

Ukrainian borders by 1994, and was a party to the Lisbon Protocol which promised Ukrainian ratification of START, membership in the NPT and the removal of all inherited nuclear arms. These documents signified that a majority of Ukrainian leaders had a shared understanding of the necessity of nuclear arms relinquishment.

Regarding prestige as moral constructivist incentive for norms compliance, this was achieved when the international community saw that both Washington and Moscow were prepared to deal with Kiev as an equal. The clearest display of this was the joint agreement on security compensation and assistance signed in Moscow in January 1994 between the U.S., Russia and Ukraine, where Kiev enjoyed a diplomatic reward disproportionate to its geostrategic importance.

With respect to interdependence and structure as aspects of Ukrainian constructivist relinquishment norms, it should be noted that apart from the “peer pressure” exerted amongst the non-Russian nuclear weapons inheritors to disarm as per the terms of the Lisbon Protocol, so as to establish reliable treaty keeping reputations, there also existed an interdependent relationship between the U.S. and Russia on one side, and nuclear inheritors like Ukraine on the other. Specifically, the former depended on the latter to relinquish the inherited nuclear munitions, so as to maintain non-proliferation norms, while the latter counted on the former to provide security, economic and both prestige and sovereignty legitimising moral constructivist benefits. Concerning sovereignty, Moscow’s willingness to include Kiev in a trilateral security compensation and assistance agreement implied a shared recognition of Ukrainian sovereignty which was equally important to prestige gains.

Concerning structure or environmental pressures, this manifested itself in START driven non-proliferation norms momentum, as the thousands of warheads decommissioned by the U.S. and Russia created nuclear relinquishment pressure that Kiev could not ignore.

Lastly, the role of Ukrainian perception or agency and leadership proclivities in the workings of Kiev's nuclear disarmament norms have to be revisited. For Ukrainians, their shared national identity incorporated a strong non-expansionist land owning agrarian mindset motivating them to defend their nation. Accordingly, the offensive flavour of nuclear munitions did not find favour with most Ukrainians who preferred non-offensive defences and espoused counter-proliferation norms. Also, ex-Soviet nuclear arms had to leave in order to eliminate Cold War era nuclear threats to Ukraine and differentiate the Ukrainian and Russian identities.

Analysing the actions of Ukrainian executive and legislative leadership with respect to constructivist counter-proliferation norms, it can be shown that then President Kravchuk and Defence Minister Morozov both acted to affirm non-proliferation norms, with the former pledging the removal of all tactical nuclear armaments by July 1992, and the latter enunciating that a nuclear deterrent was ethnically unrealistic and agreeing to unilaterally initiate dismantlement of Ukrainian ICBMs in 1993. Referencing the legislative branch's support for non-proliferation norms, it bears repeating that a clear majority supported nuclear arms relinquishment in principle, only insisting that fair compensation and concessions in line with Ukrainian national interests be awarded.

Examining North Korea, it can be fairly stated that it is enmeshed in a global paradigm that largely promotes nuclear non-proliferation and since it does not have the politico-strategic importance to be treated as an exception, Pyongyang has to incorporate this reality into its nuclear weapons policy. Indeed, the DPRK has to face the structural or environmental implications of the NPT and START. Addressing the former as the only state to have ever left the NPT, North Korea finds itself in a unique and abhorred position, without the prospect that the counter proliferation norms represented by the NPT will ever be rescinded, since it was renewed indefinitely in 1995. Consequently, as Pyongyang wants the DPRK's legitimacy to be internationally recognised, the Kim regime has to acknowledge the salience of nuclear non-proliferation norms. When discussing the structural influence of START, its impact lies both in the sheer number of warheads decommissioned as well as in the identity of the disarming parties. For the U.S. and Russia, the thousands of warheads withdrawn from service demonstrates their seriousness in upholding global non-proliferation norms, while Russia serves as a positive role model to North Korea (since the USSR was the DPRK's patron state) and Pyongyang is prevented from accusing Washington of disarmament hypocrisy. Therefore, the Kim regime simply could not ignore the pro-nuclear disarmament environment.

But even though Pyongyang had to factor external counter proliferation pressures into its policy deliberations, the fact that significant compromises towards nuclear disarmament were made from 2007 to 2008, does suggest that constructivist non-proliferation norms did have some influence amongst North Korea's leadership, and that elite DPRK perceptions or agency decided to implement the aforementioned compromises.

In relation to leadership subscription to constructivist counter proliferation norms, it can chronologically be shown that such norms have been expressed as early as 1991 in the DPRK-ROK "Joint Declaration on the Denuclearisation of the Korean Peninsula," where both Pyongyang and Seoul eschewed nuclear weapons, despite it being in North Korea's realist and liberalist economic interest not to commit to non-proliferation. Subsequently, President Kim Il Sung's made a dying wish in 1994 for the denuclearisation of the Korean peninsula, and the principled nature of this request supporting non-proliferation norms seems to be supported by an announcement by then DPRK Premier Pak Pong-ju in 2005, that not only must denuclearisation be accomplished but that it must be done peacefully. Lastly, in 2011, then leader Kim Jong Il reiterated that denuclearisation was still a principled part of DPRK state policy, thereby reaffirming that counter proliferation norms still hold some sway in Pyongyang.

Finally, the desire for an honourable reputation is closely intertwined with nuclear disarmament norms in North Korea. The Kim regime desires legitimacy and recognition for both their apex leader (the head of the Kim family) and the DPRK in general. Hence, the prestige of a successful nuclear demilitarisation deal, which has the subsidiary effect of cementing shared understandings of North Korean sovereignty, would be desired by Pyongyang as a constructivist disarmament inducer.

Scrutinising the role of moral constructivism across the South African, Ukrainian and North Korean exemplars in order to synthesise their commonalities, it can be shown that all three cases had foundational sources of moral constructivist influence that served as bases for later counter proliferation policy. Specifically, 1) South Africa's moral counter nuclear arms initiative was

driven by the executive branch as represented by De Klerk's disarmament efforts, 2) Ukrainian constructivist non-proliferation norms stemmed from legal domestic (sovereignty declaration) and international treaties (Lisbon Protocol), and 3) North Korean recognition of counter nuclear norms was significantly due to the ideational impact of the NPT.

Next, all these cases share an interdependence related feature in that prestige, both from moral compliance with non-proliferation norms, as well as from state sovereignty legitimisation by the international community or great powers, serves as a powerful military denuclearisation incentive. Fundamentally, external state actors depend on these states to disarm while the *quid pro quo* for the latter are the prestige gains to be had. Therefore, South Africa received the moral distinction for being the only nuclear proliferator to autonomously disarm, Ukrainian pride was bolstered by U.S. and Russian recognition in return for disarmament commitments, and North Korea wants regime and national legitimisation as a partial price for its denuclearisation.

As for structural influences, Pretoria, Kiev and Pyongyang could not have escaped the reinforcement of non-proliferation norms and disarmament momentum generated by SALT or START implementation. Simply put, the thousands of nuclear weapons decommissioned by Washington and Moscow would have provided good disarmament role models while deflecting criticism that the Cold War superpowers were practicing hypocrisy by urging others to disarm while the former kept their nuclear arsenals.

Turning to agency and the role of leadership with respect to non-proliferation norms, the three case studies reveal that their respective national leaders were prepared to perceive the need for and implement denuclearisation

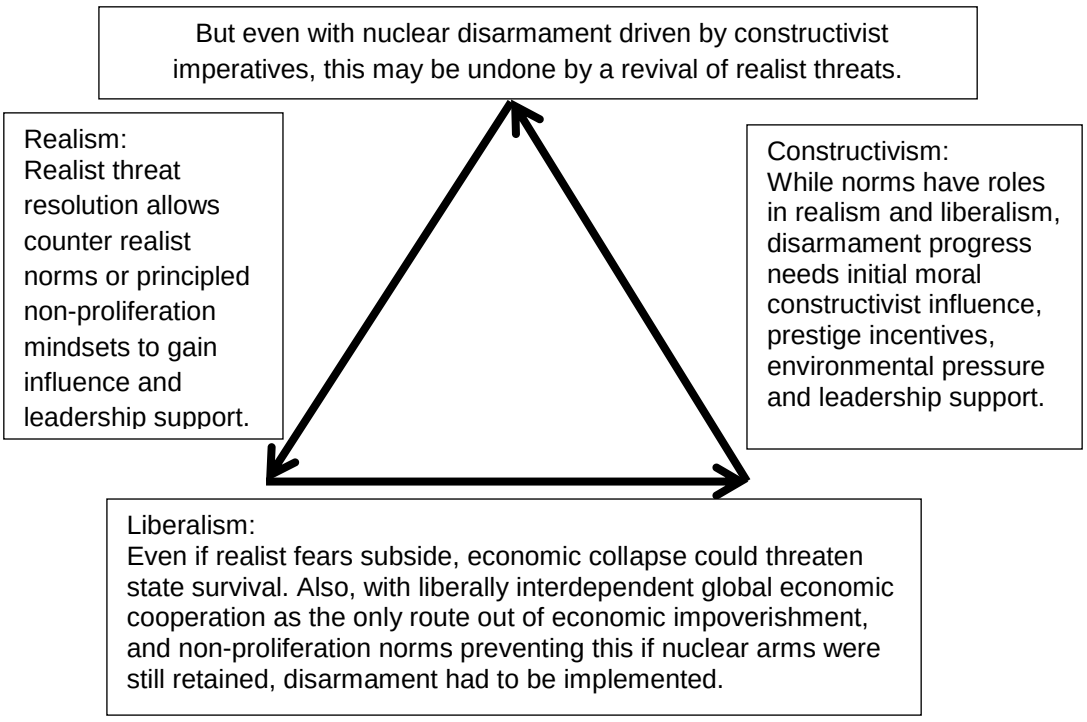
to fulfil non-proliferation norms. This is evinced from the reform mindedness of De Klerk, the acceptance of pragmatic counter-proliferation by Kravchuk and Morozov, and even the statements in support of principled denuclearisation from the Kim regime.

Having completed piecemeal analysis of realist, liberalist and constructivist nuclear disarmament/relinquishment drivers, the next section will weave all three theories into an inter-linked framework and apply this to formulate a realistic and effective roadmap for North Korean military denuclearisation.

7.8 A proposed Universal Tripartite Theory Framework for Nuclear Disarmament and its application to North Korea

Upon holistic analysis of state decisions leading to complete or tangibly attempted nuclear disarmament, a coherent realist-liberalist-constructivist framework guiding successful counter proliferation can be derived. As illustrated in Diagram 12,

Diagram 12: Tripartite Framework Guiding Nuclear Counter Proliferation



and not in order of importance, it is apparent that the amelioration of realist national security threats promote nuclear disarmament. Hence, when sovereignty and survival are no longer threatened by nuclear armed great powers or their client states, pro-nuclear realist norms give way to leadership supported counter-realist norms or nuclear non-proliferation norms advocating nuclear arms decommissioning, relinquishment or steps towards disarmament.

Next, it can be seen from the case studies that another driver of nuclear disarmament is the desire to benefit from the liberally interdependent global economy as South Africa, Ukraine and North Korea all suffered from varying levels of economic dysfunction. Basically, economic decrepitude is as much a threat to national perpetuation as military predation, and all realised that inasmuch as international non-proliferation norms excluded most nuclear proliferators from liberally interdependent global commerce and investment, nuclear munitions had to be eliminated or disarmament steps implemented. Such was the interdependent *quid pro quo* trading nuclear militarisation for liberal economic welfare which Pretoria, Kiev and Pyongyang all understood, along with varying leadership espousal of economic liberal interdependence norms.

Thirdly, emphasis must be given to moral constructivist nuclear non-proliferation norms. As earlier mentioned, such norms promote disarmament when realist threats recede, and are positively related to liberal economic norms as interdependent commerce is usually not conducted with nuclear rogues. But when judged on its own merit, shared counter proliferation ideology is an independent driver of nuclear weapons abnegation as it frames such arms as completely unconscionable. Comparing South Africa, Ukraine and North Korea,

it is seen that all had their nuclear arms policies shaped by basic sources of normative non-proliferation pressure where the Head of State, formal/legal obligations and the NPT respectively, provide constant motivation to disarm.

Regarding common factors that encouraged the interdependent process of nuclear disarmament, it was substantiated that prestige from the moral constructivist laudability of nuclear relinquishment, and shared sovereignty recognition of the former proliferator by great powers or the international community, serve as effective incentives. Additionally, the environmental influence driven by the norms reinforcing denuclearisation momentum from SALT/START, and leadership receptivity to principled nuclear arms decommissioning, were invaluable contributors to the complete (South Africa and Ukraine) or attempted nuclear demilitarisation (North Korea) witnessed.

7.8.1 An effective nuclear disarmament package for North Korea

Having derived the common factors contributing to full or attempted nuclear demilitarisation across the principal case studies, a proposed disarmament package conforming to the tripartite counter proliferation framework, which addresses Pyongyang's realist, liberalist and constructivist needs, to maximise the likelihood of concrete North Korean denuclearisation will be presented below.[428]

Once Pyongyang, Washington, Seoul and other relevant parties can agree to negotiative re-engagement, a possible disarmament solution could incorporate reciprocative concessions and disarmament measures reminiscent of those seen from 2007 to 2008. For instance, U.S.-ROK military exercises

[428] The disarmament plan for North Korea was sourced from Liang Tuang Nah, *Explaining North Korean Nuclear Weapons Motivations: Constructivism, Liberalism and Realism*, North Korean Review, Vol. 9, No. 1, Spring 2013, pp. 61 – 82, pp. 76 – 78.

could be deferred[429] and confidence building measures, like a ban on dispatching anti-DPRK leaflets across the ROK-DPRK border, implemented. In return, North Korea would freeze all nuclear arms activities. These initial steps would address Pyongyang's realist concerns about a U.S.-ROK surprise invasion, while being costless since North Korea would not have to relinquish anything with a nuclear program moratorium.

Thereafter, if U.S.-DPRK-ROK relations remain uneventful for the next six months, showing that Pyongyang is serious about stability maintenance, it could be granted a key concession in the form of a conditional/provisional non-aggression pact, where Washington would assure Pyongyang against any nuclear or conventional preemptive attack on the DPRK for a period of one year. In return, the DPRK's obligations would be to:

- Return to the Six-Party nuclear disarmament talks at the earliest available opportunity.
- Invite IAEA inspectors back to North Korea and permit installation of all required IAEA surveillance equipment.
- Prepare all plutonium-based nuclear weapons manufacturing facilities for permanent decommissioning under IAEA supervision, which should not be a problem because as explained in chapter 2, enough plutonium for 12 or more warheads (a basic nuclear deterrent), has already been processed while facilities for harvesting weapons

[429] This is significantly valued by the DPRK as shown from Dominic Smith, *North Korea will suspend nuclear tests if US calls off South Korea military drills*, The Guardian, 10 January 2015, sourced from http://www.theguardian.com/world/2015/jan/10/north-korea-suspend-nuclear-us-military-drills-south-korea.

plutonium are only partly functional because of extensive equipment degradation.[430]

- Continue to refrain from any nuclear activities or rocket tests and not initiate any military skirmishes with South Korea.

As an incentive, the U.S. could resume the 240,000-ton food shipment promised as part of the February 2012 deal and, in conjunction with South Korea, send humanitarian medical supplies and fuel aid and even light industrial spare parts on a quarterly basis as long as the DPRK fulfills its part of the bargain. This second stage should not present any compliance problems because, while North Korean security based realist and economic interdependence liberalist needs are satisfied by the temporary non-aggression pact, along with fuel and light industrial aid, the regime does not have to give up anything concrete, except swallow a little pride, show commitment to disarmament, and be pacific toward the ROK.

If all parties fulfil their obligations as agreed, Washington could send the U.S. secretary of state to Pyongyang to sign a conditional peace treaty with Kim Jong Un, assuring Pyongyang's elites that a formal end to the six-decade-old Korean War would be forthcoming, but only if North Korea fulfills certain pre-agreed stipulations within a set timeframe, failure rendering the treaty void.[431] On the part of the U.S., it would enter a legally binding agreement with the DPRK, promising not to take any hostile action, including any interference in North Korean domestic affairs, for a period of two years while basic diplomatic relations are established in the form of liaison offices in Pyongyang and

[430] Siegfried S. Hecker, *Lessons Learned from the North Korean Nuclear Crises*, North Korean Review, Vol. 8, No. 1, Spring 2012, pp. 136–141, p. 139.
[431] Anthony DiFilippo, *North Korea's Denuclearization and a Peace Treaty*, North Korean Review, Vol. 7, No. 1, Spring 2011, pp. 7–20, pp. 16.

Washington. Additionally, the U.S. would take concrete actions to remove sanctions on the DPRK and build normal trade relations, such as bestowing Normal Trade Relations tariffs on North Korean imports rather than the present tariffs, which bar access to the U.S. market.[432] The following would be expected of North Korea:

- Verifiably demolish the Yongbyon nuclear reactor and all nuclear fuel fabrication and spent fuel reprocessing facilities, eliminating the ability to manufacture plutonium-based nuclear weapons.
- Prepare uranium enrichment facilities for dismantlement under the supervision of the IAEA.
- Cease targeting South Korea and Japan with ballistic missiles as a goodwill gesture.
- Derive workable and legally binding conflict avoidance doctrines with the ROK.

Basically, the deadline of two years will illustrate to Pyongyang that a permanent peace treaty is within grasp, put pressure on the disarmament process, and prevent bureaucratic stalling. Apart from the obvious realist assurance against U.S. hostility and the liberalist economic benefits of boosted international trade and foreign investment, the constructivist prestige gains from signing a peace treaty, albeit provisional, with the U.S. are considerable.

If the DPRK delivers on its promises and no inter-Korean disputes arise, the U.S. should negotiate for a permanent peace treaty to be signed. As part of the final negotiations for this treaty, which all DPRK leaders have desired since the 1970s, the following reciprocal details should be implemented:

[432] Semoon Chang, *Why Has North Korea Responded Positively to the Nuclear Talks in 2007?*, North Korean Review, Vol. 4, No. 2, Fall 2008, pp. 6–15, pp. 7.

- The DPRK uranium enrichment program should be scrapped with IAEA verification; North Korea should apply for readmission to the NPT; and all necessary technological and financial assistance should be provided to build technologically advanced, proliferation-resistant, energy efficient LWRs along with an affordable supply of enriched uranium fuel to run the LWRs.
- All DPRK-completed nuclear warheads and unused stocks of weapons-grade plutonium and uranium should be handed over to the IAEA, perhaps in a mass media ceremony with the IAEA director general and a U.S. official of ambassador rank commending Kim Jong Un's decision to relinquish nuclear arms.
- A ROK-DPRK non-aggression pact should be concurrently negotiated and liaison offices established in Seoul and Pyongyang, with the simultaneous opening of a North Korean embassy in Washington and a U.S. embassy in Pyongyang, to cement peace on the Korean peninsula. An incentive could be discreet U.S. encouragement to the International Monetary Fund and/or Asian Development Bank to approve DPRK economic development loan applications.

Finally, a permanent peace treaty could be signed in Pyongyang by the U.S. president and Kim Jong Un, with representatives of the other two parties in the Korean War, China and South Korea, as witnesses to the formal end of hostilities. Concerning Kim's willingness to agree to a final treaty and to sign it, he should be keen because signing it satisfies realist national security goals by ruling out the U.S. as an enemy *and* fulfils liberalist economic aims through the future provision of cutting edge LWR-supplied power for export industries and

the availability of international loans for economic rehabilitation. Moreover, constructivist needs are met as North Korea sheds global pariah status, gains legitimacy via conformity to nuclear non-proliferation norms, and acquires prestige through a peace treaty with the sole superpower, the U.S.. Lastly, it should be noted that this disarmament roadmap allows the Kim regime to retain actual nuclear warheads for about 3 ½ years, thereby giving counter realist moderate factions time to convince and overcome resistance from the nationalist or headline realist pro-nuclear arms bloc.[433]

Having shown the applicability of the realist-liberal-constructivist framework for designing a nuclear disarmament package for North Korea, a final case, that of Iran, will be examined to provide concluding validation for the inter-linked eclectic tri-theoretical explanatory framework substantiating nuclear policy.

7.9 A Final Analytical Validation: The Case of Iran

Despite the fact that Iran has never acquired nuclear arms and makes a poorer case study based on the assumption that it is much easier to give up potential nuclear weapons capability, than decommission concrete nuclear arms and their manufacturing facilities, it can be illustrated that the realist-liberal-constructivist framework shows efficacy for explaining why Tehran choose to cut a deal with the West and close the door to future nuclear arms capability.

Beginning with indirect liberalist and constructivist motivations, Iran's nuclear programme began in the 1960s under the last Iranian King, Shah Mohammad Reza Pahlavi. At that time, Tehran's stated objective was the use

[433] As argued by Andrei Lankov, noted area studies expert on North Korea, Pyongyang would be highly resistant to complete nuclear arms decommissioning. Hence, enough time to overcome entrenched pro-nuclear mindsets is essential. Lankov's opinion can be found at Andrei Lankov, *The Real North Korea – Life and Politics in the Failed Stalinist Utopia*, Oxford University Press, 2013, pp. 253.

of nuclear technology as an alternative source of electrical power to fossil fuels.[434] This has implications for economic interdependence liberalism as the electricity from civil nuclear reactors can be supplied to export industries, potentially improving trade competitiveness. Additionally, Iran is a signatory to the Nuclear Non-Proliferation Treaty (NPT)[435], having signed it in 1968 and has not renounced its adherence to the NPT despite its present government having overthrown the previous government which signed the treaty in 1979. This indicates fundamental acknowledgement of and subscription to nuclear counter proliferation norms, even as the relatively early establishment of a civil nuclear programme is arguably a symbol of Iranian constructivist national pride.

Subsequently, Western distrust over Iranian nuclear intentions, which were exacerbated by the lack of transparency of Tehran's uranium enrichment attempts (which can serve as a route to nuclear arms production), lead to the first in December 2006, of several UN Security Council resolutions imposing sanctions on Iranian government entities connected to the latter's nuclear and ballistic missile programmes.[436] This was followed by economic sanctions from the U.S. and European Union (EU), designed to discourage possible weaponisation of the Iranian nuclear programme, which have cost the state $100 billion in lost oil revenue and forgone foreign investment.[437] Hence, regardless of Iranian moral constructivist national pride which resents being

[434] Sharon Squassoni, *Iran's Nuclear Program: Recent Developments*, CRS Report for Congress, 6 September 2006, pp. 1-2.
[435] *Signatories and Parties to the Treaty on the Non-Proliferation of Nuclear Weapons*, Federation of American Scientists, 3 December 1998, sourced from https://fas.org/nuke/control/npt/text/npt3.htm.
[436] *Security Council Imposes Sanctions on Iran for Failure to Halt Uranium Enrichment, Unanimously Adopting Resolution 1737 (2006)*, Security Council Press Release, United Nations, 23 December 2006, sourced from http://www.un.org/press/en/2006/sc8928.doc.htm.
[437] Ali Vaez and Karim Sadjadpour, *Iran's Nuclear Odyssey: Costs and Risks*, Carnegie Endowment for International Peace, 2 April 2013, sourced from http://carnegieendowment.org/2013/04/02/iran-s-nuclear-odyssey-costs-and-risks/fvui.

dictated to by the Western world, and insists on being able to enrich Uranium as it pleases, so as long as a nuclear arms programme is not established, Tehran recognised that it's nuclear related intransigence was preventing the economy from participating in the liberally interdependent world economy and depriving Iranians of much material welfare.

But despite being economically sidelined, Tehran also realises that it not only faces hostility from fellow Muslim nations,[438] but that the U.S. and to a lesser extent, the Western world, do not regard its authoritarian theocratic government favourably, welcoming regime change if such would occur. Accordingly, Tehran has realist fears for regime security, incorporating anxiety over covert and overt attempts to depose the present government. This can be seen in a peace overture made towards Washington after the U.S. invasion of Iraq in 2003, where the Mohammad Khatami government in Tehran purportedly contacted Washington to propose a "grand bargain" in which the former offered to cease support for violent non-state actors like Hezbollah, stop its animosity towards Israel and even bargain away its nuclear programme. In return, Washington was to provide security guarantees, end all sanctions and cease the promotion of regime change in Iran.[439] The U.S. never responded to this olive branch.

With the above realist state/regime security concerns in mind, the most recent successful negotiations between the West and Iran regarding the latter's nuclear programme can be analysed to sift out the economic liberalist and implied realist benefits which would accrue to Iran. Under the Joint

[438] Iran is a *Shiite (Shia)* Muslim state. This subjects it to distrust, discrimination and even hostility from other Muslim states which adhere to *Sunni* Islam, which is fiercely opposed to *Shia* Islam.
[439] *The "Grand Bargain" Fax: A Missed Opportunity?"*, Public Broadcasting Service, sourced from http://www.pbs.org/wgbh/pages/frontline/showdown/themes/grandbargain.html.

Comprehensive Plan of Action (JCPOA) signed between Iran, the five permanent members of the UN Security Council and Germany, along with the European Union, Iran agrees to:[440]

1) Never pursue, develop or acquire nuclear weapons capabilities.
2) Curtail most of its uranium enrichment capacity and limit remaining enrichment quality to that suitable for only nuclear power generation fuel.
3) Drastically limit its uranium stockpile and shelve all uranium enrichment research and development.
4) Modify its nuclear arm proliferation prone nuclear reactor to preclude the production of weapons grade plutonium, while exporting all spent nuclear fuel (which can be reprocessed into arms grade plutonium).

All of this contractually ensures Tehran's nuclear munitions abnegation. In return, Iran will be granted:

1) The termination of all UN Security Council resolutions implementing sanctions relating to Iran's nuclear programme.
2) The abolishment of all EU economic and financial sanctions linked to the aforementioned nuclear programme.
3) The revoking of all U.S. sanctions earlier implemented, which were designed to penalise Iran over its nuclear activities.

Fundamentally, the lifting of sanctions would boost the moribund Iranian economy, allowing it to export millions of barrels of oil which would lower the price of crude oil[441], earn valuable export revenue for Iran and help lower

[440] *Key Excerpts of the Joint Comprehensive Plan of Action (JCPOA)*, The White House, Office of the Press Secretary, 14 July 2015, sourced from https://www.whitehouse.gov/the-press-office/2015/07/14/key-excerpts-joint-comprehensive-plan-action-jcpoa.

[441] Bill Spindle, Nicole Friedman and Benoit Faucon, *Iran Deal Raises Prospect of Fresh Oil Glut*, The Wall Street Journal, 14 July 2015, sourced from http://www.wsj.com/articles/oil-prices-fall-as-nuclear-deal-paves-way-for-iran-exports-1436861774.

inflation for oil importing states. Additionally, another win-win outcome would be that foreign investment to improve the extractive productivity of Iranian oil resources could now flow in, while consumer goods exporters would be able to tap into the 81 million strong Iranian consumer base who are favourable towards imported products.[442] Hence, the re-integration of the Iranian economy into the liberally interdependent global economic environment would be supported to the benefit of both the former's people as well as the citizens of their trading partners. As for the realist concerns of Tehran, the termination of all nuclear related sanctions against Iran, economic or otherwise points towards a substantial reduction of tensions, specifically U.S.-Iranian tensions, given that nations are most unlikely to initiate hostile actions in the wake of sanctions lifting. This is important because Washington has previously classified Iran as an adversary state, while Tehran cast the insulting sobriquet "the great Satan" upon the U.S..

Turning to the moral constructivist aspect of the JCPOA nuclear negotiation breakthrough, it should be noted that even in the face of the critical need to relieve sanctions induced counter liberalist economic isolation and effect realist threat amelioration, there still exists the issue of fierce Persian or Iranian national pride which manifested itself in the right to indigenously enrich uranium. Correspondingly, a strong moral constructivist nuclear non-proliferation norm needs to exist to counter any nuclear based nationalist motivations. This can be found in the institutionalised Muslim identity of Tehran's theocratic government, in that Iran has openly declared that it is not

[442] Clifford Krauss, *A New Stream of Oil for Iran, but Not Right Away*, The New York Times, 14 July 2015, sourced from http://www.nytimes.com/2015/07/15/business/international/iran-nuclear-deal-oil-prices.html?_r=0.

developing nuclear weapons based on moral religious grounds[443]. This was and is enforced via a *fatwa* or edict of Islamic law which serves as a norms based constructivist justification to placate any pro-nuclear societal or leadership factions.

Finally, analysis with liberal and constructivist lens resumes as it must be said that all of the economically interdependent liberal economic benefits from the JCPOA would be denied to Iran if its government still insists on adopting a belligerent attitude towards the West vis-à-vis the former's nuclear programme. Global constructivist nuclear non-proliferation norms will deny Iranian integration into the liberal international economy, as long as Tehran is seen as harbouring a desire to acquire atomic munitions. Although the Iranian agreement to accept nuclear programme limitations displays minor motivational differences vis-à-vis the examined drivers behind North Korean nuclear disarmament pliability from 2007-2008, it can be said that the former still conforms to the essential inter-connected explanatory framework employing realism, liberalism and constructivism.

7.10 Concluding Thoughts

With all that has been stated, argued and substantiated, it is clear that nuclear weapons policy is not monocausal or even bi-causal,[444] and can be

[443] H.E. Dr. M. Javad Zarif, *Statement by the Permanent Representative of the Islamic Republic of Iran to the UN Security Council*, 23 December 2006, pp. 1, sourced from https://wayback.archive.org/web/20070202222316/http://www.un.int/iran/facts_about_peaceful_nuclear_program.pdf.

[444] With reference to the literature review in Chapter 3, monocausal explanations include Solingen's "*Nuclear Logics: Contrasting Paths in East Asia & the Middle East*" which uses a political economic liberalist explanation, and Rublee's "*Nonproliferation Norms: Why States Choose Nuclear Restraint"* which relies on constructivist norms. As for an example of a bi-causal framework, Paul's "*Power Versus Prudence: Why Nations Forgo Nuclear Weapons"*, employs primary realist and secondary economic liberalist rationality.

explained by an eclectic mix of security based realism, economic interdependence liberalism and norms based moral constructivism.

Across the case studies examined, this dissertation has made its case that identifiable mosaics of realist, counter liberal and pro-nuclear constructivist factors can explain nuclear munitions development and retention. Conversely, counter realist, economic liberal interdependence and counter proliferation constructivist factors working in a tripartite system, have been found effective in accounting for complete or attempted military denuclearisation. However, even as it appears that nuclear demilitarisation can be simply achieved by “reversing” the tripartite factors motivating nuclear arms building or retention, (i.e. by dispelling realist threats, directly or indirectly offering liberal interdependence based economic benefits, and enticing governments with non-proliferation linked prestige and sovereignty recognition) the reality is that it is arguably simpler to employ the aforementioned tri-faceted analysis to pre-emptively identify potential nuclear arms proliferators, than to convince current nuclear armaments possessors to disarm. Indeed, the earlier mentioned nuclear programme limiting deal with Iran is a model for future pre-emptive counter proliferation negotiations.

Based on material covered in chapters 4 and 5 along with the aforementioned proposed reciprocative nuclear disarmament plan for the DPRK, and the recent negotiations with Iran, it is clear that much needs to be done to meet a nation’s security, economic and norms linked needs before nuclear abnegation is realisable. Crucially, it must be emphasised that there must be political willingness on the part of great powers to negotiate with nuclear weapons possessors and suspected nuclear aspirants, and flexibility on

the part of the latter to compromise and accept the denuclearisation benefits package offered. With reference to Ukraine, the willingness of the U.S. and Russia to offer terms to the former, and the willingness of the latter to accept tangible economic aid and nuclear fuel compensation, which had value that paled in comparison to the monetary worth of the relinquished nuclear munitions[445], was a key lynchpin of the Ukrainian success story.

As for negotiations with North Korea, much depends on whether the U.S. legislative branch and conservatives in South Korea can be persuaded to set aside their fierce distaste for Pyongyang, to agree to earnest negotiations involving serious carrots and compromises, with a member of the "axis of evil". On Pyongyang's side, it needs to be able to countenance nuclear armaments relinquishment if the right bargain is struck for this valued national asset. Only if both sides can psychologically believe in the feasibility of a new strategic, economic and political U.S.-DPRK relationship, can the verifiable nuclear disarmament of North Korea and lasting peace on the Korean peninsula be realised. With the successful nuclear deal stuck with Iran as an aspirational objective, such a lofty goal as the complete nuclear disarmament of the DPRK might well in future, be achievable.

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[445] As quoted from an interview with His Excellency, Ukrainian Ambassador to Singapore, Pavlo Sultansky on 22 August 2014, the tangible returns from nuclear arms relinquishment was like "giving up billions in return for some ice cream".

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