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Non Nuclear States**

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ABSTRACT

In this essay, the author first defines deterrence and explains its concept and its key elements. He then explores the application of conventional deterrence strategies, whether it is through denial, or through punishment, and touch on its limitations. He proceeds to examine the existential nature of nuclear deterrence and the role it plays in shaping deterrence between states. Specifically, the author illustrates why nuclear-equipped states do not necessarily enjoy a deterrence advantage in today's security environment and discusses the deterrence strategies that non-nuclear states can employ. The author argues that these deterrence strategies remain viable, albeit complemented by other instruments of the state such as defence, diplomatic and economic interdependence. In the essay, the author also focuses on traditional state actors that apply rationality to its risks-benefit analysis in its decision-making processes. The author does not cover deterrence towards non-state actors, whose conduct of violence through terrorism for the objective of fear mongering and attention-seeking, thrives under the cloak of non-statelessness and diverges from traditional concepts of deterrence, which will require a separate study.

Keywords: Deterrence; Conflict; Diplomatic; Threat; Wars

INTRODUCTION

Ever since the world first witnessed the employment of nuclear weapons in August, 1945 with the detonation of two atomic bombs over Hiroshima and Nagasaki, deterrence strategies between states have evolved to encompass the use of these Weapons of Mass Destruction (WMD). States which have the capability to develop and employ WMDs have banked on the damaging effects and the promise of Mutually Assured Destruction (MAD) to shape their deterrence and defence strategies against each other. From the Cuban missile crisis, to the India-Pakistani conflict, to Iran's nuclear development and more recently the denuclearisation of the Democratic People's Republic of Korea (DPRK), nuclear deterrence has dominated headlines. However, it is also apt to point out that World War II (WWII) remained the only time when nuclear weapons had ever been employed in conflict.

On the other hand, deterrence strategies employed by non-nuclear equipped states have had to depend on the use of 'traditional' political and diplomatic efforts and conventional weapons in concert to deter potential adversaries from acts of aggression. These strategies are aimed at shaping the judgement and risks-benefits calculation by a potential adversary state, on the consequences that may be inflicted upon

them in the event of aggression towards a deterring state. The deterring state would have to equip itself with modern military capabilities, contributing to substantially higher costs, in order to convey the intended deterrence messaging to the adversary state. Military capabilities in itself are inadequate for deterrence strategies. It is necessary for any state to also utilise other state elements, such as those described in the broad-based Diplomatic, Information, Military and Economic (DIME) analysis framework, in its pursuit of an effective and viable deterrence framework.

In this essay, the author will first define deterrence and explain its concept and its key elements. He will also look at the application of conventional deterrence strategies, whether it be through denial or through punishment, and touch on its limitations. He then examines the existential nature of nuclear deterrence and the role it plays in shaping deterrence between states. Specifically, the author illustrates why nuclear-equipped states do not necessarily enjoy a deterrence advantage in today's security environment. The author then discusses the deterrence strategies that non-nuclear states can employ, and argue that they remain viable, albeit complemented by other instruments of the state such as defence diplomatic and economic interdependence. In this essay, the focus will

be on traditional state actors that apply rationality to its risks-benefits analysis in its decision-making processes. The author will not cover deterrence towards non-state actors, whose conduct of violence through terrorism for the objective of fear mongering and attention-seeking thrives under the cloak of non-statelessness and diverges from traditional concepts of deterrence which will require a separate study.

DEFINITIONS AND ASSUMPTIONS ON DETERRENCE

According to DFI International, 'Deterrence involves the use of threats (explicit and implicit) to convince adversaries to refrain from taking particular actions by conveying to them that the costs and risks of such actions outweigh the potential benefits.'¹ The crux here is that if an adversary perceived that the probability of a successful attack is high and its associated benefits far outweigh the costs and risks involved, deterrence would have failed.²



The USAF F-117 Nighthawk, one of the key aircraft used in Operation Desert Storm.

For the purpose of this essay, the assumption is that two rational actors, the deterring state and the adversary state, will approach the risks-benefits calculation of each other's course of action with logic and rationality.³ This assumption is premised on the political leaders of the states maintaining their composure and remaining unaffected by the stresses that accompany extreme crises such as war. It is acknowledged though, that under the fog and friction of war, misperceptions arise and rationality in decisions cannot be assumed.⁴

CONCEPT OF DETERRENCE

The effectiveness of deterrence strategies hinges on three key tenets, the 3 Cs: Capability, Credibility and

Communication.⁵ Firstly, a state must have the capabilities, military or otherwise, to inflict the deterrent threat it claims upon the adversary state once the 'Out of Bounds' (OB) markers it had established are breached. In order to deter, the adversary state must perceive that the magnitude of the response actions by the deterring state as too costly for the objective gains it seeks. The evolution of warfare to encompass the application of sea and air power had increased the viability and reality of inflicting massive damages to provoking states. For instance, sea control allows the enforcement of blockades to deny access to resupplies and reinforcements, such as that seen in the Persian Gulf in 1990 following Iraq's invasion of Kuwait. Air power permitted the capabilities to project and unleash lethal force on offending states quickly, as highlighted by the air campaign during *Operation Desert Storm* in 1991.

Deterrence involves the use of threats (explicit and implicit) to convince adversaries to refrain from taking particular actions by conveying to them that the costs and risks of such actions outweigh the potential benefits.

Next, a state must demonstrate the conviction to utilise its capabilities to carry out its deterrent threat in order to substantiate its credibility. As stated by Mohan, credibility is also dependent on 'an adversary state's assessment of the deterring state's past political record, the strength of its political leadership, and how it could behave in a crisis.'⁶ Deterrence would not be achieved if an adversary state perceives the political leadership of a deterring state as a 'pushover' that does not possess the political resolve to carry out its threat. In 1982, Latino machismo and chauvinism arguably influenced General Galtieri's decision—he had labelled Mrs Margaret Thatcher as 'politically inadequate' to invade and reclaim the Falkland Islands. He had grossly underestimated the significance of the fleet conducting naval exercises off Gibraltar and the resolve of Mrs Thatcher to protect British sovereignty.

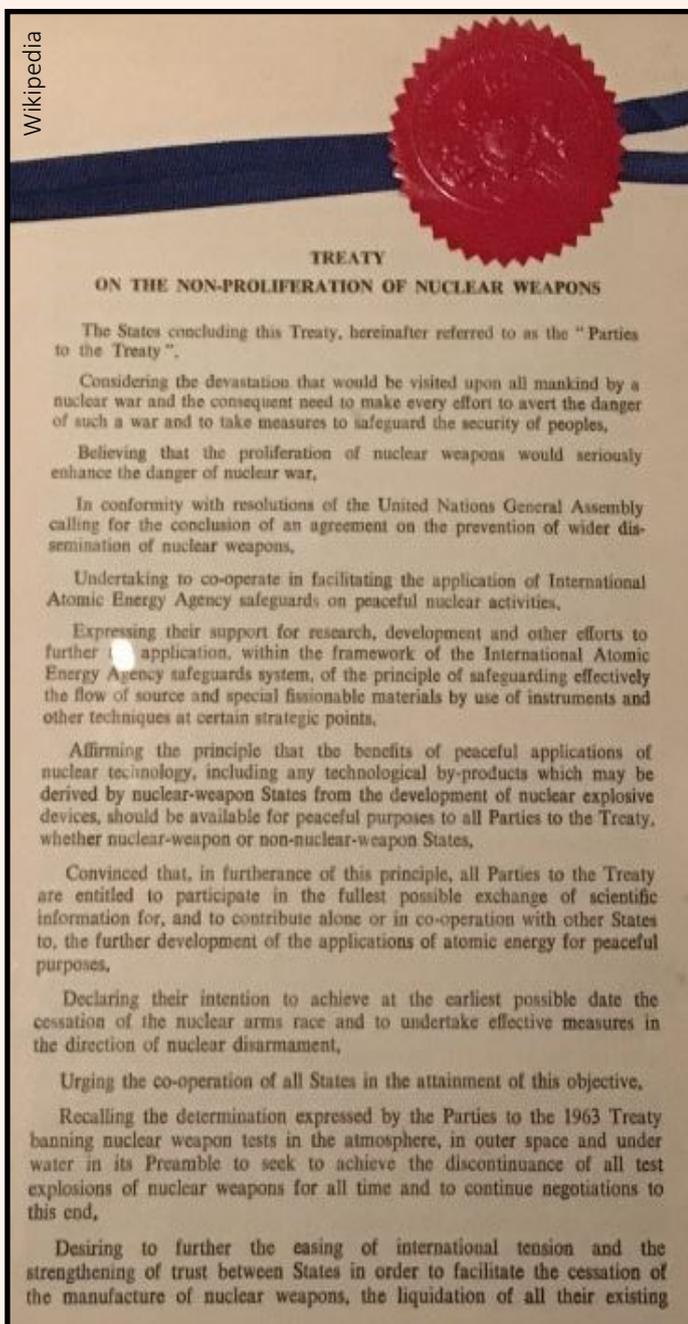
DETERRENCE BY DENIAL VS DETERRENCE BY PUNISHMENT

Lastly, an adversary state must be made aware of, whether through policy declarations or the explicit demonstrations of capabilities, the possible actions a deterring state will undertake in response to provocation.⁷ The OB markers mentioned earlier must be clearly communicated by the deterring state, and interpreted unambiguously by the adversary state. This shapes the perceptions of the adversary state and allows an accurate risks-benefits analysis to be pursued.⁸ However, the reception, analysis and assessment of such communications coupled with the complicated decision-making process of governments, is highly subjected to distortion and misinterpretation.⁹ This can give rise to possible miscalculations in opponent strategies.

Mohan described two categories of pre-nuclear deterrence: passive and active deterrence. Passive deterrence seeks to dissuade an adversary by convincing him that he will be unsuccessful in the pursuit of his objectives. Should these fail, active deterrence will be applied to inflict unacceptable punishment and pain to the adversary.¹⁰ These descriptions run similar to that as defined by Snyder regarding deterrence by denial and deterrence by punishment.¹¹

Deterrence by denial, is essentially a defensive strategy where an adversary state is convinced to alter or drop his course of actions entirely. This follows the adversary's assessment that the lack of benefits and costs he is subjected to in the process of attaining his goals do not commensurate. Several challenges affect denial strategies. Firstly, they are commonly associated with the application of conventional weapons and strong defence capabilities, which place huge cost burdens on the deterring state to sustain an arsenal of technologically advanced weaponry and armed force that can significantly deter a potential aggressor state. Secondly, in order for the strategies to be effective, it is necessary for the deterring state to reveal an extent of its deterrence capabilities as well as the OB markers that will trigger response to the adversary state. This undermines the intended effects of those denial capabilities, potentially exposing critical vulnerabilities of the deterrence strategies and allowing the adversary to develop their own counter strategies to these capabilities. Thirdly, an adversary equipped with the knowledge of the deterring state's strategies can launch a pre-emptive attack that effectively negates the presence of the deterrence.¹²

Deterrence by punishment is an offensive retaliatory strategy that employs the overwhelming use of force to generate an unacceptable cost on an adversary state initiating an attack. This overwhelming force can be exerted on the population, infrastructure or the military forces of the adversary state with the aim of breaking the morale of the adversary's political leadership.¹³ It is precisely because of the devastating effects of punishment strategies that the use of nuclear weapons inevitably become linked to it. Mohan further



Treaty on the Non-Proliferation of Nuclear Weapons.

explained that because it was perceived as providing more security at less cost, it was therefore an attractive option to deter the high costs associated with amassing the conventional weapons as described above to inflict equivalent damage.¹⁴ For this strategy to work, it required a deterring state to develop and possess capabilities to withstand first strike while enforcing its retaliatory measures against the adversary state to neutralise any potential gains. Here, the threat of MAD was epitomised by the amassing of nuclear arsenal by the United States (US) and Union of Soviet Socialist Republics (USSR) during the Cold War, in order to counter the threat posed by each other.

THE PARADOX OF NUCLEAR DETERRENCE

The ensuing nuclear race reached its peak in 1970 before the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) came into force, with the recognition that the cataclysmic nature of a nuclear war would threaten the existence of mankind. As proclaimed by Bernard Brodie in 1946, 'Thus far, the chief purpose of our military establishment has been to win wars. From now on, its chief purpose must be to avert them.'¹⁵ It was arguable whether nuclear deterrence or the fear of mutual annihilation during the Cold War era prevented full-scale war. The recognition of the magnitude of consequences resulting from the failure of nuclear deterrence strategies meant that some nuclear states voluntarily gave up their arsenals. Today, only eight countries have openly declared the possession of nuclear weapons, with Israel maintaining an ambiguous stance on its possession. The existence of nuclear weapons today is dominated by the threat posed by the Democratic People's Republic of Korea (DPRK) who wields it as an instrument to preserve regime survival and facilitate diplomatic dialogue, a far cry from the apocalyptic tensions of the Cold War era.

Nuclear deterrence has its own challenges. While the possession of nuclear weapons is supposed to deter adversary states from attacking, that had not always been the case. One of the main criticisms of the employment of nuclear weapons was that it cannot prevent local, limited and conventional attacks.¹⁶ The Falklands War, where Argentina squared up against nuclear-equipped Britain was one such example. The Yom Kippur War was another example where a conflict between Israel and Egypt-Syria escalated to the verge of

involving two nuclear superpowers (the US and the USSR) by virtue of their alliance with the conflicting states.

The utility and proportionality of nuclear weapons also meant that nuclear weapons were rendered ineffectual in conflicts such as the Vietnam War. Employment of nuclear weapons against Vietcong guerrilla tactics would bring into question the proportionality and morality from the international communities. Similarly, in the Korean War of 1950, US's restraint on nuclear employment despite being attacked by the Chinese and North Koreans showed the continued relevance of conventional weapons. This 'self-deterrence' acts as a restraint on nuclear employment in lieu of its devastating effects to civilians, while also affirming that smaller and smarter precision munitions, with its greater precision and limited collateral damage continue to maintain its viability today.¹⁷

Historically, non-nuclear states have sought to ensure their survival against potential adversary states in threatening neighbourhoods by forming strategic alliances with world powers.

DETERRENCE STRATEGIES FOR NON NUCLEAR STATES

Successful deterrence policies cannot simply rely on military deterrence. While the military is the traditional instrument of choice in 'the continuation of policy by other means... and an act of force intended to compel our opponent to fulfil our will', the economic costs of entering into conflict is a deterrent in itself to non-nuclear states to seek the path of violence.¹⁸ It is thus necessary to establish other forms of deterrence. Apart from the military element, the author examined other examples.

Military Defence

Deterring states can achieve the effects of deterrence by denial simply by modernising their

militaries. A modern and technologically superior military force may lead potential adversary states to perceive that the risks-benefits analysis do not justify intended or provocative actions. An integrated and operationally ready military force equipped to respond to a full spectrum of threats also provides the credibility that will deter adversary forces. This can be done through participation in bilateral and multilateral exercises, and participating in a myriad of Operations Other Than War (OOTW) such as Humanitarian Assistance and Disaster and Relief (HADR) efforts.

States who have developed economic interdependence are less likely to initiate provocation against each other for the fact that any economic fallout will have far reaching consequences and de-stabilising effects to its society.



Minister for Defence Dr Ng Eng Hen attending the 8th ADMM-Plus over video conferencing.

An example here would be that of the Singapore Armed Forces (SAF). Not only equipped with advanced platforms and weaponry, the SAF also regularly participates in multi-lateral exercises such as the ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus) and Five Power Defence Arrangements (FPDA) exercises, regional HADR efforts such as the Nepal earthquakes, Search and Locate (SAL) operations like the missing MH-370 aircraft, as well as Peace Support Operations (PSO) in the Middle East. These opportunities allow SAF personnel to gain valuable

knowledge in joint operations and provides the platform to enhance the SAF's credibility.

Strategic Alliances

Historically, non-nuclear states have sought to ensure their survival against potential adversary states in threatening neighbourhoods by forming strategic alliances with world powers. Extended deterrence is the discouragement of attacks on third parties, such as allies or partners.¹⁹ While this form of deterrence has its inherent limitations, such as the denial of and projection of forces long distances away from home, it remains one of the ways that small states in particular continue to pursue deterrence. The sense of security provided outweigh the possibility of lack of commitment from the world powers. This is a strategy that South Korea has adopted on the Korean Peninsula and that has provided security shelter as it sought its national interest in economic progress.

Closer to home, the Southeast Asian states such as Singapore have firmly established itself as a regional security partner through efforts such as the establishment of the Regional Co-operation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) and Information Fusion Centre (IFC) to liaise and co-operate with regional states in countering piracy and sea robbery.²⁰ Being hosts to key regional and international events such as the Association of Southeast Asian Nations (ASEAN) Regional Forum and the Trump-Kim summit showcased the readiness and capabilities of Singapore to channel Whole-of-Government (WoG) efforts successfully.

Economic Inter-dependence

A state with a strong economy that is secure from threats of conflict will attract substantial investments in its industries. Less developed states in that region may be also be dependent on that state for its own economic progress. States who have developed economic interdependence are less likely to initiate provocation against each other for the fact that any economic fallout will have far reaching consequences and de-stabilising effects to its society. Economic engagements between states yet provides even more opportunities for political leaders to establish relationships with each other.

Taking South Korea as an example, whose biggest trade partners are both US and China, means that there are shared interests between the two nuclear superpowers in its success. This is an important leverage that South Korea can use to pursue its national interest of peace on the Korean Peninsula, by providing the platform to which peaceful dialogue can be established. Also, taking a look at Singapore who is a non-member invitee to the G20 summit, shows that a small non nuclear state is able to leverage on a strong economy to create economic interdependence at the global stage.

CONCLUSION

Non-nuclear states face a greater task in developing deterrence strategies, not least because of the high costs involved in building up military capabilities, but also because its deterrence efforts involve a WoG approach. Without an adequate deterrence strategy, non-nuclear states are highly vulnerable to the actions of neighbouring adversary states. It is also recognised that even with an adequately viable deterrence strategy, it is subjected to the risks-benefits interpretation by an adversary state on the capabilities and credibility of the deterring state in

carrying out its threat of retaliation. A limitation in this essay was the deliberate exclusion of the study on deterrence of non state actors, while the assumption on rationality recognises deterrence is inherently incomplete and that it is not reflective of real-world tendencies.

This essay defined deterrence and explained its concepts and key elements. It also examined the application of deterrence by denial and deterrence by punishment strategies, and looked at their limitations. The existential nature of nuclear deterrence continues to shape deterrence between states, albeit in less violent manners. The paradox of nuclear deterrence demonstrated why nuclear deterrence is not entirely viable in today's security landscape. This essay argued that deterrence strategies for non-nuclear states continue to remain viable against conventional threats and perhaps asymmetrical ones, but observed that any deterrence strategy of a non-nuclear state should encompass elements of defence diplomacy, information operations and economic reliance and interdependence, in order to achieve effectiveness and viability against adversary states.

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