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EDITOR'S NOTE

The last few months have witnessed cases of political and military brinksmanship yet once again and the stories are still unfolding. China continued with assertive, aggressive and even provocative actions in the South China Sea and East China Sea. The stakes are slowly being raised. Chinese fighter aircraft buzzed a Japanese aircraft in the air space in the East China Sea that both Japan and China claim to be within their Air Defence Identification Zone (ADIZ). It will be recalled that China unilaterally declared an ADIZ that overlapped the existing Japanese ADIZ. The never very warm relations between China and Japan are souring further and the drop in bilateral trade is indicative of this trend. So far, no shots have been fired in anger but accidents and miscalculations can always occur. Playing with danger has its pitfalls.

China also set up an oil rig in the South China Sea in what Vietnam claims to be within its Exclusive Economic Zone (EEZ). Some near skirmishes with naval craft have also occurred. Again, confrontations could take a serious turn. As it happens, the power of China's military is far greater than that of any other country in the region, and these countries are dependent on the security guarantees provided by the US. These guarantees have been reaffirmed yet again recently but few will put their money on a US/China clash in the near future. The two powers need each other and cannot afford antagonistic relations. Therefore, Japan, Vietnam and the other nations in the Asia-Pacific region have to fend for themselves, at least till such time that the situation takes a really ugly turn, notwithstanding the US policy enunciation of a "rebalance towards Asia".

In another part of the world, the Crimean population overwhelmingly voted to join Russia, much to the chagrin and emphatic opposition to any such move by the US and Western Europe. What followed is indicative of the rapidly changing dynamics in

international relations. The lesson to be learnt yet again is that power, in its various manifestations—economic, diplomatic, military, etc.—is the arbiter of a developing situation. Many believe that the West played a part in the unrest in Ukraine that led to the ouster of a duly elected government. Russia could not accept the loss of Crimea and the Black Sea port of Sevastopol that is home to the Russian Black Sea Fleet. With Ukraine openly siding with the European Union (EU), it was a near certainty that Russia would engineer the virtual ‘annexation’ of Crimea. The sanctions on Russia imposed by the US and EU could be self-defeating. Russia has said that it will withdraw from the International Space Station (ISS) in 2020 and will no longer allow Soyuz rockets to transport European cosmonauts to the ISS. Again, the US will have to invest heavily to develop rocket launchers as the Russian launchers may not be available to them. It is a moot point as to which side has gained. What has certainly been proved is that economic interdependence cannot ensure that the possibility of clashes is obviated. In similar vein, Russia could cut off gas supplies to Ukraine and Europe or the receiving countries can stop taking Russian gas. Again, both stand to lose. On its part, Russia has entered into a deal with China to sell it \$400 billion worth of gas over 30 years. Russia has also indicated that it is open to cooperation with China in the development of another space station or even a moon base. Russia and China are also engaged in military exercises. All in all, some realignments have occurred and the area has become less peaceful but the events do represent an abject lesson in power politics and diplomacy, may be even the limitations of diplomacy. The one perennial lesson is that self-interest rules.

India is at the fringes of the momentous developments described above. However, it is in its interest to ensure that it is able to maintain a balance with the powers flexing their muscles in the region. It will be a difficult balancing act. However, once again, it is reiterated that our diplomacy will be better served by more powerful defence forces. *Defence and Diplomacy*, as the title of this journal suggests, are inseparable.

Happy reading.



CHANGE IN THE NATURE OF WARFARE WITH AEROSPACE POWER

DHIRAJ KUKREJA

*There is nothing more difficult to carry out,
nor more doubtful of success,
nor more dangerous to handle,
than to initiate a new order of things.*

— Machiavelli

INTRODUCTION

There has been a continuing transformation in the art and science of war ever since the aircraft was first used as a weapon of war, and then with the adoption of technological excellence. The use of the third dimension to enhance military capabilities had developed and settled during World War II. Gen Eisenhower put emphasis in his words when he stated, “The Normandy landings were based on a deep-seated faith in the power of the air force in overwhelming numbers to intervene in the land battle.” Ever since that era, aviators, the world over, have been putting forth their case that air power should hold centre-stage in any war.

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Over history, military operations have progressed from just land and sea to include air also; and now we have to factor in the use of space as well. Space power has demonstrated incrementally its huge potential to force military planners to combine its employment with conventional means in all operations. Operation Desert Storm (also known as the Gulf War of 1991) first demonstrated the true contributions of aerospace power, with the media assisting to spread the awareness worldwide. Air power took a quantum leap in reliability and importance after the opening days of the conflict in 1991, with a legacy to follow.

There is no denying the influence of the initial air operations on shaping the subsequent course and outcome of the war. The opening attacks by the coalition air forces against Iraq's Command and Control (C2) facilities and the integrated air defences, proved uniformly successful, with some 800 odd sorties launched under the cover of darkness, in radio silence, against Iraq's most critical military targets, with the loss of only a single coalition aircraft. The attacks continued over the next three days and the air campaign struck at the entire spectrum of Iraq's strategic and operational-level assets, gaining unchallenged control of the air and the freedom to operate without any fear of retaliation against Iraq's airfields, ground forces and other targets of military interest.

THE LEGACY OF DESERT STORM

With the passage of time, analysts naturally grow wise; in the analysis of the Gulf War of 1991, it has now come to be seen by many, if not most, observers, that the war was not as much of a towering strategic success as claimed by the America led coalition. Many of the goals articulated by the military leaders before the commencement of the war were not realised. Gen Colin Powell had asserted in respect of the Iraqi Army that "first we are going to cut it off, and then we are going to kill it"; Central Command (CENTCOM) had declared its objective of destroying Iraq's capability of manufacturing Weapons of Mass Destruction (WMD). Neither was achieved. There is also an on-going debate over the decision to terminate the war at the 100-hour mark when the coalition air and ground operations were just about beginning to have a debilitating impact. Analysts will continue

to argue about the outcome of the war had the air and ground attacks continued for another 24 or 48 hours.

Notwithstanding the debates and continuing analyses, the use of air power was without doubt, decisive. Iraq had considerable air assets and was aware of the impending attacks, yet, the coalition established air dominance. It then went on to pin down the Iraqi Army to a stage that the alliance ground forces could achieve success, with minimum casualties, in a mere 100-hour battle; these successes and others are sure to keep Desert Storm in the list of winning air power campaigns for quite a while.

Analysts and observers the world over are likely to study Desert Storm for times to come. Interestingly, some of the most insightful comments on the heightened importance of air power, made possible by new technologies and concepts of operations, have come not from America or its partners, but from Russian defence professionals who were closely following the progress of Desert Storm. Their comments underscored the decisive role of air power in destroying the enemy.

There has been a push by certain quarters to make technology the *raison d'être* for the dramatic victory of the allied air power. While historians will have the last word, it is an accepted fact that the coalition's technological edge over Iraq made an important difference in shaping the outcome of the war. High technology contributed to, but was not the sole reason of, the victory; superior training, motivation, proficiency, leadership, boldness in execution also helped in shaping victory.

THE TRANSFORMATION OF AIR POWER

The decade preceding the Gulf War saw a wide-ranging growth in the efficacy and lethality of air weapons, so amply demonstrated by the swift victory of the coalition air forces in the war. The improvements, mostly evolutionary, but some entailing a true revolution in performance, accounted for much of the ease in the success achieved. The effective role played by air power stemmed from a combination of advancement in technology, increased intensity and realism of training, and a steadily mounting leadership focus on the operational level of war.

Prior to 1991, two separate technologies had matured enough to offer a breakthrough of great magnitude. The first was low-observable (i.e. stealth) technology, and the second was the development of precision-guided munitions. Together, these two capabilities, in conjunction with an effects-based planning methodology, allowed the allied forces, primarily the US forces, to execute an innovative concept of operations that has today come to be known as “parallel warfare”. Simply defined, parallel warfare is the application of force, across the breadth and depth of a theatre, to achieve specific effects, rather than the total destruction of target lists. The term “parallel” comes from the basic electrical circuit design; anyone experiencing the frustration of Diwali or Christmas lights on a series circuit versus a parallel circuit can easily relate to the analogy.

In the first 24 hours of Operation Desert Storm, US aerospace forces launched attacks against over 150 separate and distinct targets – more than that were engaged in the years 1942-43 in the combined bomber offensive of World War II and on a much greater scale in terms of force application. These large-scale attacks affected the C2 structure of Iraq and its capability to wage a war, leading to an early and successful liberation of Kuwait. It is also of importance to note that the success was achieved at a far less cost in lives than anyone expected when the war began.

With the advancements in technology, the need to amass force has been reduced largely, if not removed totally. Technological advances such as stealth, and the ability to engage both fixed and moving targets with single munitions, have put off the need for large and cumbersome formations of strike and support aircraft, as was the need in the past. In Vietnam, for example, the US Air Force (USAF) and US Navy routinely sent in large formations to ensure that enough aircraft reached the target to deliver the requisite load to achieve the desired result. Improved battle space awareness through rapid and timely dissemination of knowledge with the improvement of information technology, coupled with heightened aircraft survivability, and increased weapon accuracy made possible the effects of massing without really have to mass. Air power can now produce effects that were earlier unimaginable.

IMPORTANCE OF EFFECTS-BASED OPERATIONS

Strategy, as defined by many, is the synchronisation of means to accomplish ends. The process of selecting the air platforms (means), and assigning them against selected targets, to achieve specific effects (ends), is, therefore, the air strategy underpinning an air campaign. Little effort or time should be spent on the development of air strategy or providing the tools for the planning of air strategy. Of concern here, is not so much the process or format of the concept, but rather the philosophy underlying the air strategy.

The architects of an air campaign do not have to be limited by a “servicing a target list” approach. Instead, the air campaign should be so designed as to impose force on enemy systems to achieve specific effects that would, directly or indirectly, contribute to the achievement of military and political objectives. The series methodology of a parallel attack scheme can be applied against an adversary’s entire target base or against a group of selected targets; an attack on one target system at a time, as adopted in World War II, allows the adversary to either continue limited operations or provides a window to recover from previous attacks.

If parallel warfare can be termed as a manifestation of the ‘revolution in military affairs’, effects-based operations is a critical enabler. David Deptula of the USAF considers the changing character of warfare as analogous to the difference in the views of Ptolemy and Copernicus. Ptolemy reasoned that the universe revolved around the Earth – not unlike the way some think about ground operations being at the centre of all warfare! Copernicus set science right, recognising that the Earth was but one part of the universe, which revolved around the sun – not much different from the actual relationship of air, land and sea operations in a larger campaign. The lesson this planetary story offers is important for strategists: adherence to legacy concepts of operations, despite the availability of new ideas, is a dangerously stagnant approach.

It is, therefore, imprudent to ignore the potential and advantages of effects-based operations. The implications of effects-based operations include, first, a viable alternative to attrition and annihilation as the only means to influence an adversary’s behaviour; and, second, effects-based operations can use current weapon systems while

transitioning to new technologies. Hence, it would be folly for a planner to ignore the potential of effects-based operations.

War Colleges have been advocating for long two forms of warfare, namely, attrition and annihilation. The first Gulf War demonstrated another – control through the application of parallel war. The strategies of attrition and annihilation rely on sequential and individual target destruction as the ultimate method of success, generally measured in terms of force applied, or in other words, inputs. Using effects-based operations, the determinant of success is effective control of systems that the enemy relies upon, to exert influence on his thinking, namely, outputs. Changing the way we think about application of force can lead to a more effective use of force.

The evolving security environment requires greater responsiveness measured in the ability to act in hours rather than in weeks or months. It also requires long range without forward basing and an effective punch through delivery of weapons with precision to achieve desired results. A focus on influence, rather than solely on presence enables one to consider different and more effective ways to accomplish the same end-results with fewer resources. An efficient systems-based intelligence analysis is, hence, critical to the application of effects-based operations to know what an adversary relies upon, to exert influence and conduct operations. Exploiting space-based systems, communication technology and a rapid information transfer system can enhance the capabilities of a force, without the need of numbers or forward basing. Parallel warfare cannot be effective otherwise.

To redefine the concept of force projection as against force deployment, and aiming to control the enemy's systems rather than destroy them, requires changes in the mindset of force management. Apart from the traditional Command, Control, Communications, Computers, Intelligence (C4I) that one is so familiar with, distributive intelligence architecture and 'off-board' systems that can provide information direct to the user, are some of the changes that need to be incorporated. Such and more structural changes can reduce the reaction time for the effective use of intelligence, minimise the requirement of forward basing and enable effective force application

without the need for deploying large command and support elements. Changing one's thinking about the application of force, therefore, requires changing one's structure to employ it.

Current weapons were built for the strategies of the past. Being in a transition phase of the revolution in military affairs, the change to the new instruments of war has to be carefully managed, unrestricted by the theories of the past. The tendency to retain orthodox concepts and doctrine is strong when the means upon which these concepts and doctrine were built still make up the preponderance of weapons. Effects-based operations provide a functional procedure on how to conduct war that can bridge the gap between the weapons of today and the weapons of the future, permitting useful application of current weapon systems as one acquires a new generation of tools, needed to exploit the concept.

Recent air campaigns, beginning from the 1990s, have provided a view of how stealth, precision, rapid and secure information transfer with accurate positional information, and other cutting-edge technologies can provide the necessary advantage against an adversary. While the aircraft/ precision munitions match of the 1990s was far better than the systems of World War II, they are still considered crude by the developed air forces for the conduct of effect-based operations. As technological innovations accelerate, 'non-lethal weapons' and cyber warfare, enabled by information operations, will gain prominence in the conduct of parallel war. The ultimate application of parallel war would involve fewer destructive weapons, with effects being the primary objective and not destruction.

ORGANISATIONAL CHANGE TO EXPLOIT EFFECTS-BASED OPERATIONS

The end of the Cold War saw a marked reduction in numbers in the militaries of America and its allies; India, on the other hand, has been constantly striving to increase its numbers. Notwithstanding the proposed increases, does India have the luxury of an abundance of weapons to conduct war in the future? This writer feels that the permanence of the theory of attrition and annihilation continues to inhibit the growth of an organisational change to capitalise on the advantages of effects-based operations. Future wars may not offer an

option to a Service component commander to do things in his own way; decisions on the use of force would need to be made based on its effect in accomplishing the theatre objective, merging into the overall military and political objective.

Newer innovations and the continuous evolution of technology will permit planners and commanders alike to make the most of the concept of targeting for effects while limiting casualties and collateral damage; however, only new organisations and doctrines, aiming to make use of effects-based operations can exploit the full potential of this concept. A joint military doctrine is helpful if the focus is on weapon system capabilities and effects-based planning, rather than the employment environment or attrition and annihilation. There are examples in the recent past of operations in some parts of the world where joint endeavours were a success. It must be remembered that 'jointness' does not mean the equal or obligatory use of each Service in every contingency, rather it is the use of the most effective force for a given situation. Jointness is a means for ensuring success; it is not an end unto itself and, hence, it does not equate to each force always participating in every operation or to a degree in proportion to its size or presence.

CONCLUSION

The potential of air power as a definitive military instrument was realised during World War II; the potential was proved, even to the sceptics, beyond doubt, in the Gulf War of 1991. Air power, however, did not act in isolation, but in conjunction with support from surface forces. Lt Gen Bernard Trainor of the US Marine Corps and *New York Times* correspondent, Michael Gordon, concluded in *The General's War*, "It was also the first war in history in which air power, not ground forces, played the dominant role".

To note an important qualification here, air power by no means has become a universally applicable tool providing an answer to every conceivable security challenge that may arise. The relative advantages of air power, or should it be aerospace power, namely, speed, range, flexibility, precision, perspective, and lethality, have the potential to achieve effects at every level of war, directly and quickly. More important than the characteristics of aerospace power,

is the strategic perspective that it offers with its most effective use in a theatre or the globe, with the aerospace medium as an indivisible whole. As a result, it will remain the dominant means of conducting war in the future.

Aerospace power systems are rapidly evolving beyond manned aircraft; the philosophy, however, behind the use of those systems will remain. It is an evolution of the philosophy born with the airplane, of control over an adversary's strategic activity and commensurate disruption of his decision-making process by direct or indirect influence. It is the fundamental recognition that legacy concepts, while instructive, may impair the development of refreshing and new ideas for military and national strategy.

One must, however, remain careful not to be so enthralled by the apparent advantage of newly emerging technologies as to lose sight of the fact that future wars will not invariably offer easy going for the users of such technologies. Nevertheless, one can argue that aerospace assets now have the potential to carry the bulk of responsibility for suppressing the adversary's fielded forces of all kinds and its other strategic centres, to assist own surface forces to achieve goals with minimum of pain, effort and cost. Thanks to these new capabilities, aerospace power, coupled with information power, can now offer the promise of being the swing factor in an ever-widening variety of circumstances; the future role of surface forces may now increasingly become to secure a win rather than to achieve it!

The challenge for a military steeped in traditions, paradigms and strategies of the past, is recognising this change, embracing it and taking advantage of it, before someone else does.

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ENVIRONMENTAL CHANGE AND SECURITY

NISHANT GUPTA

The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Scientific Report, published on March 31, 2014, once again reemphasised that climate change is real, caused by humans, and it continues unabated.¹ If humanity does not choose to reduce global carbon emissions and live in harmony with nature, global warming will continue and the Earth will see far more dangerous and potentially irreversible impacts in the decades ahead. There has never been a greater urgency to act than there is now.

As we witness the devastating impact of climate change and extreme weather incidences, global concerns regarding the implications of environmental change have been growing significantly.² Environmental issues appear to overwhelmingly threaten the conditions of human existence on a large scale, as in the case of the vulnerability of the low lying countries to extensive

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1. The IPCC (Intergovernmental Panel on Climate Change) has been publishing assessment reports since the late 1980s almost every five years. It assesses the current state of scientific understanding regarding human-caused climate change based upon contributions from thousands of experts around the world through an exhaustive review of the peer reviewed scientific literature.
2. The cause of climate change may be debated upon—whether it is a natural and cyclic process, or anthropogenic, or a combination of both. But largely, there is a consensus that there is a need to embark on adaptation and mitigation pursuits.

inundation from modest rises in sea level. Additionally, the environmental change would also exacerbate intra-state and inter-state conflicts. Therefore, casting such issues in security terms is being considered appropriate.

The first section of this paper deals with understanding of the term environment, and explores the concept of security and its various dimensions. The second section looks at the debate of linking security with the environment and investigates various perspectives on environmental security. The last section is focussed on the Indian perspective and concerns.

DEFINING ENVIRONMENT

Environment is a generic term that can be applied in many ways. In the context of climate and environmental change, environment may be described as “the natural world in which people, animals and plants live”.³ The environment has four fundamental components: the atmosphere (the air we breathe); the hydrosphere (the Earth’s water); the cryosphere (the ice sheets and glaciers); and the biosphere (the planet’s plants and animals).⁴ Changes in these spheres have far-reaching impacts on the planet and its ecology.

UNDERSTANDING SECURITY

The term ‘security’ finds its origin in the Latin word *securitas*, meaning ‘lack of care’. The *Oxford Advanced Learner’s Dictionary* states six meanings of the word ‘security’ and the first one explains security as “the activities involved in protecting a country, building or person against attack, danger, etc.”⁵ Security, in this context, is the condition of being protected from, or not being exposed to, danger—that is, being safe.⁶ Security, indeed, is a universal yet vague concept which despite lying at the heart of contemporary political theory, has generally been undertheorised and underdeveloped.⁷

3. *Oxford Advanced Learner’s Dictionary* (London: Oxford University Press, 2006).

4. Stephen Emmott, *10 Billion* (England: Penguin Books, 2013), p. 32.

5. n.3, p. 1372.

6. Jon Barnett, *The Meaning of Environmental Security: Ecological Politics and Policy in the New Security Era* (London: Zed Books, 2001), p. 23.

7. Barry Buzan, *People, States and Fear: The National Security Problem in International Relations* (New Delhi: Transasia Publishers, 1983), pp. 3-9.

The concept of security is inherently about risk and vulnerability. The probability of food shortage, military aggression, NBC (Nuclear, Biological, Chemical) warfare, or a non-conventional attack by non-state (or state) actors cannot be assessed in an objective manner. Hence, the assessment of risk, and security, is a cognitive and highly subjective process. A sense of risk and/or security is, therefore, not absolute. On the one hand, people (or a country) with a high degree of risk may feel secure and, conversely, people living in a high degree of risk but totally unaware of the reality of the looming risk may nurture a feeling of being safe. For example, the IPCC and many other reports highlight that environmental degradation and climate change are major risks to the welfare of humanity, yet the degree to which this is perceived by the common people and states is questionable.

NATIONAL SECURITY VIS-A-VIS INDIVIDUAL SECURITY

Appreciation of different connotations of security on nation-states and civil society is also of prime importance. That is, it is crucial to understand how security for a nation is different from security for an individual. Traditionally, at least after the Peace Treaty of Westphalia (1648), the concept of security has been essentially linked to national security which primarily manifests defence of territory and sovereign interests by military means. Whereas from the perspective of an individual, 'security' is somewhat similar to 'safety' and can be driven from various sources, including from within the individual, for example, psychological security. The feeling of security in an individual largely depends upon family, workplace, social, cultural and also environmental conditions. Extreme weather conditions and environmental degradation may also be considered by individuals as a threat to their personal security. Security for an individual is, therefore, more subjective, but, nonetheless, at a certain point in time and space and in certain socio-economic contexts, it can be viewed as absolute. The extent to which the nation-state is providing (or should be providing) the individual with security is also debatable and varies from one country to another. For example, national policies towards undertaking responsibility of an individual's job security/health and medical facilities/education/old age pension/unemployment dole/housing vary from state to state. Some countries undertake the

responsibility of ensuring jobs, and eligible citizens without jobs are financially compensated with a decent unemployment allowance/dole. On the other hand, some countries strive for generating employment opportunities, but do not take responsibility of ensuring the same.

As per Matthias Finger, the security of nation-states is epistemologically different from the security of individuals.⁸ States essentially derive their security from their perceived relationship with other states, i.e. their security perspective is primarily political in nature and it essentially hinges on the nation-state system. It is also different from the world security that deals with globe, planet, humanity and other entities which are more physical in nature (and not political). In other words, the security of states is largely a matter of inter-state relations. This means that in case there is absolute increase in the threat to the nation-states as a system, and if these threats are equally distributed without disturbing the relative equilibrium of the nation-states, then this absolute increase in threats will not necessarily translate into decrease in national security, unless some states are challenged from within by their own citizens. However, at that moment, the citizens would be looked at as a threat to the national security, and not the environment. In order to achieve greater synergy between nation-states and between states and civil society, the leadership needs to understand this epistemological difference.

LINKAGES BETWEEN ENVIRONMENTAL DEGRADATION AND SECURITY

Environmental degradation has been one of the central issues in the reinterpretation (and redefinition) of security. Richard Falk, in his landmark book *This Endangered Planet* (1971) elaborately linked environmental issues with security. In 1989, Jessica Touchman Matthews suggested that environmental problems were so great that they threaten the future of the world and are literally threatening the security of nations.⁹ Notably, the research paper was published

8. Matthias Finger, "Global Environmental Degradation and the Military" in Jyrki Kakonen, ed., *Green Security or Militarized Environment* (England: Dartmouth Publishing Company, 1994), p. 187.
9. Jessica Tuchman Matthews, "Redefining Security" *Foreign Affairs*, 68, 1989, pp. 163-177.

in *Foreign Affairs*, which has a critical relationship with US foreign policy. In a widely quoted article, in 1991, Barry Buzan analysed the consequences of the emerging challenges in the post-Cold War era on the security agenda of the South and categorised his security analyses under five sectors. The environment was one of them; the others were political, military, economic and societal.¹⁰

Essentially, in the post-Cold War era, there have been enormous efforts towards redefining and thereby expanding the concept of security and, concurrently, the question of including environmental issues under the gambit of security has also been gaining ascendancy. There has been considerable academic research to establish linkages among the environment, impoverishment and security. An active debate continues to prevail between those who seek to incorporate the concept of environment into security, and those who are sceptical of this approach.

The main arguments in favour of establishing linkages between the environment and security are as follows :

- Environmental degradation generally hampers the economic potential of a nation and its capacity to undertake the welfare of its people, and this, in turn, precipitates political tensions and conflicts. Various studies have established causal relations between environmental change and conflict, primarily highlighting the vulnerabilities of the developing countries.¹¹ There are several examples of trans-boundary environmental problems that have the potential to trigger conflicts. Large-scale cross-border migration due to the pressure on scarce resources or inundation due to the rise in sea level; pollution of cross-boundary rivers by the upper riparian country; exploitation of ground water aquifers in one country affecting the exploitation in the neighbouring one; excessive deforestation in a mountainous country could lead to flooding in a downstream country and the flooding may carry substantial silt/industrial pollution from one country to another; bursting of a dam in the upstream country may also lead to devastating floods in the downstream neighbourhood. And the list can be extended further. In 2007,

10. Barry Buzan, "New Patterns of Global Security in the Twenty-First Century" *International Affairs*, vol. 67, no. 3, July 1991, pp. 431-451.

11. The South Asian region invariably gets a prominent place in such studies.

the UN Security Council initiated first-ever deliberations on the impact of climate change on security. While the developed countries welcomed the initiative, the developing countries expressed their reservations, opining that climate change is a socio-economic development issue to be dealt with by the more widely represented General Assembly.

- Military strengths and capabilities, including their huge size and infrastructure, discipline, and a professional approach, should be leveraged to address environmental challenges. There is a need for the military and other national security institutions to be sensitive to environmental degradation, to appreciate the environment related threats to national/regional stability, and to be prepared to handle the associated conflicts that may arise.
- The linkages between environment and security would mainstream the concept of sustainable development and this would help in population control, generation of awareness, public opinion and funds.
- Mainstreaming linkages between the environment and security would sensitise the international community about the impending security perils and would provide a valid reason for consensus building towards pursuing a collective approach. This would further the bilateral/multilateral/global confidence building mechanisms, reduce the trust deficit, and promote peaceful coexistence.

This approach, establishing and promoting the linkage between environment and security, has resulted in the coining of the term “environmental security”.

But, the critics nurture and propagate a different viewpoint. Stephen M. Walt and others have argued that a non-military phenomenon (like pollution, environmental threats, economic recession, child abuse, drug peddling, etc) can, indeed, threaten states and individuals, but the concept of security should not be broadened to include these issues because “*defining the field in this way would destroy its intellectual coherence and make it more difficult to devise solutions to any of these important problems*”.¹² Daniel Deudney

12. Stephen M. Walt, “The Renaissance of Security Studies”, *International Studies Quarterly*, vol. 35, no. 2, June 1991, pp. 211-239.

opined that much of the environmental agenda should fall outside the realm of security. These critics primarily look at it as an economic question concerning how the pollution costs of industrial activities and development are to be counted, controlled and paid for.¹³

The commonly stated arguments of the critics can be summarised in the following manner :

- A threat-based approach may prove to be ineffective, and intervention and coercive actions may actually deter the resolution of conflict. Therefore, the international community would be best served by framing the long-term, proactive environmental strategies that underscore environmental preservation for enhancing peace and stability, and not by securitisation of the environment.¹⁴ Therefore, environmental degradation issues, including climate change should be dealt with by other UN bodies like the UN General Assembly or the UN Economic and Social Council or the UN Commission on Sustainable Development; and not by the UN Security Council.
- The case for involving the military and other security institutions for protecting the environment is opposed by the logic that the militaries themselves are potential polluters. Given the past record of the environmental impacts of military operations in wars and other than war operations, critics insist that the military should be excluded from playing any role in dealing with environmental challenges. Additionally, the secretive nature of the military structure is considered inappropriate for addressing environmental problems that call for transparency and cooperative responses.
- Consensus building between the developing and developed countries is a huge challenge since they are likely to have different perspectives on environmental change and related security challenges. The developing countries tend to be more concerned about the social and economic impacts of the local and regional environmental challenges. Whereas the developed nations are more

13. Daniel Deudney, "The Case Against Linking Environmental Degradation and National Security", *Millennium*, vol. 19, 1990, pp. 461-476.

14. Gurneeta Vasudeva, "Environmental Security: A South Asian Perspective", at <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan015801.pdf>, accessed on May 13, 2014.

likely to be uneasy about the environment and security in terms of global environment changes and their potential for instability and conflict in strategically important regions of the world.

- Some analysts also consider subsuming of environmental conflict under the regional security largely as a result of the American strategic thinking of the post-Cold War era which is primarily driven by two factors. First, the need for interventions in regions where political and other developments are perceived as adverse and a threat to its position of global supremacy. Second, in the absence of a strong adversary, there would not be much task for the huge US military, therefore, securitisation of the environment would provide a venue to the US to engage its surplus military infrastructure.

UNDERSTANDING PERSPECTIVES ON ENVIRONMENTAL SECURITY

Richard Matthew has tabulated the various perspectives on environmental security in four verticals (see Table 1)¹⁵.

Table 1

Perspectives on Environment and Security			
Ecologist	Humanist	Statist	Rejectionist
Preservation of Nature	Individual Human Welfare	Conventional National Security	Not a Security Issue
Sessions, 1995 ¹⁶	Myers, 1993 ¹⁷	Homer-Dixon, 1994 ¹⁸	Deudney, 1990 ¹⁹

15. Richard Matthew, "Environment and Security: Concepts and Definitions" in Catherine Phinney and Kent Butts, eds., *Proceedings : Regional Asia-Pacific Defence Environmental Workshop* (Darwin : Centre for Strategic Leadership) p. 49. as cited by Richard Matthew, "Environment and Security: Concepts and Definitions" in Phinney and Butts, ed., *Ibid.*, p. 49.

16. George Sessions, ed., *Deep Ecology for the Twenty-First Century* (New York: Random House, 1995).

17. Norman Myers, *Ultimate Security: The Environmental Basis of Political Stability* (New York: Norton, 1993) as cited by Matthew in Phinney and Butts, eds., n. 15, p. 49.

18. Thomas F Homer-Dixon, "Environmental Scarcities and Violent Conflicts: Evidence from Cases", *International Security*, vol. 19, no.1, Summer 1994, pp. 5-40. 18. Thomas F Homer-Dixon, "Environmental Scarcities and Violent Conflicts: Evidence from Cases", *International Security*, vol. 19, no.1, Summer 1994, pp. 5-40.

19. Dudney, n. 13.

The **ecologists** argue that the human race is recklessly transforming and destroying nature. The environment needs to be protected from threats posed by anthropogenic activities. By adopting a lifestyle in line with nature and ecology, by adapting itself to natural patterns, rhythms and thresholds, the human race would cease the activities that are hampering the life support system. More importantly, living in sync with nature would achieve a higher aim of moving the human race away from blatant consumerism, and towards the higher meanings of life—spirituality, beauty, truthful simplicity would, therefore, be more achievable.

The **humanist** view gives primacy to human welfare. As per this perspective, human welfare is paramount and, therefore, world politics should aim at maximising human security, that is, to ensure that every person has reasonable and fair access to the environmental resources that are essential for healthy living, and ensure that society respects human dignity and maximises opportunities to live safe and healthy lives. This view underscores the direct linkages between the productive technologies that have exploited and degraded nature and the economic, political and cultural structures that have exploited and degraded large segments of humankind.

The **statist** perspective brings out the relationship between environmental change and national security. This perspective primarily focusses on environmental change induced instability, conflicts and violence. In the 1980s, Arthur Westing enlisted 12 conflicts in the 20th century involving resources, World War I and the Falklands War included. Access to oil or minerals was the major cause in 10 of these cases. Five cases involved renewable resources.²⁰ Other dimensions of the statist perspective include protection of environmental resources beyond national borders, protection of the nation from negative externalities like air pollution, migration, etc. The linkages between the military and climate change are also part of the debate.

The **rejectionists**, on the contrary, oppose the linkages between environment and national security. They argue that there is little

20. Arthur Westing, "Wars and Skirmishes Involving Natural Resources: A Selection from the Twentieth Century", in Arthur Westing, ed., *Global Resources and International Conflict: Environmental Factors in Strategic Policy and Action* (Oxford, New York: 1986), pp. 204-210, as cited in Thomas F Homer-Dixon, "Environmental Scarcities and Violent Conflicts: Evidence from Cases", *International Security*, vol. 19, no.1, Summer 1994, p. 18.

evidence to prove that environmental variables are a significant cause of inter-state wars. They also advocate that military and intelligence agencies, the primary instruments of national security, are not well-suited for addressing environmental problems. Involving the military with the environmental agenda will lead to sub-optimal environmental outcomes and is also likely to dilute its war-fighting capabilities. They also suggest that environmentalism is nothing but an alarmist movement attempting to shape and influence national security policy, and the same should not be allowed.

A practical approach should not view these perspectives as alternative approaches. Pursuing the matter by focussing on a single approach as an unconditional reference point would be incorrect. On the contrary, viewing this subject through the lens of simultaneity of separateness and interconnectedness is more appropriate. Therefore, these viewpoints should be valued as different approaches reflecting the merits of their respective values and aspirations. Alongside, all efforts should be made towards reaching a consensus about mainstreaming environmental concerns and promoting peaceful coexistence in a manner that facilitates cooperation and not confrontation. In this context, climate change could play a key role in bringing the global community together and prevent it from drifting apart.

INDIAN PERSPECTIVE ON ENVIRONMENT AND SECURITY

Historically, Indian culture and traditions have been embedded with environmental sensitivities. The philosophy of *abstainism*, and living in harmony with nature has been ingrained in our lifestyles. Mahatma Gandhi had stated that “the world has enough for everyone’s need, but not enough for everyone’s greed”. For maintaining harmonious relations with nature, he had said that “for my material needs my village is my world but for my spiritual needs, the whole world is my village”. Largely India continues to revere nature and maintain a nature-friendly lifestyle.²¹

Looking further into the past reveals that 22 centuries ago, the Emperor Ashoka defined a king’s duty as not merely to protect citizens and punish wrongdoers but also to preserve animal life and

21. However, there are apprehensions that economic growth generally leads to change in lifestyle and eating habits to those which are not environment friendly. And India, a growing and aspiring nation, should be sensitised to this aspect of growth.

forest trees.²² Megasthenes, the Greek philosopher, known to be the first Westerner to give an eyewitness description of the Gangetic plain and who documented a diplomatic meeting with Chandragupta, the founder of the Mauryan Empire in early 300 BC,²³ has underscored the Indian approach towards preserving the environment, even during wars and aggressions. He wrote :

[T]here are usages observed by the Indians which contribute to prevent the occurrence of famine among them; for whereas among other nations it is usual, in the contests of war, to ravage the soil, and, thus, to reduce it to an uncultivated waste, among the Indians, on the contrary, by whom husbandmen are regarded as a class that is sacred and inviolable, the tillers of the soil, even when battle is raging in their neighbourhood, are undisturbed by any sense of danger, for the combatants on either side in waging the conflict make carnage of each other, but allow those engaged in husbandry to remain quite unmolested. Besides, they neither ravage an enemy's land with fire, nor cut down its trees.²⁴

In the modern times, per capita emissions of the developed nations are much higher than those of the developing/newly industrialised nations, which is commonly termed as the “equity gap”. Therefore, the developed countries are the primary polluters whereas the worst affected are the developing countries. India’s logical proposition is that the ‘polluter pays’. India believes that the developed world, which followed the same path/model of economic development a few decades ago, should not now hinder the growth process of the developing world as it amounts to reaching there first and thereafter stopping others from doing the same by hindering their legitimate pursuit towards economic and social development. India (and the developing world) expects that instead of blaming the developing nations for the environmental change being caused due to high

22. Indira Gandhi’s speech “Man and Environment” at Plenary Session of the United Nations Conference on Human Environment, Stockholm June 14, 1972, at http://lasulawenvironmental.blogspot.in/2012_07_01_archive.html accessed on May 9, 2014.

23. AB Bosworth, “The Historical Setting of Megasthenes’ Indica”, *Classical Philology*, vol 91. no. 2, April 1996, p. 113.

24. Megasthenes, *Indika*, at www.sdstate.edu/projectsouthasia/upload/Megasthene-Indika.pdf, accessed on May 10, 2014.

population coupled with low-end technology, the developed world should facilitate their growth by sharing its technological expertise and extending the support desired for environmental adaptation and mitigation. Way back in June 1972, Mrs Indira Gandhi, in her landmark speech at Stockholm at the Plenary Session of the UN Conference on Human Environment, had stated that poverty and need are the greatest polluters. She had emphasised that the environment cannot be improved in conditions of poverty nor can poverty be eradicated without the use of science and technology.

With regards to national security, India believes in the policy of peaceful coexistence and non-alignment, without holding any expansionist or revisionist designs. It follows the concept of defensive defence, and, accordingly, the role of the military is largely reactive to external military threats. It has never initiated a war, rather all the wars have been thrust upon it. There is no evidence of India nurturing any intention to develop any kind of Weapon of Mass Destruction (WMD). Hence, the contribution of the Indian military to environmental pollution is minimal, especially as compared with the US military which is deployed across the globe with a philosophy of offensive employment.

The Indian military has also been playing a significant role in other than war operations, including 'aid to civil agencies', Humanitarian Assistance and Disaster Relief (HADR) and preservation of the environment. The Indian Army, being aware of its environmental obligations, has constituted a special establishment known as the "Environment and Ecology Cell".²⁵ This cell closely works with the Ministry of Environment and Forests (MoEF) on environmental issues and conservation aspects. The 2006 Report of the National Forest Commission under the chairmanship of Justice BN Kripal brought out that the organisational structure, training, motivation, discipline, inter-communications and mobility of the Indian Army make it ideally suited for environmental protection.

With effect from 1981, the Eco Task Force (ETF), a successful model of a joint venture among the Indian Army, Territorial Army, MoEF and the state government, has been doing a commendable job

25. PK Gautam, *Environmental Security: New Challenges and Role of Military* (New Delhi: Shipra Publications, 2010).

in the field of eco-conservation and restoration through afforestation, soil conservation, restoration of the watershed, etc. There are eight ETFs working in different parts of the country, including the border areas and other regions of Uttarakhand, Rajasthan, Himachal Pradesh, Assam and Jammu and Kashmir (J&K).²⁶

The increasing importance given by the policy-makers to environmental issues like food security, energy security and climate change can be accessed from the fact that one of the eight verticals initiated at the National Security Advisory Board (NSAB) is dedicated to these issues.²⁷ National security experts in contemporary India also consider environmental security as a key element of the national security paradigm.²⁸ Nevertheless, India has its own perspective towards the environment and security, which is a blend of different approaches, as mentioned earlier. The Indian approach has a judicious mix of *ecologist*, *humanist*, *statist* as well as *rejectionist* perspectives. It is largely in line with the *ecologists* and *humanists*. It is also *statist* to the extent that India has started giving due credence to the fact that environmental stresses may lead to inter-state conflicts. It is gainfully employing the military and its infrastructure towards environmental adaptation and mitigation. However, the Indian approach is also *rejectionist* in the sense that it opposes the alarmism of the West. India is apprehensive that the developed countries may exploit the environmental security agenda for militarisation of the environment in a manner that would only be serving their vested interests, and not the real cause of environmental adaptation and mitigation. India believes that the military should only provide assistance and should not be given control over (or a lead role in) environmental issues.

CONCLUSION

While the concept and meaning of security are ambiguous and contested, the term is indeed very influential. Interpreting any

26 Nishant Gupta, "Mainstreaming Environmental Security and Cooperation in South Asia" in Vinod Patney, ed., *Asian Defence Review, 2013* (New Delhi: Knowledge World, 2014), pp. 109-131.

27. Shyam Saran, Chairman NSAB and Special Envoy to the PM, during the inaugural address at a Round Table Discussion on India's Nuclear Strategy held on December 19, 2013, at Air Force Auditorium, Subroto Park, New Delhi.

28. Jasjit Singh, *India's Security in a Turbulent World* (New Delhi: National Book Trust, 2013), p. 27.

challenge as a security problem raises its status. It no longer remains a problem merely to be dealt with through mainstream institutions in a routine manner, but instead becomes a crucial issue requiring extraordinary measures. Labelling a particular challenge as a security issue suggests that the challenge is a huge threat to sovereignty, consequently, requiring actions beyond the routine conventional behaviour. Thus, a vital aspect of the term security is that it raises the stakes of the problem and justifies drastic actions. In this regard, to bring the focus of the national, regional and international community on environmental change and to initiate steps for mitigation and adaptation, securitisation of the environment is a tenable proposition. The transition from environmental conflict to environmental security is perhaps justified by the desire to widen the horizon and issues concerning military establishments. It is essential to sensitise militaries to newer forms of dissensions and tensions so that they are not limited by the conventional security definition and are able to appreciate inter-country relations and politics on environmental changes in all their complexities.

Nevertheless, 'securitisation' of a concept has the inherent possibility of justifying unaccountable actions. Reportedly, the US has been craftily exploiting this dimension and waging the 'war on drugs' and 'war against terrorism'. The world community has to be cautious of the fact that the process of securitisation has an inherent potential of pursuing other hidden agendas under the garb of security.

SYNERGIES IN INDO-RUSSIA DEFENCE COOPERATION SINCE 2000

CHANDRA REKHA

Defence cooperation has been the major plank in the bilateral relations between India and Russia. It can be argued that the relations between the two countries flourished due to the common threat perceptions and the international milieu during the Cold War period. It can also be stated that the current scenario in the strategic partnership between the Kremlin and Delhi has remained strong due to the geopolitical imperatives, shared security concerns and mutual benefits which mostly emerged through strong defence ties.¹

In 2013 alone, India, with Russia's cooperation, achieved capacity building in new strategic areas through acquisitions and development of weapons which include the induction of the INS *Vikramaditya*, the launching of own IAC- INS *Arihant*, the commissioning of the MiG 29K squadron in the Indian Navy,² the purchase of 350 T- 90S tanks and the successful development of the BrahMos supersonic cruise missile, a joint venture by India and Russia. India is the largest client

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1. Dr Richard Weitz, "Russia Faces Challenges in India's Arms Market", *World Politics Review*, July 2012.
2. "Achievements of Ministry of Defence During the Year 2013" by the Press Information Bureau, Government of India , Ministry of Defence, December 19, 2013.

for Russian weapons, buying nearly 80 percent of Russian military hardware, and being number one partner for Moscow³.

The defence cooperation in what has traditionally been the most successful area of strong bilateral relations may seem very promising, but it is not without its challenges. This paper aims to sketch the important milestones in the defence cooperation between India and Russia and the evolving trends in the relations, along with an evaluation of the major strengths and drawbacks that may affect the long-term prospects between India and Russia.

BRIEF HISTORICAL SURVEY

To understand the current status and major trends of Indo- Russia defence ties, it is important to analyse the nexus that India and Russia created historically. India has been sourcing its military equipment from the Western countries ever since it became independent in 1947. Britain and France were the prime suppliers during the initial period of its independence, and the US was also a frontline supplier of military equipment to India.⁴ Arguably, the initial post-independence foreign policy doctrine of India and the Soviet Union's bipolar politics during the Cold War period had diminished the chance for both countries to emerge as strategic partners alongside their divergent political systems.

After failing to secure arms transfer agreements with the West post the Indo-Pakistan War in 1965, India turned towards the Soviet Union. This led to the Soviet Union becoming the principle defence market for India since then.⁵ In the early 1970s, both Indian and Soviet leaders looked at the emerging US-China-Pakistan rapprochement as a serious threat to the security in the region of South Asia. The USSR supported India against the alliance among Pakistan- United States-China during the 1971 India-Pakistan War by sending ships to the Indian Ocean to counter any move by the USA which had already

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3. Boris Egorov, "Russia Eyes New Markets for Arms Export, India Still Number 1 Importer", *RIR*, May 23, 2013., at http://in.rbth.com/economics/2013/05/23/russia_eyes_new_market_for_arms_export_india_still_number_1_import_25269.html
 4. Deba R. Mohanty and Uma Purushothaman, "India-US Defence Relations: In Search of a Direction", *Observer Research Foundation*, New Delhi, August 2011, pp. 8-9
 5. Ksenia Kondratieva, *A Project Report on India and Russia Military and Defense Co-operation*, 2013-14, at http://www.academia.edu/5191041/A_Project_Report_on_India_and_Russia_Military_and_Defense_cooperation

sent its 7th Fleet ships into the Bay of Bengal.⁶ The Indo-Soviet Treaty of Peace, Friendship and Cooperation in 1971 further provided a platform for a strong defence relationship between the two countries which was concluded prior to the 1971 War.

Nevertheless, the emergence of strong defence relations and India's preference for Russian military hardware during the Cold War period was determined by a host of other factors such as: the equipment was easy to operate and maintain, it was easily accessible and also enabled India's defence forces to be armed with quality weapons at good prices.⁷

During the Cold War period, the defence cooperation between the erstwhile Soviet Union and India was based on complementary interests. The Soviet intention was to use India as a strategic counter-balance to the US penetration in the Asian region. India, on the other hand, needed the Soviet Union for the modernisation and indigenisation of the defence forces and equipment, in keeping with the country's own assessment of its needs, for the protection of vital interests against international censure at the United Nations, for counter-balancing of possible American and Chinese pressures through Pakistan, and for economic assistance in the public sector⁸.

One of the reasons for India's continuous dependence on Soviet defence markets was the benefits that India received from Soviet weapon systems in comparison with the Western ones. The cost of the more sophisticated Western systems was assessed to be higher compared to the relative gains that India received from Moscow not just in the development of strong political relations but in the arrangements with the Soviet Union such as the barter trade which enabled purchase of defence equipment through the rupee-ruble trade. The other strong basis for the long-term defence cooperation between India and Soviet Russia was that after importing a specific number of weapon platforms like the MiG-21, their licensed production, in terms of their assembling, was taken up in India. These arrangements, despite some limitations, enabled the Indian

6. Gulshan Sachdeva, "India's Relation with Russia", in David Scotts ed., *Handbook of India's International Relations* (London: Routledge, 2011), p. 213.

7. Rod Thornton, "India-Russia Military Cooperation: Which Way Forward?", *Journal of Defence Studies*, vol. 6, issue 3, 2012, p. 100.

8. Ramesh Thakur, "The Impact of the Soviet Collapse on Military Relations with India", *Europe-Asia Studies*, vol. 45, no. 5, 1993, p. 832.

defence industry to develop its own capacities, which indeed were very limited in the early years after independence.⁹

INDO-RUSSIA DEFENCE COOPERATION DURING POST-SOVIET DISINTEGRATION

Despite strong defence ties being the backbone of the bilateral relations between New Delhi and Moscow,¹⁰ the dissolution of the Soviet Union challenged the very nature of bilateral relations between the two countries. In 1993, the 1971 Soviet-India Treaty was replaced with the new Treaty of Friendship and Cooperation, which dropped clauses that were implicitly directed against a perceived threat from the US and China.¹¹ During this period, the Russian defence industry was coping with the aftermath of the collapse of the integrated and lavishly funded Soviet military industrial complex. Cash strapped Russian firms required hard currency for arms transactions instead of the traditionally favourable soft terms offered by New Delhi during the Soviet period.¹²

Rupee vs Ruble

As a result, the “rupee versus ruble” issue ignited the decline of Indo-Russian relations when India owed nearly \$12-16 billion for arms purchases from the Soviet Union. This became a major cause of concern for the financially crippled Russian state in the post-Soviet scenario. Although India was willing to pay the debt, the currency and the exchange rate that was imposed became an issue. In January 1993, a resolution was reached which called for India to repay Russia \$1 billion a year in Indian goods until 2005, after which the remaining 37 percent of the debt would be repaid, interest free, over 45 years.¹³ Many observers noted that during the Cold War and in the fledgling state of Russia, defence trade

9. Ibid.

10. Andrew C. Kuchins, “Regional Dynamics and Strategic Concerns in South Asia: Russia’s Role”, *Centre for Strategic and International Studies*, January, 2014, p. 2 at www.csis.org

11. Ibid.

12. Andrei Volodin, “A Forward-Looking History”, *Russia & India Report*, April 11, 2012, at http://indrus.in/articles/2012/04/11/a_forwardlooking_history_15437.html

13. Jerome M. Conley, *Indo-Russian Military and Nuclear Cooperation: Lessons and Options for US Policy in South Asia* (New York: Lexington Books, January 2001), p.62

between India and Russia almost collapsed over the issue of the rupee-ruble debate.

Russian weapons, on the other hand, were outdated and old; the delay in supply further aggravated the continuous problems in Indo-Russia defence ties. Since India required upgradation of its defence sphere, the Indian defence forces turned their attention toward Washington¹⁴. Moreover, India paid the price when the Soviet Union imploded as many of the defence plants closed down, while the pressing requirement of India during this period was to ensure the supply of spare parts. The technological gap between the Soviet and US weaponry systems was widening to dangerous proportions which raised concerns regarding the national security of countries like India.

Upward Trend in Defence Ties from 1995-2000

There was an upward trend in the defence cooperation between India and Russia from 1996. Russian Prime Minister Primakov visited New Delhi in December 1998, resulting in the conclusion of seven agreements with the Indian government. One such agreement was a long-term military cooperation pact, in place until the year 2010, which was of singular importance. It paved the way for enhancing the joint Research and Development (R&D) capabilities of India and Russia in the production of new weapon systems. In the entire spectrum of Indo-Russia relations, the military technical cooperation traditionally has been accorded the most prominent status¹⁵.

Despite the problems that traumatised the Russian defence industry following the disintegration of the Soviet Union, Russia has remained India's main source of most of the advanced weapon systems¹⁶.

14. Brig Vinod Anand, "India-Russia Defence Cooperation Problems and Prospects", *India Strategic*, November 2008, at <http://www.indiastrategic.in/topstories203.htm>

15. Jerome M. Conley, "Indo-Russian Military and Nuclear Cooperation: Implications for US Security Interests", *INSS Occasional Paper 31*, Proliferation Series, USAF Institute for National Security Studies (Colorado, February 2000).

16. Dr. Richard Weitz, "Russia's Arms Sale to India Under Threat", December 19, 2011, at <http://www.sldinfo.com/russia%e2%80%99s-arms-sales-to-india-under-threat/>

SYNERGIES IN INDO-RUSSIA DEFENCE COOPERATION SINCE 2000

Indo-Russian defence ties got a new impetus under the dispensation of President Vladimir Putin. While emphasising the need for redefining and “reviving” bilateral ties that had got lost following the collapse of the Soviet Union, President Putin said in an interview that both India and Russia would have to set new priorities. During his visit to India in October 2000, President Putin stressed on the institutionalising of defence and strategic cooperation between Moscow and New Delhi. India-Russia ties acquired a qualitatively new character with enhanced levels of cooperation taking place in almost all areas of the bilateral relationship, including political, security, trade and economy, defence, science and technology, and culture¹⁷. This was reflected in the signing of the “Declaration on the India-Russia Strategic Partnership” in October 2000.

In accordance with the agreement, Russia promised to deliver military hardware worth \$3 billion, including the delivery of 320 T-90 tanks, SU-30 aircraft, the *Admiral Gorshkov* aircraft carrier rechristened as the *INS Vikramaditya* and MiG-29 fighter aircraft¹⁸. The government also contracted during this year for the licensed production of 140 fighters by Hindustan Aeronautics Limited. Then another 40 were added to the contract. Some purchases have been made of artillery and armoured vehicles (256M Tunguska), engines, sensors and a variety of missiles¹⁹. A noteworthy feature of the agreement was that India was given the licence to indigenously manufacture the Russian T-90 tanks. In February 2001, Russia and India signed a defence deal for the purchase of 310 sophisticated T-90 battle tanks²⁰.

The same visit finalised two other agreements: one involved technology transfer and manufacture of main battle tanks in India, and the other envisaged production of the weapon systems of these tanks. The Indian Air Force also procured the first batch of a fleet of multi-functional Sukhoi-30MKI fighter aircraft. Ten years later, during the visit of President Dmitry Medvedev to India in December

17. Sachdeva, n.6, p. 213.

18. B.M. Jain, “India and Russia: Reassessing the “Time-Tested” Ties”, *Pacific Affairs*, vol. 76, no. 3, Fall 2003, p. 383.

19. Sachdeva, n. 6, p. 213.

20. Arun Mohanty, “Indo-Russian Strategic Partnership: A Reality Check”, *Mainstream Weekly*, vol. XLIX, no. 16, April 9, 2011.

2010, it was decided to further elevate the strategic partnership to the level of a "Special and Privileged Strategic Partnership"²¹. India has now emerged as the number one importer of Russian arms and military equipment.

The defence purchases by India include aircraft (MiG-29, MiG-29 SMT, SU-30K, SU-MK1), helicopters (Mi-17, Mi-18, etc.) and air defence systems (AK 630 30mm, etc.). In June 2010, the Cabinet Committee on Security cleared another deal worth more than \$3,000 million to buy an additional 42 Sukhoi-30 MKI fighters from Russia. The deal came on top of the 230 aircraft already contracted for from Russia in three deals worth a total of \$8,500 million. The initial contract was for 50 fighters, at \$1,460 million.

INDRA

Another aspect that displayed the upward trend in Indo-Russia defence relations was the conduct of INDRA, a joint ground and naval drill conducted by India and Russia which began in the year 2003 and is since being conducted every two years. The Russian-Indian joint INDRA military drills involve all three branches of the armed forces. Since 2003, India and Russia have conducted seven large exercises. The main part of the recent INDRA-2013 military exercise between Russia and India has been completed. It involved the armies of the two countries cooperating and learning how to counter terrorists²². In addition, the main objective of the naval exercise is to enhance interoperability, which will be useful if both the navies are working against a common threat like the pirates in the Gulf of Aden.²³

MILITARY TECHNICAL COOPERATION BETWEEN INDIA AND RUSSIA

India is Russia's primary partner in military-technical cooperation. In the year 2000, an agreement was reached between the two countries on the creation of an Inter-governmental Commission on Military-

21. Ibid.

22. Artem Sanjiev, "Indra-2013: Russian and Indian Servicemen Destroy a 'Terrorist Base', October 29, 2013 at http://in.rbth.com/economics/2013/10/29/indra2013_russian_and_indian_servicemen_destroy_a_terrorist_base_30433.html

23. Sandeep Unnithan, "Russia Snubs India: Moscow Cancels Two Military Exercises with India", May 27, 2011 at <http://indiatoday.intoday.in/story/moscow-cancels-two-military-exercises-in-india/1/139527.html>

Technical Cooperation; inter-governmental accords were signed on the purchase and production in India of cutting-edge Russian tanks, armoured vehicles and fighter aircraft under Russian licences²⁴. In 2009, both countries agreed on a new military technical cooperation agreement for the period 2011-2020²⁵.

The new programme covers both ongoing projects, such as the SU-30 MKI fighter plane and the T-90 tank production in India, and 31 new projects, which include a fifth-generation fighter aircraft, the multi-role transport aircraft and a new multi-role helicopter. On March 21, 2010, India, successfully test-fired the BrahMos supersonic cruise missile²⁶. Russia has also agreed to provide India with access to signals from its Global Navigation Satellite System (GLONASS)

Under this programme, India hopes to further shift from the buyer-seller relationship to joint design, development and production. Maritime purchases have been noticeable, including frigates (Talwar stealth class), submarines (Kilo/Sindhudesh), nuclear submarines (Akula-2 lease)²⁷.

Project 11356M

The new guided missile frigate, christened the INS *Tarkash*, was handed over to the Indian Navy. Russia and India signed a \$1.6-billion contract for constructing the three modified Krivak III class (also known as the Talwar class) guided missile frigates in 2006. The first of the three upgraded Talwar class warships, INS *Teg*, had been commissioned into the Indian Navy in April 2012. The most promising Indo-Russian project is the joint development of the Fifth Generation Fighter Aircraft (FGFA). India is also building two aircraft carriers of its own with Russian technical assistance.²⁸ The navy plans to equip its carriers with about 45 Russian MiG-29 combat

24. Tatiana Shaumyan, "Russian-Indian Bilateral Cooperation", in P Stobdan, ed., *India-Russia Strategic Partnership: Common Perspectives* (New Delhi: IDSA), 2010, p. 157.

25. Sachdeva, n. 6.

26. "India Launches Brahmos Cruise Missile", March 22, 2010, at http://articles.economictimes.indiatimes.com/2010-03-22/news/27581932_1_cruise-missile-brahmos-aerospace-russia-s-npo-mashinostroyenia

27. Stockholm International Peace Research Institute (SIPRI), "Arm Transfers: TIV Data," at <http://portal.sipri.org/publications/pages/transfer/tiv-data>

28. "Talwar Class: Destroyer Project 11356", at <http://www.globalsecurity.org/military/world/india/d-talwar.htm>

jets and Kamov anti-submarine helicopters²⁹.

CHANGING TRENDS IN INDO-RUSSIA DEFENCE COOPERATION

Despite such strong defence agreements and defence trade between the two countries, it is important here to understand that both countries have pursued policies that have moved beyond the traditional partnership they once shared. India has been unhappy with the delays of its contracted weapons and with the efficiency of Russian equipment³⁰. A recent example was the induction of the INS *Vikramaditya* in 2013 which brought the curtains down on a 13-year saga of carrier reconstruction which was marred by recurrent time slippages, cost overruns and edgy political negotiations.³¹

Delhi has diversified its defence markets by tilting towards the West for its defence requirements. Among its major suppliers, the United States and Israel have become important markets for its defence supplies. In 2012, the Mil Moscow Helicopter plant, a unit of Oboronprom, lost bids for about 15 heavy lift helicopters and 22 combat helicopters to Boeing Co, in deals totalling \$2.4 billion. Russia also lost out to Europe's EADS (EAD.PA) in a \$1 billion contract to supply aerial refuelling planes, while the Russian MiG-35 lost out to France's Dassault as the preferred bidder in a \$15 billion deal for 126 new combat jets³².

Moreover, the Indian Air Force decided to replace the Russian Il-76s with the American C-17s. The US Air Force is scheduled to complete the delivery of all 10 planes by the end of 2014. It is believed that during the last several years, Russia has lost Indian military tenders worth up to \$13 billion. Overall, the relations between India and the US are becoming warmer – sometimes at the cost of Indo-Russian cooperation³³. India is currently the United States' largest defence market. In 2009, India imported defence kits worth \$237

29. Arup Roychoudhary, "Factbox-Russia and India's Defence Ties", December 24, 2012., at http://articles.chicagotribune.com/2012-12-24/business/sns-rt-india-russiadefence-factbox14n09v1zr-20121224_1_defence-ties-admiral-gorshkov-medium-lift-helicopters

30. "India Becomes US' Largest Defence Market", *IHS Balance of Trade Study*, February 2014.

31. S Anandan, "13-Year Saga Comes to an End", November 16, 2013, at <http://www.thehindu.com/news/national/13year-saga-comes-to-an-end/article5358030.ece>

32. Roychoudhary, n.29.

33. *Ibid.*

million from the United States and the figure skyrocketed to about \$1.89 billion in 2013.

The primary export strength of the US is in its aerospace products offering C-17s, AH-64s, B737s, H-47s and F-16s. This dominance is further enhanced with the upcoming deliveries of the Joint Strategic Fighter (JSF) aircraft in the coming years. The United States bagged twin contracts of \$1 billion (six C-130J Hercules aircraft) and \$2.2 billion (eight P-81 Poseidon long range maritime patrol-strike aircraft for the Indian Navy) deals respectively. Defence cooperation between India and the US has increased exponentially in the last few years and is testimony to the common interests and growing trust between the two countries which is now fast emerging as a strategic partnership³⁴.

THE ROAD AHEAD

The bilateral quibbling between India and Russia has become less volatile in the recent times despite the hiccups in their defence cooperation. The relations are far more stable than those between India and the other big powers. India is aware that Russia is its most dependable partner and the Russians are far more willing to share technology than the other big powers. Delhi also recognises that unlike the Russians, the Americans have little compunction about making available to Pakistan³⁵ the same military hardware they have sold to India. The growth of China in terms of both economic development and its military might poses a potential threat to India.

Defence cooperation between Russia and India remains strong because of shared security concerns, geo-political imperatives, and economic benefits. Both countries fear radical Islamic terrorism, share concerns about regional instability and the repercussions post US withdrawal from Afghanistan. Although there is sustainable growth in India as well as in China, the rise of China and its military hegemony is seen as a potential threat by India. Hence, to secure its boundaries and national interest, it becomes imperative for India to fortify its defence forces. India's changing geo-political orientation has become a major cause of concern for Russia.

34. Mohanty and Purushothaman, n. 4., pp. 8-9.

35. Sudha Ramachandran, "Snub' Just a Snag in Russia-India Ties", June 8, 2011, at <http://www.russiadefence.net/t1444-snub-just-a-snag-in-russia-india-ties>

INDIAN RESPONSE TO THE US' REBALANCING STRATEGY

ASHA M. MATHEW

The 21st century brought a whole new reality to the notion of the Asia-Pacific with the rise of countries like India and China, a reviving Japan, along with security and economic links right from the Indian Ocean to the Western Pacific, creating one large strategic unit. With over 21 economies having a Gross Domestic Product (GDP) which comprises about 56 percent of the world's economic output, the Asia-Pacific region has become the key engine for the global economy. The region is of great geo-political importance, as it consists of some of the world's major energy and trade routes, and the largest militaries¹.

With this tectonic shift in the world economy and the rapid rise of China, the first Obama Administration in the latter half of 2011, announced that the US would be stepping up its role in the Asia-Pacific region. Ever since, there has been a flurry of visits to the region, at both the presidential and Cabinet levels. While some saw no results at all, a number of these meetings have translated into deeper bilateral and multilateral ties. The US' rebalancing strategy demands an enhancement of US diplomatic activism within the Asia-Pacific region. The formation of new partnerships and alliances remains one

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1. "The Importance of the Asia-Pacific Region", *Editorials on Voice of America*, July 24, 2012, at <http://editorials.voa.gov/content/the-importance-of-the-asia-pacific-region/1514099.html>, accessed on November 20, 2013.

of the major agendas of the rebalance, as they continue to be crucial in handling traditional security challenges and primary to tackling non-traditional security challenges in the region.

A BRIEF ON THE US' REBALANCING STRATEGY

The initial steps towards strengthening US relations with the Asia-Pacific region can be traced back to the Bush Jr. Administration. Aside from the US involvement in Iraq and Afghanistan, Bush made sure to deepen relations with the existing allies and forge new partnerships in the Asia-Pacific region. President Bush was crucial in bringing forward various initiatives such as the Trans-Pacific Partnership, yet another vital economic agenda in the strategy which is yet to see the light of day. The US worked towards strengthening relations with countries such as India and Vietnam. The Bush Administration initiated the signing of the Indo-US civil nuclear deal which was considered to be a major breakthrough in the then almost non-existent Indo-US relations.

The next question is: how different is President Obama's rebalancing strategy from that of the previous Administration? The strategy is referred to as "forward-deployed" diplomacy. This requires the US to dispatch its diplomatic assets, which include experts, high rank officers, permanent assets and even agencies, to the various corners of the Asia-Pacific region. This is to be done through six major steps: deepening relationships with the emerging powers, including with China; strengthening bilateral security alliances; expanding trade and investment; engaging with regional multilateral institutions; forging a broad-based military presence; and advancing democracy and human rights. The strategy reiterated that it was crucial for the US to look towards deepening partnerships with the emerging countries. The two countries that were stressed on under this agenda were India and Indonesia. The US feels these countries would be the key drivers of the economy and their importance would grow in the future because of their strategic location, growing economy, large population and democratic governance system.²

2. Hillary Clinton, "Asia's Pacific Century", *Foreign Policy*, October 11, 2011, at http://www.foreignpolicy.com/articles/2011/10/11/americas_pacific_century, accessed on March 12, 2014.

While the US attempts to forge these strategic partnerships and alliances, the Asia-Pacific region continues to see various challenges in the form of territorial disputes, fast growing militaries and general hostility as a legacy of history. Within such a backdrop, the US partnerships and alliances are “a calming constant in a sea of change”.³

THE INDIAN RESPONSE TO THE US’ REBALANCING STRATEGY

India has been considered a crucial factor in the US’ rebalancing strategy. On a visit to India, former US Secretary of Defence Leon Panetta referred to India as the “lynchpin” of the US strategy in Asia.⁴ Yet another US government report stated, “The United States is also investing in a long-term strategic partnership with India to support its ability to serve as a regional economic anchor and provider of security in the broader Indian Ocean region.”⁵ With the US pushing for closer ties with the country, India has taken a pacifist approach and has remained an observer of the changing geo-political scenario in its neighbourhood. India’s former Defence Minister AK Antony, in response to Panetta, highlighted the necessity to enhance the multilateral security architecture in the Asia-Pacific, but, at the same time, also emphasised that necessary steps “at a pace comfortable to all the countries concerned” should be taken.⁶

In order to further understand India’s stance on the issue, it would be interesting to observe and analyse the following table

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3. Ralph A. Cossa, Brad Glosserman, Michael McDevitt, Nirav Patel, James Przystup and Brad Roberts, “The United States and the Asia-Pacific Region: Security Strategy for the Obama Administration”, *Pacific Forum CSIS*, February 2009, at http://www.cnas.org/files/documents/publications/CossaPatel_US_Asia-Pacific_February2009.pdf, accessed on March 14, 2014.
 4. Panetta says India ‘Lynchpin’ for US Strategy in Asia,” *Dawn*, June 6, 2012, at <http://www.dawn.com/news/724420/panett-says-india-lynchpin-for-us-strategy-in-asia>, accessed on March 20, 2014.
 5. S Amer Latif, *India and the New US Defence Strategy*, Centre for Strategic and International Studies, February 22, 2013, at <http://csis.org/publication/india-and-new-us-defense-strategy>, accessed on March 20, 2014.
 6. “India and US Hold Defence Talks: Asia-Pacific Countries Should Settle Bilateral Disputes as per International Law,” Press Information Bureau, June 6, 2012, at <http://pib.nic.in/newsite/erelease.aspx?relid=84715>, accessed on March 18, 2014.

(Table 1)⁷ in which four foreign policy approaches were estimated with respect to the Indian response towards the US' rebalancing strategy.

Table 1

Foreign Policy Schools	Strategic Environment	Perception of US Pivot	Foreign Policy Prescription
Soft Nationalists	US in relative decline; China rising	Strategic concern	Maintain strategic autonomy
Great Power Realists	US in relative decline; China rising	Strategic opportunity	Increase strategic engagement with the US
Hard Nationalists	US in relative decline; China rising	Strategic concern	Strategic independence from the US
Bandwagoners	US decline a myth; China rising	Strategic opportunity	Strategic alignment with the US

Source: "Indian Debates on America's Rebalance to Asia," *Policy Brief*, Signur Studies for American Studies, July 2013.

The first response is that of the **soft nationalists**. Soft nationalists are known for their neutral stance in foreign policy matters. In a security environment wherein India perceives the relative decline of the US and the rise of China, the rebalancing strategy sounds like an attempt by the superpower to stand up on its feet and prove that it is still capable of acting as a stabiliser in the region. In such a scenario, India will definitely view the American strategy with concern, as the proactive role of the US in the region will only aggravate Chinese sentiments. This would, in turn, have a domino effect on the smaller nations which would immediately garner strength under the US support, thereby leading them to take hardline decisions against China. India would be caught in a tricky situation where it would have to decide between the two powers in the region. In short, the rebalancing strategy would compel India to get involved in a conflict it would choose to avoid otherwise. For this

⁷ "Indian Debates on America's Rebalance to Asia," *Policy Brief*, Signur Studies for American Studies, July 2013, at http://www.risingpowersinitiative.org/wp-content/uploads/PolicyBrief_Jul2013_India3.pdf, accessed on March 23, 2014.

very reason, India would keep a distance from both the superpowers to ensure that it maintains its strategic autonomy which continues to be an essential component of its foreign policy.⁸

India's growing presence and importance in the region and globally, ensures that the US has to work towards developing closer ties with it, laying aside decades of mutual mistrust and suspicion. One of the important steps taken by the two countries in enhancing their relations was the statement of intent signed by Prime Minister Manmohan Singh and President George W. Bush on July 18, 2005, which provided India access to civilian nuclear technology. What is crucial to note at this juncture is the fact that India was given access to this technology despite not being a member of the Non-Proliferation Treaty (NPT), a regime set up by the US itself to focus on non-proliferation. The US definitely had to go back and rework on its own policies to ensure that this access was given to India. The irony lies in the fact that one of the foundational reasons for the start of the NPT regime was that India went nuclear. Thus, a clear shift can be seen in the US' policy towards India. How successful this effort has been so far is a question that is being debated, as "India is always seen as a reluctant partner and the US, an unreliable power".⁹ The US' rebalancing strategy to a large extent is to convince its allies in the Asia-Pacific and elsewhere that the US has not been weakened by its own economic and political challenges. In a speech to the Australian Parliament on expanding its influence in the region, President Obama made it clear that "the United States is a Pacific power, and we are here to stay".¹⁰ On the announcement of the rebalancing strategy, former Indian Ambassador to the US Nirupama Rao was one of the few Indian representatives to comment on the US pivot to Asia. She made a public statement in 2013 wherein she welcomed the US engagement in the Asia-Pacific region and felt it was one which was vital to both the countries but she also went on to say, "Many observers are tempted to view the India-US engagement in this region as directed at China. I do not believe that such a construct

8. Ibid.

9. Monish Tourangbam, "Rebalancing: Where Does India Figure?", Institute of Peace and Conflict Studies, May 14, 2014, at <http://www.ipcs.org/article/india/us-in-asia-pacific-rebalancing-where-does-india-figure-4435.html>, accessed on April 23, 2014

10. "Obama Tells Asia US is 'Here to Stay'", *The Guardian*, November 17, 2011, at <http://www.theguardian.com/world/2011/nov/17/obama-asia-pacific-address-australia-parliament>, accessed on November 23, 2013.

is valid or sustainable, given the significant overlapping interests that bind us in the region and globally.... China is our largest neighbour.”¹¹ This neutral stance taken by India so far clearly highlights its response to be that of a soft nationalist. Another factor that associates India with this school is the importance India gives to its strategic autonomy.

The second response is that of the **great power realists**. This lot of countries would look out for opportunities to enhance their interests. In such a security environment where India perceives the relative decline of the US and the rise of China, the rebalancing strategy would be considered a strategic opportunity for India. The US would require Indian support to implement its strategy in the Asia-Pacific region, and India would use this bait to strengthen its relationship with the superpower. The aim of India would be to follow a policy where it would be cautious of its actions against China while, at the same time, benefit from even military cooperation with the US. Keeping in mind that India has had a history of ‘non-alliance’, it would be careful to define its engagement as a strategic one which envisages cooperation in the areas of defence and diplomacy.¹²

This is probably the route India should opt for in response to the US’ rebalancing strategy. Looking back into history, this largely was what India’s non-alignment policy referred to. During the Cold War, with the immense importance India gave to its strategic autonomy, it was able to benefit from both superpowers at some point of time.

Owing to India’s strategic role in the 21st century, the US engagement will continue to grow, also keeping in mind the large number of congruent interests between the two. The importance of engaging closely with India is now an important part of the strategic consciousness of the US too. India should work towards further enhancing its relations with the US and cooperate on more strategic areas and, at the same time, ensure that at no point does it compromise on its strategic autonomy.

India can also utilise this opportunity to forge security cooperation with other countries in the region, especially in the maritime sector. At some level, it should take the responsibility and highlight its legitimate

11. “Ambassador Rao Talks About US’ Asian Pivot”, *IndUS Business Journal Online*, July 2, 2013, at <http://www.indusbusinessjournal.com/ME2/Audiences/dirmod.asp?sid=&nm=&type=Publishing&mod=Publications%3A%3AArticle&mid=8F3A7027421841978F18BE895F87F791&tier=4&id=EBD1F478D9F14025B885F4CD22E8DEA5&AudID=F1B696626A8943B7B50052A323677014>, accessed on February 24, 2014.

12. n.7.

interest in the region. Further, it can also make use of its Look East policy to build closer ties with these countries and seek economic integration.¹³ India seems to have been engaging on a closer note with countries like Japan and South Korea in the recent past. Prime Minister Manmohan Singh's visit to Japan early 2013 was heavily criticised by the Chinese media. Japanese Prime Minister Shinzo Abe also visited India in January 2014 as the guest of honour for the Republic Day parade. Deeper bilateral ties with Japan are clearly welcomed by Indian officials. The visit of South Korean President Lee to India in January 2010 was also of great significance for the strengthening of relations between the two countries. Meanwhile, India should play its cards carefully when it comes to the Sino-US power rivalry in the Asia-Pacific region.

The third response is that of the **hard nationalists**. These are countries that largely follow an inward looking policy rather than have extensive reliance on other powers. They are firm believers of 'strategic independence' and avoid any sort of dependence on outside powers for their national security. In such a scenario, India would look to engage with countries within the region to balance China as the focus here is on the rise of China and not on the decline of the US. India would also foresee the possibility of some sort of adaptability in the US-China relations, leaving it to look after itself on its own. Yet another possibility would be that with India perceiving the relative decline of the US, there are chances that the US' domestic challenges could affect its commitment towards India. Amidst the territorial disputes in the region, India would be more comfortable joining hands with countries such as Japan, South Korea, and Vietnam to counter China rather than look towards the US.¹⁴

The fourth response is that of the **bandwagoners**. This group is very clear about its goals and largely comprises the defence community. Their vision is much beyond the regional balance and more at a global level. In contrast to the soft nationalists, the bandwagoners see an obvious clash of interest with China. They look to the US for 'perceived gains' rather than just mere survival. They feel the US is capable of regaining its strength, hence, they believe that this relative decline of

13. Arvind Gupta, "India's Response to the Asia-Pacific" in S.D Muni and Vivek Chadha, eds., *Asian Defence Review 2014* (New Delhi: Pentagon Press, 2014), p. 211.

14. n.7.

the US is a myth. And that India should work towards siding with the superpower since they both face a common threat.¹⁵

Looking back at India's history, India was never really known to be a hard nationalist or a bandwagoner. Hence, it is highly unlikely that it would follow this path in the near future either.

CONCLUSION

The US' rebalancing strategy to a large extent is a strategy that India can clearly take advantage of because of the 'lynchpin' position it holds in the overall picture. While India has expanded its strategic and diplomatic ties with the US to a certain extent, it also has to ensure that it convinces Beijing that it will not become a mere addition to the rebalancing strategy. But keeping in mind that the two countries, India and the US, can and do converge on a number of issues, the onus lies on India to ensure that it at no point treads beyond the thin line and hurts the sentiments of its 'largest neighbour'. Meanwhile, India's growing role and participation in the international arena as well as its wide acceptance in the Asia-Pacific region, require it to step forward and play a more proactive role. This could also convince its neighbours in the South Asian region of its good intentions and help ease the friction that exists amongst them. On the other hand, the overwhelming shadow of China in the region is also not in the interest of India. India, thus, has to make sure that it gets its balancing act right throughout the game. With the likelihood of the Asia-Pacific region becoming a zone of contention between the US and China, the onus lies on India and other countries in the region to enhance the mechanisms of communication between these powers to ensure peaceful resolution of disputes.

After the recent elections in India, it would be interesting to see if the new government would follow the stance of the previous one or take a completely different approach altogether. The new government should look to develop a long-term strategy to make use of the rising prospects for India in the region while also ensuring that it confronts the security challenges that are at hand. Either way, it is time for India to step out and up its game in the international arena at both regional and global levels.

15. Ibid.

CHINA'S NAVAL MODERNISATION: WILL IT CURE INDIA'S SEA BLINDNESS?

ARJUN SUBRAMANIAN P

INDIA'S LAND-CENTRIC STRATEGIC MINDSET AND ITS CONTINUING SEA BLINDNESS

India, throughout its existence, has remained a land power. India too has a rich martial tradition, but a tradition that is deeply entrenched in its threat perception which is primarily focussed on its northwestern border. The evolution of this mindset has its reasons; throughout its history, almost all the invasions came from the northwestern border through the passes in the Hindukush range and the plains of Baluchistan and Sind. The existence of another great civilisation in the north (China) did not factor much in the Indian strategic security calculus as the Himalayan ranges acted as a great barrier to any possible invasion and also the very much similar (to India) culturally influenced superiority-based non-expansionist attitude of the Chinese contributed further to such thinking on security in India. Only after 1947, when India became a proper nation-state was the northern neighbour factored into its strategic

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security calculus and this mindset got further strengthened after the brief Himalayan war in 1962 when India suffered its worst military defeat. This further strengthened the Indian land-oriented military strategic mindset in the post independence era.

Even this land-centric strategy was largely defensive in nature, which is embedded in India's non-expansionist mindset. According to George K. Tanham, largely because of its geography, India has a long history of non-aggression and non-expansion outside the subcontinent. Had Indians sought to expand to the west, north, or east, they would have faced a long, cold trek through the mountains to lands that are relatively poor and barren. Thanks to India's relative riches, however, Indians lacked an incentive to expand.¹ Self-sufficient in the necessities of life, they were largely oblivious to the outside world.² Perhaps, self-sufficiency was the single strongest reason for the defensive orientation, as the rulers had to protect the riches and resources concentrated in this region from invaders.

All this, and the absence of a threat from the sea front for most periods in its history resulted in India's sea blindness. One of the earliest outside maritime contacts happened during the 7th century AD when Arab traders brought the idea of Islam to the Malabar coast, and the first Indian Muslims were converted here and at scattered points along the western coast.³ This was a peaceful contact as there were no Muslim armies.⁴ The European powers were the only powers that used the sea front to gain access to the subcontinent and finally subjugated it.

In its long history, India has undertaken only one aggressive overseas military expedition against another country. The Cholas (the South Indian Empire) led naval expeditions to Sri Lanka and the Maldives in South Asia. The Cholas also led a naval/military campaign to Southeast Asia in 1025. They were the only subcontinental rulers to have ever led a naval/military expeditionary force outside South Asia. Their overseas campaign against the Kingdom of Shrivijaya in Southeast Asia involved both the army and the navy.⁵ Apart from this

1. George K. Tanham, *Indian Strategic Thought An Interpretive Essay* (Rand Corporation, 1992), p. 55.
2. *Ibid.*, p. 56
3. M.J. Akbar, *India: The Siege Within* (New Delhi: Roli Books, 2003), p. 111.
4. *Ibid.*
5. Manjeet Singh Pardesi, *Deducing India's Grand Strategy of Regional Hegemony From Historical and Conceptual Perspectives* (Singapore: Institute of Defence and Strategic Studies, April 2005), p.35.

brief period of southern peninsular kingdoms' utilisation of the navy as a tool to serve foreign policy objectives, there was no other notable naval power in India. For mostly cultural reasons, Mughal and pre-Mughal India never held the navy in very high regard. According to Thapar, even though shipbuilding technologies existed and ships and boats were also used for transport across rivers, naval warfare was not highly developed in ancient India. There were riverine forms of warfare in the Indus delta, in the Ganga delta and in Assam. Moreover, southern peninsular India and the Marathas had coastal navies. However, no distinct or dominant tradition of naval warfare existed in India. Even the Mughals had no effective naval fighting force.⁶ During the British rule, the British controlled the Indian Ocean with their navy, but the mission was part of their overall global commercial and colonial interests.

The sea blindness continues in post independence India. Though India inherited a navy from the British ruled India, the Indian Navy has had to grapple for years with its 'Cinderella service' status, which has left it with but a meagre portion of the defence budget. Having played a mostly peripheral part in most of India's past conflicts, the navy has also been hard pressed to define and justify its role.⁷ Even during the 1965 War with Pakistan, the directive to the navy from the Naval Headquarters (HQ) was to ensure the safety of Indian merchant shipping and the sanctity of the Indian coast. A directive was sent out by a joint secretary in the Ministry of Defence (MoD) that the Indian Navy's action should not "widen" the war, whatever that might mean.⁸ Only in the 1971 War did the navy perform a considerable classic role of a navy in a war. In this war, the navy performed offensive operations and influenced the course of the war. Nevertheless, the navy continued to be seen as a force that could play only a secondary role. During the tenures of Indira and Rajiv Gandhi, the navy spasmodically regained impetus, but it has only really been over the past 15 years that India's political leadership has actively endorsed an ambitious blue-water role of it. Nevertheless, to this day,

6. Ibid.

7. Iskander Rehman, "India's Aspirational Naval Doctrine" in Harsh V. Pant, ed., *The Rise of the Indian Navy: Internal Vulnerabilities, External Challenges* (Surrey: Ashgate, 2012), pp. 55-79.

8. Adm S.M. Nanda, *The Man Who Bombed Karachi: A Memoir* (New Delhi: Harper Collins Publishers, 2004), pp. 176-177.

the navy's share of the defence budget remains considerably lower than that of the army or the air force, and even the most optimistic predictions for its future allocation doubt it will climb much above 20 per cent in the years to come.⁹ This continuing myopic view of the role of the navy is despite the fact that roughly 90 per cent of India's external trade by volume and 77 per cent by value is seaborne¹⁰ and India has expanding interests across the globe. Though at present the Indian Navy is a much better force compared to earlier times, it has still not attained the level and status that befits the status of a force of an emerging power like India. However, the geo-political set-up and the security architecture in the region are changing fast, primarily due to the rapid emergence of China. A historically inward looking China has started looking out of its traditional periphery. This will definitely have a major impact on Indian security and national interests. But the question is: will it be a factor in removing India's sea blindness and altering its land oriented strategic mindset?

MAJOR TRENDS OBSERVED IN CHINESE NAVAL MODERNISATION

From the mid-Nineties, particularly after the 1996 cross-strait crisis, China speeded up its naval build-up with a focus on enhancing its anti-access and area denial capability (A2/AD). The important concern was preventing the intervention of the US and its allied powers in any conflict with Taiwan or other conflicts involving China along its periphery. This focus was visible as the People's Liberation Army Navy (PLAN) started acquiring weapons and platforms with anti-shipping capability. Initially, the bastion to be protected under this strategy was the first island chain, as defined by China. But now it appears that it is gradually extending till the so-called third island chain.

The second trend that is visible in China's naval modernisation is the building of capability to protect its Sea Lines of Communication (SLOC). Most of Chinese trade and oil supply is through seaborne traffic. In 2011, China imported roughly 40 per cent of its crude oil

9. Rehman, n.7, p. 62.

10. Walter C. Ladwig, "India and Military Power Projection: Will the Land of Gandhi Become a Conventional Great Power?", *Asian Survey*, vol. 50, no. 6, 2010, p.1173.

supply, 182 million tonnes of coal, roughly 6 per cent of total demand, and 12 per cent of its natural gas supply by sea. More importantly, these figures are likely to rise. For instance, even if the Chinese economy were to slow down substantially, the country could still add more than 300,000 barrels per day of new crude oil demand each year—the equivalent of adding a Philippines to the global oil market annually.¹¹ As the Chinese economy grows, the demand for energy will grow manifold which can only be met through seaborne supply. China fears that these lines may be disrupted to strangle it and disrupt its economic growth. So the build-up of the Chinese naval force is focussed on negating such a possibility. Most of China's commercial shipping traffic passes through the Strait of Hormuz and the Malacca Strait which are major choke points. The major initiative China has undertaken in this regard is the building and developing of ports along these lines. While China maintains that the ports are not for military purposes, despite this assurance, these ports could potentially be used as supply and refill bases for PLAN ships. The use of these bases will shorten the supply lines and reduce vulnerability to enemy interdiction.

The third trend, which appears to be in the initial evolutionary stage, is to enable power projection over land and at longer distances and attain sea control capability. Chinese naval activity is increasing in the Indian Ocean region. This is evident from the fact that China is acquiring aircraft carriers and increasing the number of nuclear attack submarines (SSNs).¹² While one aircraft carrier has already entered service, one more indigenous aircraft carrier is reportedly under construction.¹³ Recent reports indicate that China is showing interest in building nuclear powered aircraft carriers. Nuclear powered ships can travel longer distances compared to conventionally powered

11. "China's Rising Seaborne Food and Fuel Imports: Propelling Naval Expansion?", at <http://www.chinainpost.com/2012/05/chinas-rising-seaborne-food-and-fuel-imports-propelling-naval-expansion/>, May 13, 2013, accessed on May 24, 2013.

12. David Axe, "China's Overhyped Sub Threat" at <http://thediplomat.com/2011/10/20/china%E2%80%99s-overhyped-submarine-threat/>, October 20, 2011, accessed on May 24, 2014.

13. "Aircraft Carrier Construction Well Underway in China", at <http://www.informationdissemination.net/2011/08/bill-gertz-at-washington-times-has.html>, August 2, 2011, accessed on May 24, 2014.

ships. China is already equipping its navy with boats that could potentially be part of the Carrier Battle Group (CBG) in the future like the Type 52C and Type 52D. The Type 52C which is equipped with the naval version of the HQ-9 SAM, could provide effective air defence cover for the CBG. China will also soon deploy its new SSN which could be the Type 095 SSN. This submarine is expected to have improved stealth capability over the other SSNs in the PLAN's inventory. In addition to this, China is already operating 12 Kilo class attack submarines which could also be made part of the any future CBG. This is a strong indication that China is aiming to acquire the ability to project power all across the globe. There has been another strong indication of China's intention to dominate and control the world oceans, given in early 2009 by a senior officer of PLAN who told the visiting US Adm Keating, ostensibly half jocularly, "As we develop our aircraft carriers, why don't we reach an agreement, you and I. You take Hawaii east, we'll take Hawaii west and the Indian Ocean. We'll share information and we'll save you all the trouble of developing your naval forces west of Hawaii". The proposal articulated long-held Chinese aspirations.¹⁴ Moreover, in the year 2012, 22 PLAN submarine contacts were reported by the United States to have been in the Indian Ocean region. One contact was reportedly made just 90 km off the Indian soil. This was highlighted in a report by the Indian Defence Ministry.¹⁵ Such ambitions and the drive towards them comprise natural progression for a country which is expanding its economic and business interests around the globe.

CHINESE NAVAL EXPANSION: WILL IT END INDIA'S SEA BLINDNESS?

India is one of the fast developing economies and a country which is located strategically. The country sits atop one of the busiest commercial shipping lanes in the world and is also located close to some major choke points. The Malacca Strait through which more than 200 vessels pass on a daily basis, gives an annual throughput of approximately 70,000 ships, carrying 80 per cent of the oil transported

14. Jayadeva Ranade, *China Unveiled* (New Delhi: KW Publishers, 2013), p.101.

15. J. Michael Cole, "Red Star Over the Indian Ocean", at <http://www.thediplomat.com/2013/04/red-star-over-the-indian-ocean/>, April 9, 2013, accessed on May 24, 2014.

to Northeast Asia as well as one-third of the world's traded goods, including Chinese manufactures, Indonesian coffee, etc. The strait is not deep enough to accommodate some of the largest ships (mostly oil tankers). At Phillips Channel, the strait narrows to a 2.8 km width, with 2.1 km in the shipping waterways, creating one of the world's traffic choke points.¹⁶ The Andaman and Nicobar Islands are located very close to the strait. The very strategic location is a vital enabling factor for India to become one of the foremost maritime powers in the region. Nevertheless, the realisation and intent to use these advantages depends on the strategic orientation of the country. The geo-political scenario of the region and the larger world along with the threat perception has a major part to play in shaping both strategic orientation and intent. At present, there appears to be a major shift in the geo-political scenario largely due to the rapid emergence of China. China's expanding global interests and the resultant naval expansion coupled with its recent trend of assertive behaviour could probably be a cause of friction with India in the future. The question here is: will this be a factor in pushing India to start looking towards the sea in a grand way to ensure its national interests, breaking away from the long tradition of focussing only towards its land borders? To attempt to answer this question, it is pertinent to look at the possible implications for India as a result of the Chinese expansion,

- The foremost concern at present is China's increasing influence in what is considered as India's strategic backyard. China's is increasing its influence in Sri Lanka, Nepal, Maldives and Pakistan. For example, China has made major inroads into Sri Lanka. China has at least 14 major infrastructure projects in hand in Sri Lanka.¹⁷ China used the opportunity offered by Sri Lanka's war with the Liberation Tigers of Tamil Eelam (LTTE) to develop close military ties with Sri Lanka's armed forces. A number of Sri Lankan armed forces officers have been going to China for training in Chinese military institutions for the past many years.¹⁸

16. "The Economic Importance of the Straits of Malacca and Singapore: An Extreme Scenario Analysis", at http://www98.griffith.edu.au/dspace/bitstream/handle/10072/47702/77135_1.pdf?sequence=1, accessed on May 25, 2014.

17. Ranade, n.14, p. 195.

18. *Ibid.*, p.198. The chapter discusses the depth of increasing economic and military cooperation between China and Sri Lanka.

These activities by China are steadily eroding India's influence in the region.

- As discussed earlier, China is building ports around India. The Gwadar port, located just across the mouth of the Strait of Hormuz, is a key node built and now being operated by the Chinese.¹⁹ Though this port might not be a full-fledged Chinese foreign naval base, it could be used for refuelling and rearming, whenever required. China deployed a flotilla off Somalia in the Gulf of Aden for anti-piracy operations. The deployment of Somalia was significant. It confirmed that PLAN ships could use Pakistani ports in case of need; that the PLAN was capable of undertaking offensive operations at sea; that PLAN could operate in waters far from home; and that PLAN could maintain its ships at sea in operational mode for long stretches.²⁰ These Chinese capabilities could probably upset India's naval dominance in the Arabian Sea.
- India's energy requirements are increasing steadily as its economy grows. Since domestic energy production cannot satisfy the growing demand, the external dependence on energy is bound to increase. India will have to diversify its energy sources to other regions in the future. One region which is said to have tremendous energy resources is the South China Sea which is a disputed region. The growing power of the Chinese Navy in this area and its belligerent actions are major concerns for India and could possibly affect any future energy exploration activity in the region.

All these moves by China have serious implications for India's security in the coming decades. According to Commodore M.R. Khan, a retired Indian naval officer, the Indian Navy acquiring blue water capability is inevitable as India needs to possess the capability to protect its expanding interests all across the globe; he also opines that Chinese naval modernisation and expansion will certainly be a

19. Syed Irfan Raza, "China Given Contract to Operate Gwadar Port", at <http://dawn.com/2013/02/19/china-given-contract-to-operate-gwadar-port/>, February 18, 2014, accessed on May 24, 2014.

20. "Implications of China's Navy Modernisation", in Air Cmde Jasjit Singh, ed., *Essays on China* (New Delhi: KW Publishers, 2012), p. 222.

major factor in India's naval modernisation. China's bastion centred A2/AD will not directly affect India, but its increasing influence in India's backyard and its policy of encircling India with potential naval nodes has already started inviting reactions from India. India has started upgrading its naval capability. Recently, India leased an SSN from Russia and is also in the process of fielding a nuclear ballistic missile submarine (SSBN) which is at present undergoing trials. India is also acquiring eight P-8I Long Range Maritime Patrol (LRMP) aircraft from the United States. These aircraft will greatly assist in monitoring and controlling traffic in the Indian Ocean up to Diego Garcia. The Indian Navy is being equipped with high-tech modern vessels like stealth frigates and destroyers. Moreover, India is also focussing on acquiring power projection capability by acquiring aircraft carriers. India is soon to induct the Russian carrier *Gorshkov*, rechristened INS *Vikramaditya*; and another indigenous carrier is being built in India. However, the navy's share of the defence budget is still lower compared to the other two arms of the armed forces. But if the present trend of China's naval expansion continues, it could potentially be a major factor in propelling India to look seawards for its defence. A strong Indian naval presence in the Indian Ocean and the potential to enforce a China-specific naval blockade in the Malacca and Sunda Straits will be a deterrence factor against any aggressive moves by China.

FALLOUT OF THE INFRASTRUCTURAL DEVELOPMENT INSIDE THE TAR

SIMRAT VIRK

China has been surging ahead and pushing for infrastructural development in the western region of the country, which includes the restive areas of the Xinjiang Uighur Autonomous Region (XUAR) and the Tibetan Autonomous Region (TAR). This push is essential if it sincerely wants the often ignored west of the country to be at par with the relatively more thriving east. Included in the government's plans, which began in the year 2000, is the setting up of small-scale industries and factories and also tapping into the vast mineral deposits in the area, and, in the process, generating employment for the locals. Furthermore, plans to improve connectivity within the area are also underway. This includes establishing rail and road networks linking the region, in particular the Tibetan plateau with the mainland. Massive projects are already underway, with some in the second or third phases. Prime among these projects is the ambitious Qinghai-Tibet Railway (QTR) link.

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This article takes a look at China's infrastructural development inside the TAR, with a focus on the QTR. It also takes a look at whether the infrastructure development has had an impact on the lives of the local Tibetan community. India's concerns in terms of what it means for the security of its borders are also addressed in the concluding sections.

QINGHAI-TIBET RAILWAY

The Qinghai-Tibet Railway, also known as the Lhasa Express forms an integral part of China's Western Development Plan. Former President Hu Jintao, like several of his predecessors, is believed to have stated on several occasions that economic development, particularly in terms of infrastructure development, helps in the integration of different people from various diverse ethnicities. Many in China echo similar thoughts of economic development being a key constituent for better security; as former President Hu Jintao stated in 2000, "Rapid economic development is the fundamental condition for realising the interests of all ethnic groups in Tibet and is also the basic guarantee for greater ethnic unity and continued stability there."¹ Suffice to say, therefore, that the Chinese government is employing the rail link as a tool to help accelerate social and economic development in the region. This is best exemplified in the government's official website where the benefits of the rail link are spoken of in great detail. The website states that one of the highlights is that the QTR is not just a step in regional integration (owing to high rates of migration), but that it is also a tool to increase the number of tourists visiting the region. However, what remains key to Indian interests is the fact that the QTR is aiding China in its military preparedness to a great extent, a fact that the Chinese side does not discuss in great detail. The QTR, many analysts believe, thus, gives the Chinese military (primarily in terms of preparedness) an edge, and India must, therefore, remain watchful.

Western Development Plan

The Western Development Plan that started in the year 2000 is part of the Chinese government's plan to develop the relatively less

1. Susette Cooke, *Merging Tibetan Culture into the Chinese Economic Fast Lane*, China Perspectives (Online) 50, December 2003, at <http://chinaperspectives.revues.org/775>, accessed on May 16, 2014.

developed part of western China and was, therefore, aptly named the “Go West Plan”.² The aim of the project is to develop the western part of the country which includes the restive regions of the TAR and XUAR, the main objective being, as stated earlier, to bring them at par with the more developed east. Many critics of the Western Development Plan, however, are of the opinion that the project is aimed at strengthening China’s hold over the region; this is being done through a massive push towards infrastructure development and increasing Foreign Direct Investment (FDI).

The western region, with 22.8 percent of the population, covers two-thirds or 71 percent of the country’s territory.³ As stated earlier, in order to encourage investments in the region, the Government of China has formulated policies to encourage foreign businesses to invest in the region.⁴ “The main components of the strategy include developing infrastructure, attracting foreign investment, increasing environmental protection, education promotion, and the retention of highly skilled labour from flowing to richer provinces”, quotes a CCTV report.⁵ Since its inception, nearly US\$325 billion has been invested in major projects in the west. Of these, the two flagship projects are the 4,000-km West-East natural gas pipeline project and the QTR.⁶

However, many critics believe that when it comes to integration of the ethnic communities (living in the western regions) into the mainstream, the plan has met with little success. Riots that broke out in Lhasa and spread to other cities in the region are proof of the deep resentment that the locals have towards the steps taken by the Chinese government in its plans for integration. Not only this, even on the economic front, many acknowledge that the programme still has a long way to go. For example, according to a report by the Centre for Studies of China’s Western Economic Development at

2. Julia Gu, *China Approves 12th Five-Year Plan for Western Regions*, China Briefing, February 27, 2012 at <http://www.china-briefing.com/news/2012/02/27/china-approves-12th-five-year-plan-for-western-regions.html>, accessed on May 12, 2014.

3. Mitch Moxley, “China Renews ‘Go West’ Effort”, *Asia Times*, July 23, 2010, at http://www.atimes.com/atimes/China_Business/LG23Cb01.html accessed on May 9, 2014.

4. *The Development of Western China*, Chinaorg.cn, at <http://www.china.org.cn/english/features/38260.htm>, accessed on May 8, 2014.

5. Ibid.

6. Andrew Moody, Hu Haiyan, Ma Wei, “Go West Policy is an Economic Milestone for China”, *China Daily*, December 9, 2012, at http://www.chinadaily.com.cn/business/2011-12/09/content_14239360.htm, accessed on May 11, 2014.

the Northwest University in Xi'an, the west only accounted for 17.8 percent of the total Gross Domestic Product (GDP) as opposed to the East that accounted for nearly 41.1 percent in the year 2008.⁷

Despite the above facts that highlight the somewhat dismal performance of the Western Development Plan, the government has reiterated on several occasions that it is committed to "unswervingly stick to the strategy adopted in 2000."⁸ Part of this has reflected in the extension of the Qinghai-Tibet rail link, which will be discussed in greater detail in the following sections.

Qinghai-Tibet Railway

The QTR links the Tibetan plateau with the rest of China being a rail link between Xining (capital of Qinghai province) and Lhasa (in the TAR). Built at cost of US\$ 3.5 billion, it became functional in October 2005.⁹ In its journey, it covers a length of 1,956 km, and, more importantly, some of the most perilous areas in the world. The highest point of the stretch comes at 5,072 m (16,640 ft) at Tanggula Pass, making it the highest rail link in the world;¹⁰ it is also the longest plateau railway in the world. All this ought to be viewed from the great impetus it provides to China's military preparedness. Areas which were initially cut off are now accessible by this rail link, thus, making the support system to (particularly in terms of logistics) the People's Liberation Army (PLA) relatively easier. Every year, since it was started, the rail link has been used to transport goods across various regions. This, China claims, was one of the primary reasons behind the initiation of the QTR project. Prior to the start of the rail link, transportation was solely dependent on the Qingzang Highway, which was highly limiting due to the difficult terrain and the vast distances; but the situation has changed tremendously now. More importantly, despite travelling at a very high altitude, the train successfully maintains a speed of 100 km per hour. This could possibly be highly beneficial to China in the event

7. Ibid.

8. "Wen: China to Continue to Develop Western Region", *Xinhua*, December 9, 2011 at http://www.chinadaily.com.cn/business/2011-12/09/content_14239360.htm accessed on May 15, 2014.

9. "Qinghai-Tibet Heavy Rail Line, Railway," *Technology.com*, at <http://www.railway-technology.com/projects/china-tibet/> accessed on March 8, 2014

10. "Qinghai-Tibet Railway", Wikipedia at http://en.wikipedia.org/wiki/Qinghai%E2%80%93Tibet_Railway

of a conflict as it will result in speedier supplies to the forces.

In what may be of interest to India, there are reports that China proposes to extend the rail link beyond Lhasa, in other words extending the link from Lhasa to Nyingchi, and also from Lhasa to Shigatse (Xigaze), very close to the Sikkim border; the latter by October this year.¹¹ India must be concerned about both developments since, as already mentioned, Nyingchi is in the southeastern part of the TAR and precariously close to the Indian border.

The QTR has also proved to be highly cost-effective for China, as several million tons of goods are transported at very low costs. Therefore, suffice to say that the benefits of the QTR for China are many. Primary among those are, firstly, linking Tibet to the rest of China, particularly along a treacherous route which was once impossible to travel through; and, secondly, transportation of goods is now extremely cost-effective. Furthermore, all of these benefits play out very well when viewed in the context of an armed conflict, particularly with respect to India. It is now easy for China to move a large number of troops along the border (especially if the QTR extension plan works), and, secondly, it is now, more than ever, easier for China to maintain and sustain its troops, and, finally, and most importantly, a reduction in expenditure will allow China to increase its spending on modernisation of the PLA. This is certainly a development not in favour of India, and India must remain watchful of that.

TIBETAN CONCERNS

As mentioned in the previous section, the Western Development Plan leaves much to be desired when it comes to certain human indices, particularly in terms of integration of the otherwise ignored Tibetan community. As a report in the *China Brief* states, "At its heart, the plan is not a humanitarian enterprise. It is instead an effort by the Chinese government to further consolidate its control over troublesome regions (in this case Xinjiang and Tibet)."¹² Therefore, although when

11. "China's Expanding Rail Network in Tibet Nears Sikkim", *The Times of India*, March 6, 2014 at <http://timesofindia.indiatimes.com/india/Chinas-expanding-rail-network-in-Tibet-nears-Sikkim/articleshow/31549078.cms>, accessed on March 13, 2014.

12. Josh Schrei, "The Dark Side of China's Western Development Plan", *China Brief*, vol. 2, issue 7, at http://www.jamestown.org/programs/chinabrief/single/?tx_ttnews%5Btt_news%5D=3802&tx_ttnews%5BbackPid%5D=192&no_cache=1#U3RU7qKKBA6, accessed on May 8, 2014.

the plan was initially launched, it was an attempt at bringing the economy of the western part at par with the more prosperous east, but despite that not much has changed on the ground for the local Tibetan community. This, of course, has been acknowledged by the government officials on several occasions; for example, Li Xinming, Vice-Director of one of the newly created economic zones says that, "despite the 10-year old policy of encouraging development in the western areas, the speed of development and urbanisation still lags behind the eastern part."¹³ One of the primary aims of the plan, as stated by the Government of China, is to link the rural parts of the region with the relatively better developed urban areas. The Qinghai-Tibet Railway link is seen a one step in that direction. During the planning phase of the rail link, it was seen as a link between the Tibetan plateau and the rest of mainland China; but this purpose has been lost somewhere along the way. This conclusion can be justified in three broad ways. Firstly, the rail link is primarily for its logistics support capability and less for strengthening communications between the two regions; as Monika Chansoria states in her paper, "As the PRC prepares to become capable of winning in the era of high-technology warfare, great focus is now being placed upon logistics development."¹⁴ Logistics development also entails having a strong support system, and the QTR is now seen as providing just that. Secondly, the other aim of the Western Development Plan was to generate employment opportunities for the people of the region thereby boosting the economy and improving the general lifestyle. But if we go by existing reports, the plan is failing on this front as well. Taking the example of the rail line construction project, it is surprising that there is not even one local skilled Tibetan who is employed in the project. Furthermore, even in terms of pay scales, there are vast discrepancies. For example, a study conducted by David Lynch of US Today found that as compared to a Chinese technician who earns \$725 per month, an unskilled Tibetan labourer earns only \$235.¹⁵ Part

13. Moody, et. al., n.6.

14. Monika Chansoria, "China's Infrastructure Development in Tibet: Evaluating Trendlines," *Manekshaw Paper*, No. 32, 2011, at http://www.claws.in/administrator/uploaded_files/1317312941MP%2032%20inside.pdf, accessed on May 16, 2014.

15. Tendar, "Beijing's Development Policy and Tibetans", *Cultural Survival*, Spring 2004, at <http://www.culturalsurvival.org/publications/cultural-survival-quarterly/china-tibet/beijing-s-development-policy-and-tibetans>, accessed on May 16, 2014.

of the reason for this is, of course, the fact that Tibet has largely been an agrarian society and, therefore, for locals to find employment in newly established factories in the region where technical knowhow is essential is not easy. Finally, and most importantly, the one thing that economic development has guaranteed is the huge influx of members of the majority Han community.

Another rail network, the Lhasa- Golmud Rail link between Tibet and China proper, not only helps in goods supply but also brings along a deluge of migrants who settle in the Tibetan areas. Chinese migrants in the area, as Tendar states in his article, are “drastically changing the economic and physical landscape, and threatening ethnic conflict.”¹⁶ This was evident in 2008, when riots broke out in Lhasa and spread to other towns in the region. The primary reason behind the heavy rioting was the deep resentment that the locals had against “Chinese” citizens.

In other words infrastructure development in terms of employment has had no real benefit for the local Tibetans. The same is true of the Qinghai-Tibet Railway link that employed only migrant workers (from the mainland) during the construction and continues to do so. Having absolutely no freedom of expression in their own land, there is little that the Tibetans can do.

Therefore, suffice to say that the Western Development Plan, which includes the construction and running of most rail networks connecting the TAR with mainland China, has served the interests of the Chinese government in primarily two ways. Firstly, as the International Time stated, economic development in the western restive areas is important to “quell the unrest”; this is just what infrastructure development inside the TAR is doing; with no jobs, an influx of Han migrants and having absolutely no freedom to express their concerns, the Tibetans might have to take this as their *fait accompli*. Secondly, infrastructure development is a huge step for China in enhancing its military (logistics) preparedness and capability. This, of course, is a cause for concern for neighbouring countries, particularly India, with which China continues to have a long standing border dispute.

16. Ibid.

CONCERNS FOR INDIA

It is important to know at the very outset that one of the primary goals of the Chinese government, particularly in terms of military development, is improving logistics support capability. This push towards a better logistics support system came somewhere in the early 1990s with the general understanding being that “the logistics system needed to be overhauled to enhance its ability to support a more mobile and better equipped fighting force, as well as to cope with the challenges of economic liberalisation.”¹⁷ One step towards that direction has been the Qinghai-Tibet Railway.

Besides the QTR, however, China has also been concentrating on improving infrastructure in terms of better road connectivity across the Tibetan plateau and India must remain vigilant of this as well. In fact, according to the 12th Five-Year Plan, China plans to spend close to Yuan 45.174 billion on road construction projects between 2011 and 2015.¹⁸ There are reports that many road links have been rebuilt according to military standards, and these will be handed back to the military at the time of a conflict. A large part of the road development has been done with the aim to have motorable roads connecting some of the towns close to the boundary with India, Nepal and Bhutan. China has already developed 58,000 km of roads in the TAR (following military standards) , and there are plans to spend a further US\$ 3.13 billion in the coming years for the construction of more than 100 highways. Primary among these are the Western, Central and Eastern Highways. The Central Highway, better known as the Qinghai-Tibet Highway is often referred to as the ‘lifeline’ that connects Xinning (Qinghai) to Lhasa (TAR). The Western Highway primarily connects Xinjiang and Tibet, connecting Kashgar with Lhasa. The road also branches off along the way, leading to several areas along the border with India. (It also becomes the Karakoram road, leading up all the way to Gilgit.) The Eastern Highway connects Chengdu (Sichuan) with Lhasa. But what India must pay attention to is the recent upgradation of the road from Lhasa to Ngiti, close to Arunachal Pradesh. Together, the Central, Western and

17. Chansoria, n.14.

18. “Tibet to Spend Heavily on Road Construction”, March 19, 2012, *Xinhuanet*, at http://news.xinhuanet.com/english/china/2012-03/19/c_131476138.htm, accessed on March 5, 2014)

Eastern Highways have been highly beneficial to China in terms of connecting western China(in particular the TAR) with the mainland; this, in turn, aids the Chinese military in movement and sustenance of a large number of troops during a conflict situation.

These are indeed worrying signs for India as they highlight China's ability to mobilise its military effectively. Analysts believe that "the PLA considers it necessary to build up a network of roads and mule tracks to bring military hardware and troops to the forward areas of the disputed border (with India)."¹⁹ In an article in the *Deccan Herald* titled "China prepares Tibet as a future war zone" it is claimed that "the concentrated expansion of infrastructure in Tibet has improved the PLA's capability to rapidly induct integrated forces."²⁰ However, there is a certain section which believes that the Qinghai-Tibet Railway may not entirely be a boon for China and can, quite the opposite, prove to be a liability. The link running between Xining (Qinghai province) and Lhasa (Tibetan Autonomous Region) can be a potential target "of the Indian Air Force if a territorial dispute between China and India escalates into a full-scale war."²¹

CONCLUSION

Therefore, one can draw primarily two conclusions from the above: firstly, although infrastructure development in China's west, particularly the TAR was undertaken with the aim of improving living standards, providing employment opportunities and improving the lives of the local community, if we look closely, this is not the case. Not only has everyday life not changed for the Tibetans, but on the contrary, they feel the sanctity of their land is being lost to the droves of migrants as well as to the large number of factories being set up in the region. This resentment has, in the past, been a cause of disquiet for China, and can certainly be so in the future as well. Secondly, it is

19. "For Tibetans Railroad Brings Doom," *Washington Post*, November 25, 2004, at <http://www.washingtontimes.com/news/2004/nov/25/20041125-102310-6006r/?page=all>, accessed on April 27, 2014.

20. Gurmeet Kanwal and Monika Chansoria, *Deccan Herald*, March 12, 2014, at <http://www.deccanherald.com/content/165996/china-preparing-tibet-future-war.html>, accessed on March 7, 2014.

21. "India Could Take Out Qinghai-Tibet Railway to Cripple the PLA," *Want China Times*, October 1, 2013, at <http://www.wantchinatimes.com/news-subclass-cnt.aspx?id=20131001000003&cid=1101>, accessed on April 20, 2014.

of prime importance that India keenly follows developments inside the TAR since these can have a huge impact on security along the borders. But along with this, it must be kept in mind that some of the projects undertaken by China can actually prove to be a bane for China (being vulnerable targets) and, in fact, a boon for India.

NUANCES OF THE DRAGON'S DIPLOMACY AND STRATEGY: THEN AND NOW

RAJ MONGIA

Diplomacy is an integral part of the Chinese state machinery. Though always important and firmly embedded in the Chinese mind from time immemorial, of late it has widened its reach. The institutional base of China's diplomatic machinery is firm and strong. It has found legitimacy in the state apparatus. An analysis of the past and the present will enable an appropriate understanding of the Chinese actions of recent times.

In the imperial times, the role of diplomacy was not well established. Streamlining the commercial relations through Chinese traders was definitely an important objective. But in the more recent times, the Chinese developed a strong sense of victimhood. In the late 19th and early 20th centuries, the Chinese talked about national humiliation 国耻(*guochi*).¹ The "victim narrative" became more pronounced after the Opium War. Western colonialism played a crucial role in reviving the narrative and scarring the Chinese psyche by forcing China's rulers to adopt Western diplomatic principles. The

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1. Le Minh Khai, "Nationalist Victim Narratives in China and Vietnam", *Le Minh Khai's SE Asian History Blog*, at <http://leminkhai.wordpress.com/2012/08/25/nationalist-victim-narratives-in-china-and-vietnam/>, accessed on June 4, 2014.

aftermath of the Opium War saw the rise of the following phenomena:

- Establishment of treaty ports in favour of Western traders and governments.
- Accession of Hong Kong.
- Acceptance of resident missions in Beijing.

When the Communists came to power in 1949, they declared that they had put an end to a “Century of National Humiliation” 百年国耻 (*bainian guochi*).² The duo of Chinese Premier and Foreign Minister Zhou Enlai and the military strategist Mao Zedong took upon themselves to undo the consequences of the abovementioned seemingly unjust developments. The tools to be used were force, strategy and diplomacy. A paranoid China thought it appropriate to push back in Tibet and Xinjiang in the south. The supposed dangers of foreign encroachment and threats to its front areas motivated it to follow the same strategy in Manchuria and Mongolia in the northeast. These primarily military actions needed a moral facade. The onus of applying diplomacy and justifying Chinese actions to the world fell on Zhou Enlai. He handled the situation astutely. The military actions in Tibet, Korea, Taiwan and the Indo-China border were required to build long-term alignments with foreign powers. Chinese diplomacy was pursued to facilitate development of the two-pronged strategy:

- To push China’s strategic presence on its southern frontiers.
- To seek a balance of power on its northern, western and eastern areas.³

An absence of a supposedly powerful military and diplomatic counter-force was perhaps the trigger for setting in motion a more ambitious approach towards China’s southern frontiers. The influence of Japanese, Russian and American powers in the northern, western and eastern areas prompted China to adopt a more cautious perspective. Thus, was sown the seed of contemporary Chinese diplomacy during the ‘Mao-Zhou’ era. The dual framework continues to prevail even today. The opportunities and challenges accruing out of this framework are aplenty. A look back in this context would be

2. Ibid.

3. Ashok Kapur, “China’s Changing Approach to Strategy and Negotiations: Past and Present”, *ICWA Paper* 01/2013, pp.37-38.

worthwhile; moreover, it might enable us to forecast what the future has in store for the world in general and China in particular.

One of the byproducts of the Communist victory was the ascendancy of Maoist thought. Diplomacy war and psychological warfare emerged in Chinese political thought as key elements of an ingrained strategy. War and peace were not antonyms in Maoist thinking. In fact, they were considered essential elements to enable ongoing manoeuvres. The state of equilibrium was considered a fallacy. The need of ongoing manoeuvres to seek psychological advantage for China was adequately emphasised.

CONCEPT OF MANOEUVRABILITY

Chinese diplomatic and military theory and practice have been striving for room to manoeuvre. Before the victory of China's Communists, Mao Zedong made overtures to Washington to initiate friendly relations. Both the 1944-46 and 1949 requests for American support were rebuffed.⁴ Mao then turned to Stalin for support. The 1950 friendship treaty with Stalin was widely regarded as the manoeuvre towards Russia and against the West. The Moscow manoeuvre was a temporary one. The Sino-Soviet split revealed the contention in terms of ideology, military and diplomatic issues. A lesson in triangular diplomacy during the Korean War was adequately learnt by China even before the split. It confronted America's superior military power with nominal Soviet support. Therein lies the genesis of developing the confidence of confronting both the superpowers and staking a claim as the true leader of the socialist camp.

The 1960s and 1970s saw China manoeuvring itself as a major player in the third world and an opponent of the imperialism of both superpowers. Primacy of strategic interests and tactical considerations even at the cost of ideology were the main factors behind establishing diplomatic and military ties with Pakistan. The brief war with India, however, may be seen as the manoeuvre against its earlier use of India to build its case for peaceful coexistence in the third world. Ironically, China acknowledged the validity of the McMahon Line while signing border agreements with Nepal,

4. Donald S Zagoria, "Choices in the Postwar World(2): Containment and China", in Charles Gati, ed., *Caging the Bear* (New York: Bobbs-Merrill Co., 1974), pp.110-111.

Pakistan and Burma, whereas it refused to accept it as a basis of negotiations with India.

The early 1970s were witness to another set of major manoeuvres. China bade adieu to its revolutionary theory and armed struggle rhetoric. It built a strategic link with the US to counter the Soviet Union effectively. It recognised Nixon's theory that the US-Japan pact not only checked Japanese militarism but precluded Soviet influence in Japan. An avid observation of China's diplomatic and military journey and analysis thereby indicates that some of its diplomatic ideas require modification. China still seems to be pursuing the theory of the 'Middle Kingdom'. The sobriquet 'Middle Kingdom' has its genesis in the Chou dynasty of 1000 BC. The Chou people, unaware of the big civilisations of the West, believed that their empire occupied the middle of the Earth.⁵ But the extent to which this theory determines China's actions is still unclear. The Chinese word for China today is still 中国 (Zhongguo) or the Middle Kingdom. On the one hand, being a member of the United Nations Security Council and international diplomatic systems, China follows the norm of sovereignty and legal equality among nations but, on the other, by still adhering to the Middle Kingdom characterisation, it exhibits a commitment to cultural and possibly racial superiority. The Chinese believe that they have progressed without any help from the West and did not descend from the Cro-Magnon man as the rest of the world did.⁶

The rhetoric of the Middle Kingdom may impress some of the weaker states but the seasoned practitioners from different parts of the world are less likely to accept the theory. Before liberation, China followed a doctrine of the use of "five baits" to corrupt foreign officials.⁷ Excessive use of these baits can also boomerang, especially in this era of instant communication and social media. The term "Chinese Colonialism" is increasingly getting echoed in the print and visual media of African nations to criticise the commercial practices of Chinese companies and their state sponsors.

5. "Middle Kingdom, Definition and Origin" at <http://www.infoplease.com/encyclopedia/history/middle-kingdom.html>, accessed on May 10, 2014.

6. "Proof that Chinese Think that They are the Master Race", at <http://wtdevflnt.wordpress.com/2013/10/24/proof-that-chinese-think-they-are-the-master-race/>, accessed on May 11, 2014.

7. Henry Kissinger, *On China* (New York: Penguin Press, 2011), p.21.

Reflecting on China's relations with Myanmar, the authenticity of the emergence of this syndrome is established. Since the early 1980s, Myanmar has been regarded as a client state of China. In recent years, Myanmar has exhibited its resurgence and ability to adopt a confident posture that negates the tag of '*just-a-client-state-of-China*'. Its nationalism and political consciousness are robust features of Burmese political and cultural life. The decision to suspend a major irrigation project that was being built with China's aid exhibits the Myanmar government's courage and willingness to curb China's growing influence in the region.

Although subtle changes in China's approach to strategy and diplomacy are evident, even these changes are perhaps reverberations of a constant and consistent thought process. The new stance in no way replaces Mao Zedong's postulates. The major ones are:

- Use of force to signal the existence of China's core interests.
- Use of force to signal the existence of China's red lines.
- Use of crises to discover the adversary's red lines.

While there is always a danger that participation in a military crisis may lead to war as has happened in the case of the Korean, Indian and Vietnam Wars, if handled carefully, it may also facilitate crisis management and enable one to test the intentions and capability of the adversary. The shelling and military build-ups with respect to Quemou, Matsu and Taiwan since the 1950s are testimonies to this mindset. China puts emphasis on not only maintaining the general confrontation but also on evoking controlled escalation at a time of its choice. The psychological advantage accruing out of having the initiative in hand so that the tension may be aggrieved or alleviated as per the convenience of own forces, is tremendous.

As far as diplomacy is concerned the value of this tool was not considered necessary before the onset of the 19th century. There was no need of friends when China was strong and if it was weak, then allies were bound to be false friends.⁸ In the 19th century, the circumstances developed in such a way that China had to acknowledge the presence of Japan, Russia and the West. The presence of these pressures

8. FitzGerald, *The Chinese View of Their Place in the World* (London: Oxford University Press, 1965), pp.18-53.

triggered the process to find ways to deal with them. However, diplomacy and foreign policy were still considered temporary phenomena. The methods employed by Chinese practitioners were traditional ones. The gist of the philosophy of dealing with barbarians in ancient China was still considered relevant in handling modern world adversaries. The main points of this theory are as enumerated below:

- Set baits for the opponents.
- Make temporary concessions.
- Play on the greed and rivalries among opponents.

Since Russia and Japan were in close geographical proximity to China, their policies affected China's core interests directly.

China thought it wise to cultivate far off powers that did not have territorial designs against it. The belief that the differences amongst opponents were beneficial to China as warring adversaries would cancel out each other, was upheld. Rather than engaging in direct conflict, it was considered wiser to gain psychological advantage. The concept of manoeuvrability gained currency. The policy of manoeuvre was preferred to the quest for permanent or fixed alignments. The foundation of this line of thinking was based on:

- China was the Middle Kingdom, the centre of the universe.
- Enemy morale had to be undermined at any cost.
- The enemy was to be placed in an unfavourable psychological position.

Manipulation and deception were thought to be accepted diplomatic norms.⁹ The methods employed to woo and corrupt the enemy were:

- Through gifts.
- Through entertainment.
- Through women.
- Through imperial reception.

From the 1970s, higher emphasis was placed on "Power Through Economic and Military Modernization" rather than on "Power

9. Kissinger, n. 7, pp.19-30.

Through Armed Struggle". China joined the United Nations following the realisation that it was a normal country and the Middle Kingdom hypothesis had perhaps lost its relevance. Under the aegis of the UN, China now sought a peaceful rise and participation in world affairs as a responsible member of the world community. After the 1970s, China's presence and participation grew phenomenally in regional as well as international diplomatic, military and economic affairs.

By participating in the Korean War in 1950 and shelling Quemou and Matsu in the 1950s and by starting the China-India War in 1962, China projected the willingness to resort to direct action in select circumstances in response to foreign threats. This change in attitude not only facilitated China's diplomatic contact in Warsaw but also the formation of the USA-China-Russia strategic triangle. The intentional or unintentional wavering of the Chinese position on the issue of boundary settlement with India is a classic case.

RECENT DEVELOPMENTS

China's toughness was also evident in the renewed dispute with India over India's northeastern state of Arunachal Pradesh. China claims it to be a territory of southern Tibet. During the 1962 border war with India, China had advanced deep into the region but withdrew after a brief occupation. Although Arunachal Pradesh achieved statehood in 1987, China has continued to lay claim to this territory. China has started using increasingly strident language to object to any Indian assertion of sovereignty over the area, in the recent years. In 2009, China blocked the Asian Development Bank from making a US \$60 million multi-year loan for infrastructure improvements in the state.¹⁰ When India had no other choice left, it decided to fund the project itself. In retaliation, China sent more troops to the border. The Dalai Lama's trip to the state in November 2009 caused further deterioration in Indo-China relations. Beijing was antagonised because the Dalai Lama did not restrict his visit to Itanagar, the state capital. He also visited Tawang which is the main bone of contention between India and China. It is the piece of Indian real estate that China covets the most in the border dispute. In Indian eyes, China

10. *Annual Report to Congress, 2013*, at http://www.defense.gov/pubs/2013_china_report_final.pdf, accessed on May 5, 2014.

has become increasingly provocative over their long running dispute in the Himalayas.

On the night of April 15, 2013, a platoon strength (contingent of 50 personnel) of China's Army came 19 km inside the Indian territory in Burthe in Daulat Beg Oldi (DBO) sector, which is at an altitude of about 17,000 ft in the Depsang Valley and established a tented post there. The Indian side got the first indication of the Chinese gradual build-up in the stand-off area when the troops noticed three vehicles moving between the Chinese tents and their nearest back-up location 25 km away, suggesting replenishments of supplies. Troops from the Indo-Tibetan Border Police (ITBP) also established a camp about 300 m opposite the location.¹¹ The Ladakh Scouts, an infantry regiment of the Indian Army, specialising in mountain warfare, was also moved towards the area where the situation was described as tense. Although small incursions are common across the Line of Actual Control (LAC), the *de facto* border that runs some 4,000 km across the Himalayas, it is rare for either country to set up camp so deep within disputed territory.

Differing perceptions about the disputed boundary, which is yet to be demarcated was said to be the root cause of the problem and it was expected to be resolved amicably. DBO, located in northernmost Ladakh, is a historic camp site and located on an ancient trade route connecting Ladakh to Yarkand in Xinjiang, China. It lies at the easternmost point of the Karakoram range in a cold desert region in the far north of India, just 8 km south of the Chinese border and 9 km northwest of the Aksai Chin LAC control between China and India. A landing strip was established at DBO during the 1962 War. At 5,100 m, the strip is one of the world's highest.¹² Though the stand-off was resolved 21 days later, with both the Chinese and the Indians returning to their original positions behind the LAC, the exact motive of the Chinese incursion intrigues many.

The Chinese grand strategy resembles their classic board game, *Wéi Qí* (围棋). This game epitomises Chinese strategy which is different from the US and Western premise of grand strategy based

11. Rajesh Kalia, "Chinese Troops Intrude into Indian Territory in Ladakh, Erect a Tented Post", *Hindustan Times*, April 19, 2013.

12. Qin Gang, "Differing Perception about LAC to Figure in India-China Border Talks", *The Times of India*, May 15, 2013.

on the game of chess. In chess, there are 16 identified pieces of known capabilities, with each side on a playing board with 64 squares. The contest is for total victory, through checkmate. Translated into military strategy, chess identifies the adversary's centre of gravity and seeks a decisive point to eliminate the opponent through a series of head-on clashes. Both the intent and capabilities of each side are on the table.

Wéi Qí, on the other hand, has an expansive playing board with 361 squares. Each player is given a total of 180 stones of equal capabilities. Unlike chess, where a game starts with all the pieces fully displayed on the board, *Wéi Qí* starts with an empty board. The players take turns placing stones at a point on the board, building up positions of strength while working to encircle and capture the opponent's stones. Multiple contests take place simultaneously in different portions of the board. At the end of the game, the board is filled with interlocked areas of strength. The margin of advantage at each point is small; only a *Wéi Qí* expert can assess victory through a multitude of contests. In military terms, *Wéi Qí* is about strategic encirclement and demands enormous patience and single-mindedness of purpose through strategic flexibility to achieve objectives. This strategic thinking is in consonance with Sun Tzu's famous treatise on *The Art of War*, where premium on victory is through psychological advantage and by avoidance of direct conflict. The incident of the border incursion amply indicates China's new found confidence and willingness to assert itself without any provocation, perhaps to drive home the point that in Asia it is the lone dominant player.¹³

China is exhibiting more aggressiveness and belligerence in international affairs. Perhaps this is due to reinvigorated confidence owing to its achievements in various spheres. When China successfully landed a craft carrying a robotic rover Jade Rabbit (Yutu) on the surface of the moon on December 14, 2013, it seemed to have come one notch closer to realising its dream of landing a human being on the moon. This was the first soft landing on the lunar surface in 37 years, making China the only country, after the US and Russia to have achieved this feat.

13. Praveen Sawhney and Ghazala Wahab, "China's Age of *Wéi Qí*", *Force, National Security and Defence News Magazine*, May 2013.

In 1969, Neil Armstrong became the first American to walk on the moon and only Americans have repeated the feat. The Russians then, sent a rover to explore the lunar surface, in 1976. Since then, nothing has gone to our nearest neighbour. The Chinese have come a long way in a short time and will not stop here. By 2025, among other things, they want to walk on the moon, too. Apart from international prestige, patriotism is bolstered by these proud exploits. In 10 years, from 2003's first man in space to 2008's first space walk, China has overtaken its pace-setting Asian rivals Japan and newer entrant South Korea. The Shenzhou programme has reaped rich dividends. China also hopes to have an operational full-time space station by 2020. Billions of euros are being spent as China seeks to conquer space to prove that it is a superpower. It is anybody's guess, whether these projects are purely about exploration or science or whether China has a hidden agenda to deny enemies the use of their orbital assets if conflict should break out .¹⁴

In the recent past, Chinese actions in the region have been appearing more and more aggressive. On December 5, 2013, a Chinese naval ship had a terse encounter with an American cruiser, the *USS Cowpens*, which had been forced to manoeuvre to avoid hitting the Chinese ship. The maritime near miss came after the announcement on November 23, 2013, of an "Air Defence Identification Zone" in the East China Sea that would require all aircraft flying through it to report to Chinese authorities. This enraged Japan, which controls islands within the zone and was criticised by other countries, including America and South Korea. Though China wants to maintain the posture of a responsible country by chanting the slogan of "Peace Loving China", its increasingly belligerent posture is definitely a cause for concern. The world in general, and Asia in particular, need to be vigilant.

14. "Where Next after China's Landing", *Euronews*, December 19, 2013, at website <http://www.economist.com/2013/12/18/where-next-after-china-s-moon-landing/> accessed on May 6, 2014.

THE COMPREHENSIVE TEST BAN TREATY: AN AMERICAN PERSPECTIVE

HINA PANDEY

REVISITING CTBT: AN OVERVIEW

The images of mushroom clouds fashioned during the first nuclear age, emerging to a great extent out of the potentially annihilating capability of the atomic bomb blast in the minds of the public, policy-makers and strategists. Not only were the immediate effects of the atomic explosion felt in terms of radiation fallouts such as health hazards; but the realisation of the destructive means was such that the next two decades were spent in preventing the catastrophic eventualities related to the possession of the lethal capability. The idea to ban the bomb, thus, emerged and made way into the future for a copious amount of checks designed to achieve a security balance of some sort in the nuclear realm.

The international momentum that developed in the late 1960s towards arms control delivered many treaties such as the Limited Test Ban Treaty (LTBT), Threshold Test Ban Treaty (TTBT), etc. The Comprehensive Test Ban Treaty (CTBT) also owes its birth to one of these international interactions conceived in order to prevent

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nation-states from further acquiring the nuclear capability. It was put back onto the negotiating table in the year 1994 the Conference on Disarmament (CD)¹ The CTBT was adopted by the United Nations General Assembly (UNGA) two years later on September 10, 1996, and that year itself, it was opened for signatures. According to the Preparatory Commission's statistics, as on May 19, 2014, 183 states have signed the treaty. Niue, the island country in the South Pacific, became the newest country to have ratified the CTBT. Along with this, as many as 162 states have ratified the treaty, including three Nuclear Weapon States (NWS)². However, due to a variety of issues, the treaty seems to have reached an international stalemate, and has not been able to deliver the promises it meant to achieve.

In the post Cold War, three kinds of nuclear proliferation challenges have been identified originating from: (1) states within the existing non-proliferation regime, mainly the P-5; (2) states outside the nuclear Non-Proliferation Treaty (NPT) regime such as Pakistan, Israel, etc; and (3) non-state actors. A counter-initiative to these three sets of challenges has led the international community to devise three approaches to check the proliferation problem. First, a treaty-based multilateral institutional approach through the NPT; second, a non-treaty-based UN approach such as UN resolutions; and the third consists of ad-hoc non-institutional, non-conventional approaches to counter nuclear non-proliferation which may be bilateral in nature.³

Under this context of approaches, the CTBT forms an integral component of the nuclear non-proliferation regime as in principle it accentuates the nuclear non-proliferation commitment mentioned in the Article VI of the NPT. It is noteworthy that the treaty is nearly universal with a membership of nearly 183 countries, yet political unwillingness prevents it from entering into force. However, a recent resonation towards the CTBT ratification was visible in the UN secretary general's appeal to the member states as he drew linkages

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1. Rebecca Johnson (2009), "Unfinished Business :The Negotiation of the CTBT and the End of Nuclear Testing", UNDIR Report, UNIDIR/2009/2
 2. France, Russia and the United Kingdom ratified the CTBT on April-1998, June 2000 and April 1998 respectively. "Status of Signature and Ratification", The CTBTO, <http://www.ctbto.org/>, accessed on May 19, 2014.
 3. Waheguru Pal Singh Sidhu, "Nuclear Proliferation", as cited in Paul D. Williams, ed., *Security Studies: An Introduction* (New York: Routledge, 2012), pp.361-365.

between the UN's post 2015 goals and disarmament.⁴ Interestingly, in the same meeting, the US Under Secretary of State for Arms Control and International Security Rose E. Gottemoeller too reiterated her commitment towards the Senate ratification of the CTBT.⁵

The Comprehensive Test Ban Treaty completely bans a nuclear weapon explosion and even a weapon test worldwide. Through the verification system it also establishes a provision of a global network of monitoring facilities and allows for on-site inspections. As of September 2013, the CTBT Organisation claims to have about 276 certified verification systems installed; 22 more are under construction and another 21 are planned. The treaty text consists of 17 Articles and a Preamble that describes the verification procedure.⁶ The treaty, however, cannot enter into force until 44 specific states ratify the treaty. The United States is one of the eight states out of the specific groups yet to ratify the treaty. The failure of the US national legislature to ratify the treaty became evident in 1999 when the US Senate rejected the CTBT. It is the US stalemate in CTBT ratification that has been cited as one of the reasons by many countries to delay their ratification. President Obama in his initial term announced his will towards the Senate verification of the treaty in 2009.

The CTBT was concluded in 1996, and three years later, a leading nuclear non-proliferation expert rightly predicted that its ratification remains in doubt. The expert pointed out the difficulty in getting the ratification of a specified number of states because of the newly conceived Entry Into Force (EIF) clause.⁷ Article XIV of the CTBT, also known as the EIF clause requires the ratification of all the 44 countries recognised by the International Atomic Energy Agency (IAEA) as possessors of nuclear technology in terms of nuclear power

4. "UN: Officials Urge Renewed Efforts for Nuclear Weapon Free World", *International Business Times*, September 27, 2013, at <http://au.ibtimes.com/articles/509465/20130927/united-nations-secretary-general-ban-ki-moon.htm#.Ulzr6lPz6hr>

5. "Foreign Ministers Urge Action on CTBT", *Arms Control Today*, October 2013, at http://m.armscontrol.org/act/2013_10/Foreign-Ministers-Urge-Action-on-CTBT accessed on October 14, 2013.

6. For details see, "Comprehensive Test Ban Treaty Organization", <http://www.ctbto.org/> and "Comprehensive Test Ban Treaty at a Glance", at <https://www.armscontrol.org/factsheets/test-ban-treaty-at-a-glance>

7. For details, see Michael Krepon, "Troubled Treaties: CTBT Deadline Nears", *The Bulletin of the Atomic Scientists*, vol. 55, no.2, 1999, pp. 18-20.

reactors or research reactors. The United States is among these 44 states that have not yet ratified the CTBT.

The EIF provision of the treaty further complicates the CTBT ratification as this involves a ratification of the remaining 8 states out of the 44 states possessing nuclear technology; this acts as an external impediment on the US debate on the CTBT ratification as often times, the Senate debate also gets stuck on the conditions that are attached to the ratification by these countries.

Since the Senate rejection, the treaty has been benched at present at the Senate Foreign Relations Committee.⁸ The Administration of President George W. Bush remained opposed to the CTBT ratification and refused to participate in the CTBT's EIF Conference held in the year 2001.⁹

THE AMERICAN DEBATE

Much before President Obama ascended to the White House, his support to non-proliferation issues became evident during his presidential campaign. His support for disarmament, at least in principle, was visible through his campaign speeches. As a senator, Obama acknowledged that unguarded stockpiles of nuclear weapons material comprised the most important threat to American national security. He specifically raised proliferation concerns over North Korea and Iran, urged the US Senate to debate about the future scope of the Cooperative Threat Reduction (CTR) programmes. In November 2005, he travelled with Senator Lugar to Ukraine to witness first-hand the process of nuclear weapons dismantlement and later recommended to the US Senate to creatively think about the next generation efforts on nuclear, biological and chemical weapons. The subsequent year saw the Senate deliberate on the 'Lugar-Obama Legislation S, 1949', that sought an extension of the Nun-Lugar Act of 1991. Hence, President Obama's support to the CTBT did not come as a surprise.

In his Prague Agenda (2009), Obama declared that his Administration would aggressively pursue the CTBT ratification.

8.. Jonathan Medalia, Congressional Research Service Report, August 2012, "Comprehensive Nuclear Test Ban Treaty: Background and Current Developments" RL33548, at <http://www.fas.org/sgp/crs/nuke/RL33548.pdf>

9. Ibid.

He, indeed, followed up on this commitment by chairing the United Nations Security Council (UNSC) session on disarmament and nuclear non-proliferation, bringing it more limelight that resulted in international support for Resolution 1887. This UNSC Resolution calls upon all states to refrain from conducting nuclear test explosions and to sign and ratify the CTBT at the earliest. It was also since the revelation of the Prague Agenda that the US undersecretary on many occasions has rallied for the US ratification of the CTBT.

Interestingly, the Nuclear Posture Review (NPR-2010) too zeroed in on achieving non-proliferation objectives. The CTBT ratification was viewed as being instrumental in *“leading other nuclear weapons states towards a world of diminished reliance on nuclear weapons reduced nuclear competition and eventual nuclear disarmament”*¹⁰. In fact, as compared to the *“aggressive”*¹¹ Nuclear Posture Review set forth by President George W. Bush, the Obama Nuclear Posture set the nuclear strategic guidelines to reduce the role of nuclear weapons in the US national security strategy. The NPR-2010 very categorically expressed the Obama Administration’s will to mobilise international support for the Comprehensive Test Ban Treaty. The same year, an inclination from 47 nation states to proceed towards taking disarmament measures was seen during the Washington Nuclear Security Summit (2010). In a February 2010 speech, Vice President Biden reaffirmed the US’ commitment to ratify the treaty. He argued that the US will need allied states to reach out and apply diplomatic pressure to holdout states to help secure entry into force. One year later, President Obama announced a voluntary donation of in kind to the CTBT Organisation valued at \$8.9 million, directed at strengthening the detection technique and another \$25.5 million devoted towards the reconstruction of a hydroacoustic station in French territories.¹²

Many nuclear strategic experts viewed this point in time as ripe for pushing forward the non-proliferation agenda. Citing a report by

10. *The Nuclear Posture Review Report* (2010), Department of Defence, at <http://www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf> accessed on July 24, 2012.

11. Manpreet Sethi, “US Nuclear Posture Review 2010: Highlights, Limitations and Lessons for India”, in Jasjit Singh, ed., *Asian Defence Review* (New Delhi: Knowledge World Publication, 2011), pp. 17-36.

12. “CTBT Signatories Push Entry into Force”, *Arms Control Association*, October 2011.

the prestigious panel on the National Academy of Sciences (NAS), the Executive Director of the Arms Control Association, Daryl G. Kimball argued that the case of the CTBT is stronger than ever in the United States, hence, President Obama must provide strong leadership to a successful vote in the Senate.¹³

Indeed, the stage to deliberate on the evolving issues of nuclear non-proliferation was set under the renewed environment brought into the limelight by the 'Four Horsemen' of nuclear disarmament in the year 2007.¹⁴ President Obama only tried to take it forward by giving more voice to the disarmament agenda. The message that the Obama Administration tried to convey in his first tenure seemed clear: to generate more noise on nuclear matters relating to disarmament. Contrary to the will towards the Senate ratification of the CTBT, the Obama Administration was unable to put forward the treaty in the Senate even in his second term.

The US foreign policy practically takes shape in the Congress, even before it is executed. The leadership of the executive body plays an important role in pushing forward the agenda. The US Senate in this respect plays an important role; especially in respect of the ratification of a treaty. The present composition of the 113th US Congress remains as 52 Democrats and 46 Republicans.¹⁵ This implies that for CTBT ratification to take place, the leader of the executive has to secure the ratification by a majority in the Senate. The first term of the Obama Administration was, indeed, a golden opportunity for him to have aggressively put forward the ratification process, as the Democrat controlled Senate could have possibly enabled the president to shape his ratification agenda. The presidency of Obama

13. Daryl G. Kimball (2012), "The Case for CTBT is Stronger Than Ever", *Arms Control Association*, April 2012, at https://www.armscontrol.org/act/2012_04/Focus

14. The Four Horsemen is an informal collective reference to the authors of the Op-Ed article, "A World Free of Nuclear Weapons", that Henry Kissinger, George Shultz, William Perry and Sam Nunn published in the *Wall Street Journal* in the year 2007. These four authors, who were also former secretaries of state and defence secretaries of the United States, were once instrumental in the country's nuclear weapons establishment. Their article talked about the need of the US to lead a global initiative towards nuclear disarmament. The article was well received by the strategic audience all across the world. It also renewed since then a worldwide debate on the possibility of nuclear disarmament.

15. As per the US Senate's Official Website, the US Senate has 100 seats; Frank Lautenberg (D-NJ) died on June 3, 2013. He was replaced by Jeffrey Chiesa (R-NJ) on June 6, 2013 + 2 Independents (both caucus with the Democrats), <http://www.senate.gov/>

has already reached the middle of his second tenure. It is not certain as to how President Obama would utilise a second chance for the CTBT ratification, especially when the generic debate favouring and against the treaty ratification has not changed drastically.

(a) The Senate Opposition to CTBT :“The Stockpile Stewardship Programme: Dilemma”

In the year 1999, the Democrats in the US Senate pressed for the consideration of the CTBT. The treaty was rejected at the Senate due to the Republican opposition. It is noteworthy that only four Republican senators¹⁶ voted in favour of the treaty. The Senate rejection of the treaty represented the failure of a national legislature to form a consensus on a significant national security issue.

The Senate’s rejection of the CTBT emanated from the failure in the Stockpile Stewardship Programme (SSP). The SSP is a technical process of enhancement of the ageing nuclear weapons. This process, through technological means, attempts to maintain the reliability of the stockpile of the nuclear arsenal without actually conducting an actual test. The SSP, in addition, thus, ensures the security and safety of the nuclear weapons stockpile. A larger objective of the Stockpile Stewardship Programme then becomes to maintain the reliability of the US nuclear deterrent while protecting the nation’s pledge of a voluntary nuclear testing moratorium. The SSP could also be viewed two dimensionally, as it not only sustains the credibility of the American nuclear deterrent but, at the same time, attaches a tone of sincerity to the American nuclear non-proliferation commitment by sustaining the US moratorium on nuclear testing.

The origins of the SSP could be traced back to the immediate post Cold War era wherein a generic trend towards a voluntary moratorium was visible. The collapse of the eastern power bloc indeed altered the need for Soviet Russia to uphold a massive inventory of nuclear arsenals, as in the next year, the Russian president announced the pledge to refrain from nuclear testing. This development was followed by the declaration of the United Kingdom, China and France

16. Names of the Republican Senators are Arlen Specter (Pennsylvania), Jim Jeffords (Vermont), Gordon Smith (Oregon) and Lincoln Chaffee (Rhode Island). The US and CTBT, CTBT Organisation, at <http://www.ctbto.org/the-treaty/developments-after-1996/1999-2002-the-united-states-and-the-ctbt/> accessed on September 16, 2013.

of a similar voluntary moratorium on nuclear testing. The United States too announced a suspension from nuclear testing; in the year 1994, the US Public Law 103-160 was passed in order to extend the moratorium on nuclear testing¹⁷. During the Senate debate on the CTBT (1999), the treaty was rejected, as according to the testimonies of the lab directors, a concrete guarantee on the long-term safety and reliability of the American nuclear stockpile could not be provided through the SSP. The programme was formally established in the year 1996 demanding a joint certification from the US National Nuclear Security Administration (NNSA) and the Department of Defence annually, assuring the safety and reliability of the nuclear arsenal.¹⁸

(b) Reliability Without Testing?

On the other hand, nuclear experts like Bruce T. Goodwin, principal associate director for weapons at Livermore National Laboratory argues that the United States no longer has any need for, nor any interest in, conducting nuclear explosive tests. In the past, previous Administrations too have maintained the reliability of the nuclear arsenal without physical testing. According to a 1995 Sandia National Laboratories report, of the roughly 350 underground nuclear tests that occurred between 1972 and 1992, only 17 were so-called stockpile confidence tests. The United States, thus, already has the tools it needs to maintain the long-term safety and reliability of the nation's nuclear deterrent. Through the SSP, the nuclear weapons laboratories conduct extensive series of non-nuclear tests on both production-line and stockpiled warheads to determine if there are any problems with the warheads themselves, their components, or their production procedures. Once the problem is detected, it can be rectified even without conducting a nuclear test. With statistics of approximately 1000+ nuclear weapons test explosion by 1992, a possibility for an

17. "Stockpile Stewardship Programme"(2010), Nevada National Security Site, DOE/NV—1017, Factsheet, [Online: Web], accessed on September 10, 2012, at http://www.nv.doe.gov/library/factsheets/DOENV_1017.pdf

18. The SSP relies on computer simulations and physical tests of non-nuclear components to support its judgments about the reliability of the weapons in the stockpile, and it maintains a capacity to refurbish and remanufacture components as needed. It is also tasked with maintaining a test-readiness programme as a hedge in case nuclear testing is ever again deemed necessary..." For more details, see Judith Reppy (2010), "US Nuclear Laboratories In a Nuclear-Zero World", *The Bulletin of The Atomic Scientists*, vol.66, no. 44, pp.42-57

indefinite extension on the moratorium on nuclear testing by the United States was debated. Interestingly, the principal associate director for the weapons at the Livermore National Laboratory has reaffirmed his conviction in the SSP programme and argued that the US today has a better understanding of the SSP progress than ever before. Another former Director of the NNSA, Linton Brooks, too reiterated a similar sentiment and said that, “*as a practical matter, it is almost certain that the US would not test again.*”¹⁹

Last year, in 2012, the US Department of State in a press release, acknowledged that there has been an improvement of the capability of the use of data from the SSP surveillance programme; this would enable more accurate prediction of how the weapons were likely to perform even without a nuclear explosive test.²⁰ A strong case for CTBT ratification was also put forward by the National Academy of Science, as it confirmed that the US does not need to explode nuclear weapons to assure effective functioning of its ageing stockpile. The report titled, “*The Comprehensive Test Ban Treaty: Technical Issues for the United States*” (2012), reaffirms that the United States no longer needs—and would not benefit from—nuclear explosive testing. It further stated that renewed nuclear testing would only help improve other nations’ nuclear capabilities and reduce US security.²¹

(c) The Verification Distrust

One of the reasons for the Senate’s rejection of the CTBT was distrust in the verification system by the CTBT Organisation. The opponents to the treaty ratification expressed their doubts towards an effective verification. The question was whether a nuclear explosion of even a smaller degree, anywhere in the world, could be detected? The response

19. “No Going Back : 20 Years Since the Last Nuclear Test”, *Arms Control Association*, vol.3, no. 14, 2012 at <https://www.armscontrol.org/issuebriefs/No-Going-Back-20-Years-Since-the-Last-US-Nuclear-Test%20> accessed on October 14, 2013. And David E. Hoffman, “We Know Know”, *Foreign Policy*, 2012 at http://hoffman.foreignpolicy.com/posts/2012/04/02/we_now_know, accessed on October 15, 2014.

20. Enhanced US Nuclear Weapon Stockpile Surveillance Tools (December 13, 2012) Fact Sheet, *Bureau of Arms Control, Verification and Compliance*; US Department of State.

21. Matthew Wald, “US Has No Need to Test Atomic Arsenal”, *The New York Times*, March 31, 2012 at http://www.nytimes.com/2012/03/31/science/earth/us-tests-of-atomic-weapons-not-needed-report-says.html?_r=0 accessed on October 17, 2013 and “The New NAS Report: The Case is Stronger Than Ever for the Test Ban Treaty”, *Arms Control Association*, vol. 3, issue 5, March 30, 2012.

to these doubts was addressed by an independent commission from the Verification Research Training and Information Centre (VERTIC). The experts of the commission not only considered the efficacy of the verification system proposed by the CTBT such as the International Monitoring System (IMS) installed in Vienna, they also assessed the entire range of monitoring capabilities available to nations (classified and unclassified) to further reassure the credibility of a verified test ban. The VERTIC commission suggested that the monitoring capabilities of the United States, Russia and France could be utilised. This would make a valuable contribution to the verification system. The concluding observation of the commission reiterated its trust in the probable verification regime consisting of a variety of means available, outside the international monitoring system at Vienna.

Similarly, the verification proponents in the US too argue in favour of the capability of the International Monitoring System (IMS) to detect and identify nuclear explosions of 1 kiloton. An example of this could be North Korea's 2006 test that released a total yield of 0.5 kiloton and was detected by at least 31 seismic stations around the world, including 21 IMS seismic stations.²²

CONCLUSION

In October 1999, the US Bureau of Arms Control released a statement arguing for the CTBT ratification on a few points: (a) it strengthens US national security by limiting the nuclear threat facing the United States; b) it further advances American nuclear proliferation goals by delivering on the goals of the NPT- ReviewCon 2000.²³ Fifteen years later, the case for signing the CTBT remains the same, in fact, there seems to be developing a renewed understanding among traditional opponents to now ratify the treaty on the basis of confidence in the SSP programme. One year ago, the former US Secretary of State George Shultz²⁴ underscored once again his support for the CTBT

22. Robert Nelson, "Three Reasons Why the US Senate Should Ratified the Test Ban Treaty", *Bulletin of the Atomic Sciences*, vol. 65, no. 52, p.56.

23. Fact Sheet released by the Bureau of Arms Control, US Department of State, Washington, DC, October 8, 1999 Why Ratify the CTBT?, at http://www.fas.org/nuke/control/ctbt/news/fs_991008_whyctbt.htm, accessed on May 20, 2014.

24. "Shultz Urges US Ratification of Test Ban Treaty," March 2013, Nuclear Threat Initiative, at <http://www.nti.org/gsn/article/shultz-urges-us-ratification-test-ban-treaty/>, accessed on May 20, 2014.

ratification and put forward his trust in the efficacy of the verification regime. The Obama Administration still has a close second chance of getting the treaty ratified, however, it appears less likely that it would be possible in the next two years as the Administration has already lost its focus. The US nuclear non-proliferation objective such as the Iran issue and Nuclear Security Summits along with NPT Revcoms and Prep Coms have consumed the Obama's presidency. The coming two years, the last few months of President Obama in the White House, may not be ideal for rebuilding the CTBT debate in the US Congress. Support for the CTBT ratification in the US may fluctuate in the future with the change in Administration. The issues of the efficacy of the SSP programme and whether or not to continue nuclear testing would remain. The fact that a nation that developed the theory of nuclear deterrence would rely on computer simulations to examine and verify the reliability of its nuclear deterrent some time in the future is highly unlikely.

RATIONALITY, COGNITION AND STRATEGIC THINKING

PRATEEK KAPIL

INTRODUCTION

A fundamental debate in international relations pertains to the application of rationality and context to different situations. Rationality is a hugely debated concept in philosophy. Across disciplines, the conceptualisation of rational thought and practice provides various puzzles and problems. Yet, it is the most influential concept in modern day parlance and forms the foundations of approaching any problem. To be rational, according to Plato, is to let reason govern all intrinsic human thinking. He says reason is the supreme quality of human beings which gives them their unique character. The internal reflective process of a human being is what gives him/her an evolutionary advantage. Knowledge, according to rationality, is innate and achieved through continuous reflection and processing. One's surroundings, undoubtedly, constrain or enable reason but the latter is the final instrument through which human beings have the ability to shape the environment to their advantage. Aristotle considered reason analogous to a charioteer who steers the seemingly irrational aspects of human thinking i.e. spirit and appetite. Further, there are myriad debates within the concept of rationality itself.

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What are the qualitative, quantitative, observational or empirical inputs that are required to consider something as 'rational'? There are often variables, it is argued which are beyond the scope of human reasoning which provide every rational situation with a 'context' that is extremely difficult to limit within the analytical framework of rational thought. Comprehensive rationality and bounded rationality are two different classifications which provide an example of this debate. Bounded rationality is the idea that in decision-making, the rationality of individuals is limited by the information they have, the cognitive limitations of their minds, and the finite amount of time they have to make a decision. It was proposed by Herbert A. Simon¹ as an alternative basis for the mathematical modelling of decision-making, as used in economics and related disciplines, "It complements rationality as optimization, which views decision-making as a fully rational process of finding an optimal choice given the information available. Another way to look at bounded rationality is that, because decision-makers lack the ability and resources to arrive at the optimal solution, they instead apply their rationality only after having greatly simplified the choices available"². Thus, the decision-maker is a satisfier, one seeking a satisfactory solution rather than the optimal one. Simon used the analogy of a pair of scissors, where one blade is the "cognitive limitations" of actual humans and the other the "structures of the environment"; minds with limited cognitive resources can, thus, be successful by exploiting pre-existing structure and regularity in the environment.

Rationality is defined as the ability of an entity to examine the pros and cons of a situation to arrive at an outcome by which the said entity is better off without leaving anything or anyone worse off than before the situation presented itself. In strategic situations, it governs the issue of initiating a strategy by calculating whether the execution of the strategy will leave the strategist better off than before without making other variables worse off or making the total outcome better off, irrespective of its individual parts being better off than they would have been without initiating a strategy. Rational thought was first propounded by philosophers such as Descartes with

1. Gerd Gigerenzer and Reinhard Selten, *Bounded Rationality* (The Adaptive Toolbox, MIT Press, 2002), pp. 1-432.
2. Ibid.

a famous dictum, "I think, therefore, I am". Rationality in strategy may not always lead to rational outcomes. That is because in strategy, the fundamental principle is the existence of an adversary who is thinking exactly the same as you are. This dynamic is explained by a number of rational choice theory/game theory scenarios such as chicken, prisoner's dilemma and stag hunt. That does not, however, mean that rationality cannot be applied to strategic situations. What, in fact, it implies is that a strategist should look to make the strategic environment conducive to rational choice and action.

COGNITIVE AND PHILOSOPHICAL INPUTS TO RATIONALITY

Cognitive science has shown that humans have a tendency to be distracted by the heuristics of a situation. This presents one of the problems in applying rational thought. Examples of this heuristic method include using the rule of thumb, an educated guess, an intuitive judgment, stereotyping, or common sense. In more precise terms, heuristics are strategies using readily accessible, though loosely applicable, information to control problem solving in human beings and machines. A good simplistic example of this is the following one.

Assume, for example, that a town of 600 people is hit by the plague. There is one plan to tackle this plague but it is presented to you in two different ways. One way it is presented to you is that if you choose the plan, 200 people will live. The other way, it is shown is that if you choose the plan, 400 will die. Cognitive experiments have shown that a majority of the respondents choose the former even though the two plans are exactly the same. That is because people have an intuitive judgement that saving 200 people living sounds better than 400 people dying, although in quantitative terms the two outcomes are exactly the same. Heuristics are used by people every day in their lives but they are not necessarily rational responses to various situations that we encounter. Having said that, passing a final judgement is difficult as employing heuristics is also an important aspect of human nature. Strategists need to be aware of these distinctions to reach optimum outcomes.

There are other questions that need to be asked when we apply rational thought to the problems a government faces, or social sciences in general. I will illustrate this by looking at the two concepts

of justice and social structures. They have a direct bearing on the issues of security. What is justice? Justice over the years has had various dimensions: consequentialist, deontological, reparative or distributive. Consequentialist justice was given by Jeremy Bentham through his thesis of utilitarianism. It is best encapsulated in the statement, "Greatest good for the greatest number". It says that as long as bad outcomes can be avoided and good outcomes achieved, an actor's act is just. The deontological view given by Kant is that the act must be just, i.e. the process by which the actor performs something. An act is just if you would do to others as others would do unto you. According to Kant, an act has to be just in itself. That, he says, can only come from goodwill. Now both these principles are well debated in social sciences and neither is conclusive but the debate illuminates the central issues in initiating a strategy. Rationality here would be to weigh every situation according to these principles and come to a prudent solution. In some cases, the two formulations will be fundamentally opposed to the others. Then the onus falls on the strategist as to how well he frames the problem to himself and to the other actors, bearing in mind these different principles. Rationality still forms the primary tool of devising a strategy but knowledge of these debates and principles will lead to minimising the damage a particular context can do.

Similarly, the debate around social structures revolves around the views of Thomas Hobbes, John Rawls and Robert Nozick. Hobbes says people escape the state of nature (characterised by anarchy) and come together to form a state with a monopoly of force so they don't have to deal with the business of security themselves and pursue higher goals and forms of living. John Rawls says there are certain inviolable rights of human beings which are life, liberty, equality, pursuit of happiness and consent of the governed. Nozick further argues for a minimal state which only provides for the security of citizens and enforcement of contracts. For him, the process of justice is more important than justice as an outcome. He considers liberty of an individual as the highest virtue in a society. There are problems with each conception. An overtly Hobbesian state can become a militaristic state, an ideal Rawlsian state is difficult to achieve without constraining some liberties and an overtly minimal state of Nozick

may lead to anarchy and violation of certain natural rights e.g. a tragedy of commons and public goods. Therefore, social sciences and reason do not have as simple a linkage among theory, evidence and practice as do natural sciences. Having said that, rationality has proved to be the most beneficial mode of thinking when it comes to problems of social sciences and, consequently international politics and security.

THE KASHMIR ISSUE : AN EXAMPLE

The reason all these debates are relevant to strategic studies is because strategy in international politics does not occur in a vacuum. Armed forces, to succeed, have to be in synergy with governance. A rational grand strategy articulated by a government can help the armed forces integrate their operations in the larger strategic environment. This is most relevant in issues of war and internal security. For example, India's stand in Kashmir and its further tackling of the insurgency is an example of debates about justice, social structures and strategy coming together. India argues that partition was agreed to by the Indians due to a consequentialist notion of justice to prevent further violence in the country as a large majority of Muslims at the time—not all of them—wanted a state of their own. India agreed to it not on the basis of the two-nation theory of two states for two different religions but rather as a reaction to the large scale riots which had made Indian resistance costs to partition extremely high. This was followed by the understanding that all the princely states were free to join either union through legal instruments of accession. Pakistan, meanwhile, claimed that it was defending a deontological position, that the Islamic identity of the Kashmiri people deemed its actions as just in trying to integrate the region with Pakistan. The Pakistanis claimed that their actions were just in themselves because they were acting out of goodwill. India, on the other hand, maintained the deontological position that the secular identity of all Indians, Hindus or Muslims, was the primary factor and that India itself was acting in goodwill in defending the integrity of the nation. The resultant outcome was a conflictual stalemate that persists to this day. This eventually led to four wars between the two nations. Now rationality here suggested that India maintain the status quo by keeping Kashmir

within a Rawlsian view of distribution of goods and responsibilities while maintaining the monopoly of force of the Indian state equal to other regions in the country. This means granting to Kashmiri citizens all the inviolable rights that Rawls deemed inviolable under a proper social contract, according to the consent of the Kashmiri citizens. To paraphrase Rawls, one way to achieve this is if each Indian citizen puts himself under 'a veil of ignorance' i.e. he doesn't know what is his/her status under the Indian state is and then decides the rights and duties of all citizens in the Indian Union, including of the Kashmiris. Rawls maintained that you need the monopoly of force of the state to enforce any social contract but the resultant state should then respect the principle of equality of all citizens. This objective of the Indian government was further complicated by the Hobbesian view of the Indian state, as interpreted by the Pakistanis and (state sponsored) non-state actors who took up arms against the state. They do not recognise the monopoly of force of the Indian state (obvious in the Pakistani case) which then manifests itself through cross-border terrorism and violent insurgency. This then leads to certain sections of the Indian establishment justifiably going away from a Rawlsian to a more Hobbesian state in their handling of this situation. The same can be said of the erstwhile insurgencies in the northeast, Punjab and now the Naxal areas. A prudent strategy for the Indian state under these circumstances is to gradually move from the Hobbesian form imposed on it due to the challenge to its monopoly of force to a more Rawlsian form which would be desirable for both the Kashmiris and the Indian state. An overreaction towards a more Hobbesian form towards the Kashmiris is a sub-optimal and detrimental strategy for India.

The presence of Pakistan is the crucial factor. Unless both India and Pakistan realise that their deontological views of justice with respect to Kashmir are fundamentally contradictory, it is not prudent to plan for peace. The only way peace can be achieved between the two states in this core issue is either through reparative justice or a more consequentialist notion of justice. However, if consequentialist or reparative notions are employed by both states, aimed at preventing future violence, negotiations or non-force strategies are possible. India, meanwhile, despite major friction should look

to continuously introduce Rawlsian features of governance in the state of Kashmir. Despite deep-seated problems in the same, it is the only viable outcome for the Indian state. Private investment, education, designated areas of protest, free and fair elections and intensive public relations strategies are required. The same holds true for other insurgencies as well. Comprehensive rationality of maintaining the territorial integrity of the state has to be checked by the more bounded rationality of achieving a long-term integrated Kashmiri state. This may require a more decisive action on the issue of cross-border interference where the Pakistanis are dismissive of any consequentialist solution. The Kashmiris do not have as strong a deontological conflict of justice as Pakistan does with respect to India. The Indian strategy has to gradually move towards a more Rawlsian notion in tackling this situation. Rationality is usually given a more comprehensive or broad-based form by scholars but by introducing other variables to the environment, it can account for context and deontological factors as well. For example, the prisoner's dilemma leads to different rational outcomes in the context of normal prisoners as compared to the prisoners part of a mafia group who know they will be killed if they get out of jail. Therefore, rational choice is flexible enough to include more variables without being straitjacketed or losing relevance.

International relations is largely characterised by a Hobbesian view of states due to international anarchy. Beyond a point, states can justifiably prioritise the use of force in the absence of a global leviathan. Without a global leviathan taking care of security, there is limited scope for what Hobbes stated was the primary reason why individuals in domestic society and states in the international realm come together—"commodious living". With a global leviathan, states can use the cooperation or peace dividend to focus on goals of development and prosperity. But geography and nationalism prevent such integration among nations. Therefore, it would not be amiss to consider the international realm as a paradigm governed by a superior force. In realist terms, international politics and security employ a consequentialist notion of justice. That is, relative gains and losses between states. Any interaction between states focusses on outcomes rather than the deontological notion which focusses

on the act or the goodwill. The Kantian notion of deontology has been propounded by certain scholars but it has so far been proven ahistorical and difficult to achieve. The frequency of war and biased global institutions of governance have furthered the reasoning behind a more consequentialist realist notion of international relations. Strategic thought cannot overlook this point.

RATIONALITY, PERCEPTION AND EMPIRICAL EVIDENCE

This is because these debates change the nature of questions in foreign and security policy and directly influence the perceptions of various actors. Perceptions are an important variable albeit not a decisive one. How do perceptions and rationality affect each other? Cognitive science has a large body of research on the theory of dual processing of human nature i.e. how human beings process phenomena. In psychology, a dual process theory provides an account of how a phenomenon can occur in two different ways, or as a result of two different processes. Often, the two processes consist of an implicit (automatic), unconscious process and an explicit (controlled), conscious process. Verbalised explicit processes or attitudes and actions may change with persuasion or education; though implicit processes or attitudes usually take a long time to change with the forming of new habits, institutions and patterns. Dual process theories can be found in social, personality, cognitive, and clinical psychology. Table 1 provides the various functions of the two systems prevalent in human psychology.³

Table 1 : Dual Processing Systems

System 1	System 2
Unconscious reasoning	Conscious reasoning
Implicit	Explicit
Automatic	Controlled
Low effort	High effort
Large capacity	Small capacity
Rapid	Slow
Default process	Inhibitory

3. Daniel Kahneman *Thinking, Fast and Slow* (1st ed.) (New York: Farrar, Straus and Giroux, 2002), pp. 1-533.

Associative	Rule based
Contextualised	Abstract
Domain specific	Domain general
Evolutionarily old	Evolutionarily recent
Non-verbal	Linked to language
Includes recognition, perception, orientation	Includes rule following, comparisons, weighing of options
Modular cognition	Fluid intelligence
Independent of working memory	Limited by working memory capacity
Pragmatic	Logical

The leadership often has to account for interconnections between System 1 and System 2 when it comes to policy-making but it is important to not let System 1 completely overshadow System 2 in the interest of prudent, rational policy-making.

The debates around what it is to be rational are further qualified by debates around what is empirical evidence. The debate between rationalists and empiricists goes a long way back. The⁴ dispute between rationalism and empiricism concerns the extent to which we are dependent upon sense experience in our effort to gain knowledge. Rationalists claim that there are significant ways in which our concepts and knowledge are gained independently of sense experience. Empiricists claim that sense experience is the ultimate source of all our concepts and knowledge. Rationalists generally develop their view in two ways. First, they argue that there are cases where the content of our concepts or knowledge outstrips the information that sense experience can provide. Second, they construct accounts of how reason in some form or other provides that additional information about the world. Empiricists present complementary lines of thought. First, they develop accounts of how experience provides the information that rationalists cite, insofar as we have it in the first place. (Empiricists will at times opt for scepticism as an alternative to rationalism: if experience cannot provide the concepts or knowledge the rationalists cite, then we don't have them.) Second, empiricists

4. Peter Markie "Rationalism vs. Empiricism", in Edward N. Zalta, ed., *The Stanford Encyclopedia of Philosophy* (Summer 2013 Edition), at <http://plato.stanford.edu/archives/sum2013/entries/rationalism-empiricism/>, accessed on January 8, 2013.

attack the rationalists' accounts of how reason is a source of concepts or knowledge.

In recent times, the debate is moving in the direction of how to integrate the two rather than the two positions being completely contradictory. Rationalists believe in innate knowledge. They contend that any phenomenon can be achieved by a deductive hypothesis which can then be falsified under certain conditions. Empiricists, on the other hand, believe that evidence is paramount and all phenomena have to be tested by observation and experience. Neither side completely precludes the other. They are not mutually exclusive. Both, however, argue that to test a phenomenon, you have to have a hypothesis to an event you want to explain; further you need to look for evidence that confirms the hypothesis (rather than the other way round where you try to look for random or inductive hypotheses in a large dataset); and then you try to provide conditions under which your explanation can be falsified. This debate is extremely important in issues of military intelligence. For example, it can be argued that the Kargil intelligence failure occurred due to a certain cognitive bias of the leadership to intuitively not rationally seek consistency over dissonance. They believed that the growing India-Pakistan bonhomie at the time (Prime Minister Vajpayee's visit to Pakistan and the bus diplomacy) would eliminate an imminent threat of intrusion by Pakistan. Analysis assumed that for Pakistan, an act of intrusion was operationally irrational, and, finally, that India's nuclear arsenal would act as a deterrent against Pakistan's irrational move of intrusion. It is easy to point out the problems in this intuitive thinking in hindsight, but the larger point I'm trying to argue is that a more rigorous rational, cognitive and social sciences approach by the same actors may have led to a more successful outcome for the leadership. Therefore, how to go about anticipating, planning or executing an event is strongly influenced by rational and other cognitive modes of thinking. The rationalist vs empiricist debate is an extremely important tool of policy-making for the leadership.

RATIONAL CHOICE THEORY

Finally, game theory and rational choice theory have contributed the most in rational thinking. Rational choice theory makes three

assumptions about individuals' preferences for actions:

- **Completeness:** All actions can be ranked in an order of preference (indifference between two or more is possible).
- **Transitivity:** If action a1 is preferred to a2, and action a2 is preferred to a3, then a1 is preferred to a3. In other words, all actions can be compared with other actions.
- **Independence of Irrelevant Alternatives:** If A is preferred to B out of the choice set {A,B}, then introducing a third alternative X, thus, expanding the choice set to {A,B,X}, must not make B preferable to A.

Together, these assumptions form the result that given a set of exhaustive and exclusive actions to choose from, an individual can rank them in terms of his preferences, and that his preferences are consistent.

At the same time, it is often claimed from behavioural or social disciplines that rational choice theory makes some descriptively unrealistic assumptions in order to generate tractable and testable predictions. These can include:

- An individual has full or perfect information about exactly what will occur due to any choice made. More complex models rely on probability to describe outcomes.
- An individual has the cognitive ability and time to weigh every choice against every other choice. Studies about the limitations of this assumption are included in theories of bounded rationality.

Even more realistic theories of human action include such components as Amos Tversky and Daniel Kahneman's prospect theory⁵, which reflects the empirical finding as that, contrary to rational choice theory, individuals attach extra value to items that they already own compared to similar items owned by others. To rational choice theory, the amount that an individual is willing to pay for an item (such as a drinking mug) should equal the amount he or she is willing to be paid in order to part with it. In experiments, the latter price is typically significantly higher than the former. Behavioural economics includes a large number of other amendments to its picture

5. Ibid.

of human behaviour that go against pure economic rationality. These approaches are still largely dependent on experimental findings. They have added corrections and richness to rational choice rather than replacing it as alternative paradigms.

There are various concepts of rational choice theory which can be applied to any strategic scenario, one or more of which can be used in tandem. Examples of these are iterative deletion, median voter theorem, best response, Nash equilibrium, mixed strategies, evolutionary stability and mutation, backward induction, imperfect information, sub-game perfect equilibrium, repeated games and asymmetric information. Explaining each one is beyond the scope of this paper but the developments of this theory demonstrate the progress in purely rational thinking. Determining optimality for rational behaviour⁶ requires a quantifiable formulation of the problem, and making several key assumptions. When the goal or problem involves making a decision, rationality factors in how much information is available (e.g. complete or incomplete knowledge). Collectively, the formulation and background assumptions are the model within which rationality applies. Illustrating the relativity of rationality: if one accepts a model in which benefiting oneself is optimal, then rationality is equated with behaviour that is self-interested to the point of being selfish; whereas if one accepts a model in which benefiting the group is optimal, then purely selfish behaviour is deemed irrational. It is, thus, meaningless to assert rationality without also specifying the background model assumptions describing how the problem is framed and formulated.

Combined with cognitive science and philosophy, rational choice theory provides us with an exhaustive body of work on rationality and strategy. The application of the scientific method rather than only abstract or experimental constructs is deemed better in strategic analysis today. Strategy is the art of the possible and it deals with how ends and means can be brought together. In modern day parlance, rationality is often confused with various meanings and various formulations but one criterion has remained unchanged. To reason is to continuously reflect. This continuous process of reflection

6. W. Spohn, "The Many Facets of the Theory of Rationality", *Croatian Journal of Philosophy*, vol 2, 2002, pp. 247-262.

leads one to calibrate the objectives and resources at hand. A political leadership has the prerogative to rationally articulate a political objective in every situation so as to come to an optimal strategy for the same. There can be no strategy without policy leadership and no political objective can be achieved without articulating or debating a strategy for it. Rationalism remains the cornerstone of this process. This paper is a small attempt to highlight the issues involved in its conceptualisation and application and why it still remains an important form of epistemology.

THE POLITICS OF MISSILE DEFENCE IN POLAND

DEBALINA GHOSHAL

As Poland is fielding the US missile defence system in its territory, it is also simultaneously working on its own missile defence system due to the trust deficit with the United States. The Ukrainian crisis and the integration of Crimea into Russia have prompted Poland to beef up its missile defence programme. However, as Warsaw strives to modernise its missile defence capabilities, this article would aim to study the politics of fielding a missile defence system in Poland from certain important dimensions.

WHAT IS THE EUROPEAN PHASE ADAPTIVE APPROACH?

In 2009, President Obama announced that the United States would field missile defence systems in Europe under the Phase Adaptive Approach. This missile defence system was expected to provide “stronger, smarter and swifter defence” of American forces and its allies by deploying capabilities that are “proven and cost-effective” in order to protect the US homeland and the North Atlantic Treaty Organisation (NATO) territory from long range missiles threats.¹ This missile defence system would be an amalgamation of sea-based

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1. “United States European Phase Adaptive Approach and NATO Missile Defense Shield,” US Department of State, May 3, 2011, at <http://www.state.gov/t/avc/rls/162447.htm>

and ground-based missile defence systems in order to “ensure and enhance” protection of the US-NATO allies. There would be three phases of the missile defence system: SM-3Block IA, SM-3Block IB and SM-3 Block IIA.

WHY POLAND?

Ever since the Phase Adaptive Approach System was planned by the United States, Poland found itself in a strange quagmire regarding the missile defence system. Under the European Phased Adaptive Approach (EPAA), Poland has been chosen to host Phase 3 of the missile defence programme. The interceptor site in Poland “will be the key to the EPAA” since not only will it “protect Poland itself” but also the NATO Europe against ballistic missile threats from the Middle East.² Poland’s “ideal location”³ to intercept both mid and long range missiles was one of the reasons why it was the choice for the United States. Hence, Poland has become NATO’s “key eastern bastion.”⁴ At the same time, the US investment in Europe would also assure its allies in Europe of the American security commitments in the region. In 2014, Poland also participated in the Nimble Titan, a multinational missile defence war-game programme.

POLAND’S CONCERNS OVER RUSSIA

Since the 1700s, Russia wanted to invade Poland, but knew it could not do so without going to war with Prussia and Austria. In the year 1939, Poland was invaded by the erstwhile Soviet Union and by Germany. The Soviet Union invaded Poland in spite of signing the “non-aggression pact” with Warsaw in 1932.⁵ Not only did the Soviet Union invade Poland, the Polish people were also tortured by them. Post World War II, following the Potsdam Conference in 1945, Poland further lost territory to the Soviet Union and also became a part of the

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2. Frank A Rose, “Implementation of the European Phase Adaptive Approach,” US Department of State, April 18, 2013, at <http://www.state.gov/t/avc/rls/2013/207679.htm>
 3. Alex Jaholkowski, “The Geopolitics of Missile Defence in Poland”, *New Eastern Europe*, October 30, 2013, at <http://www.neweasterneurope.eu/node/985>
 4. “Alone, If Necessary: The Shield of Poland,” *Defense Industrial Daily*, March 23, 2014, at <http://www.defenseindustrydaily.com/if-necessary-alone-the-shield-of-poland-022785/>
 5. “Poland Timeline,” BBC News, January 18, 2012, at http://news.bbc.co.uk/2/hi/europe/country_profiles/1054724.stm

Warsaw Pact. It was only after the Cold War, and the disintegration of the Soviet Union, that Poland became an independent state.

In 1991, Russia pledged to keep the Baltic states as a nuclear weapons free zone. However, its recent deployment of tactical nuclear weapons in the region proves that Russia could violate its pledge if that serves in the interest of beefing up its security. In recent times, with the growing capabilities of present-day Russia, Poland is sceptical that Russia could annex Poland, justifying it on the ground that Poland was historically a part of the Soviet Union. Such concerns have also been raised by other European states which were under the Soviet Union. The present Crimean crisis and the Russia-Georgia conflict in the past have raised concerns amongst several states which were formerly under the Soviet Union that Moscow is trying to “reimpose” its influence across the old Soviet bloc.⁶

There is little doubt that the Russia-Georgia conflict and the Crimean crisis, where Moscow aims to be seen as a strategic power, proved wrong. States which were once under the erstwhile Soviet Union like the Ukraine, Poland and Czech Republic now seem to have started to view Moscow as an expansionist state. For Poland, Russia’s move in Crimea is a “long-term trend of Russia shifting the momentum” and the events in Ukraine are only the “first steps.” Warsaw also feels that there is a Russian intention of “rebuilding the power it lost after the break-up of the Soviet Union” which could next affect states like Moldova, Georgia, Poland and the Baltic states.⁷ Moreover, Russia’s massive nuclear forces exercise in early May 2014 that involved several ballistic and cruise missile firings further heightened tensions in Warsaw.

Poland shares borders with Russia at Kaliningrad where Moscow has planned to deploy the nuclear capable Iskanders. The Iskander is reported to be “among the world’s most powerful weapon in its segment.”⁸ According to Poland and the Baltic states, if Moscow moved its nuclear capable missiles in Kaliningrad, it could be

6. Thom Shanker and Nicholas Kulish, “US and Poland et Missile Deal,” *The New York Times*, August 14, 2008, at http://www.nytimes.com/2008/08/15/world/europe/15poland.html?ref=missilesandmissiledefense_systems&r=0

7. n.4.

8. “Putin Says Nuclear-Capable Missiles not yet put in Kaliningrad,” *Space War*, December 19, 2013, at http://www.spacewar.com/reports/Putin_says_nuclearcapable_missiles_not_yet_put_in_Kaliningrad_999.html

“disturbing” and “alarming.”⁹ In early March 2014, Poland, a NATO member had also exercised Article 4 of the NATO Treaty “which allows a country to call for consultations if it feels that its security and independence are threatened.”¹⁰

As the United States and Russia get involved in this tussle of an offence-defence arms race in Europe, the lesser powers in the region would probably need to bandwagon with the stronger powers. Hence, the lesser powers like the Czech Republic, Poland, and Bulgaria have chosen to bandwagon with the United States, and have decided to allow Washington to field its missile defence systems in their territory. This could be beneficial for the lesser states. But the pace at which Russia is modernising its nuclear forces in order to develop counter-measures against the US ballistic missile defence system, would make it difficult for the lesser states to keep up if they were to develop their own deterrent capability, whether offensive or defensive. At the same time, these states would also have to protect themselves from becoming victims of annexation by Russia. For Poland, bandwagoning with the United States was seen as a medium to balance Russia and also improve Poland’s own status as a US ally.

Under the “law on the reform and technical modernisation of the Polish armed forces,” Poland is expected to spend 1.95 percent of its Gross Domestic Product (GDP) on defence. This is not surprising since it is the “only EU member to have sustained growth amid the global financial and euro-zone crises.”¹¹ Poland presently also possesses the Soviet era missile defence systems. However, since the missile threat is perceived to come from Russia, Poland is least likely to depend on these old defence systems for two reasons. First, Russia could easily develop counter-measures against its own missile defence system. Second, Russia is modernising its nuclear forces, and, hence, the old missile defence system would be rendered useless. In fact, Poland’s

9. “Russia Moves Nuclear-Capable Missiles Closer to EU,” *Space Daily*, December 18, 2013, at http://www.spacedaily.com/reports/Russia_moves_nuclear-capable_missiles_closer_to_EU_999.html

10. Shirin Jaafari, “Poland Sends Distress Signals over the Ukraine-Russia Stand-off,” *PRI*, March 6, 2014, at <http://www.pri.org/stories/2014-03-06/poland-sends-distress-signals-over-ukraine-russia-standoff>

11. “Poland Vows Own Shield as US Reins in Europe Missile Defence,” March 20, 2013, at http://www.spacewar.com/reports/Poland_vows_own_shield_as_US_reins_in_Europe_missile_defence_999.html

desire to modernise its anti-aircraft and anti-missile systems by 2022 makes it its “largest armament program” which is estimated to cost US\$ 8.4billion.¹²

POLAND’S SENSITIVITIES TO THE US MISSILE DEFENCE SYSTEM

There is little doubt that Poland would be sensitive to the US missile defence system. In 2008, in exchange for providing a base to the United States to host the 10 interceptors under “enhanced security cooperation”, Poland was reported to have received the Patriot air defence system.¹³ But under the Obama Administration, the Bush plan of fielding 10 Ground-Based Interceptors (GBI) was scrapped. The GBI system was abandoned since the Obama Administration felt that the Aegis system was “sufficient to meet regional threats.”

In 2013, the US plan to field the SM-3 Block 2B which could target Intercontinental Ballistic Missiles (ICBMs) was also scrapped. Instead, there was a plan to field the Block 2A system which could target intermediate range missiles.¹⁴ This perhaps is the reason why Warsaw is developing its own missile defence system “separate from the American system.”¹⁵ However, by March 2013, there were reports that due to funding problems, the United States had to decide to scrap several interceptors planned to be deployed in Romania and Poland.¹⁶ This could have serious repercussions on the feasibility of the system and its reliability against missiles with counter-measures which could be decoys and Manoeuvrable Independently Targetable Reentry Vehicles (MIRVs), to name a few.

12. Jaroslaw Adamowski and Tom Kington, “Building the Shield: European Nations Cooperate With US, NATO Allies on Missile Defense,” *Defense One*, November 26, 2013, at <http://www.defensenews.com/article/20131126/DEFREG01/311250029/Building-Shield>

13. Shanker and Kulish, n.6.

14. “Kerry: 2018 Missile Interceptors Fielding in Poland ‘On Target,’” *NTI*, November 5, 2013, at <http://www.nti.org/gsn/article/kerry-says-planned-2018-fielding-missiles-poland-target/>

15. Marcus Weisgerber, “US Ready To Assist Poland With Indigenous Missile Defense System,” *Defense News*, February 1, 2014, at <http://www.defensenews.com/article/20140201/DEFREG01/302010028/US-Ready-Assist-Poland-Indigenous-Missile-Defense-System>

16. “US Drops Key European Missile Defense Component,” *RT*, March 16, 2013, at <http://rt.com/news/us-cancels-missile-interceptors-350/>

Moreover, under the Bush Administration, not only was Poland not willing to accept Iran as a threat, it was also not willing to spoil its relations with the Russians. Warsaw felt that the American missile defence system would adversely affect its relations with Russia and other European countries like Belarus, also a Russian ally. This, it was felt, would result in diminishing the security of Poland rather than increasing it. Hence, the system would have proven to be politically too costly. Moreover, the system appeared to be too expensive, with low reliability.¹⁷

In addition to this, concerns were also raised regarding the command and control of the missile defence system. Even though the missile interceptor site was to be under Polish command, the United States would have enjoyed the exclusive command and control of the interceptors which also included the right to use the interceptors.¹⁸

There was also a threat from possible debris from incoming intercepted missiles. In fact, the possibility of debris on their territory rather than a missile attack has been a major concern for the European countries.

Concerns were also raised that Poland could become a target of attack by states like Russia and Iran. Another problem of the land-based missile defence system was that it would have to depend on the sea-based Aegis system to be 100 percent effective. This meant that in spite of possessing a missile defence system, Warsaw might not be able to successfully counter missile threats and also probably would have to depend on the goodwill of states like Spain where the sea-based missile defence systems are being deployed.

THE POLITICS OF MISSILE DEFENCE

The plan of fielding missile defence in Poland proves the fact that the United States no longer views the East European countries as a threat which was the case during the Cold War. It also proves that for the time being, for the United States, which faces missile threats from Iran and North Korea, there is no threat more pertinent than the one

17. Jyri Saanio, "Increasing Security, But Avoiding a Security Dilemma," National Defense University, series 2, no.43, 2010, at http://www.puolustusvoimat.fi/wcm/ee190d004470f83ca0dda40619e9d60c/StratL2_43w.pdf?MOD=AJPERES

18. Ibid.

it faces from these Asian states.

On the other hand, when in 2008, the Bush Administration planned to field GBIs there, Poland's main aim in having the US interceptors in its territory was to have an "American presence on Polish soil in the belief that it will increase the country's security, particularly given fears that Russian could one day try to dominate the region again."¹⁹

In fact, in May 2013, there were reports of the United States cancelling the last phase of the missile defence system also. The cancellation of the fourth phase, according to reports, makes the missile defence system ineffective against the Russian ICBMs and capable only against the Iranian missile systems.²⁰ One of the major reasons for doing so was Obama's keenness to not annoy the Russians and also progress with further nuclear reduction measures with Moscow which would not be possible unless the Russian concerns over the missile defence system in Europe were sorted out. Under the Obama plans, medium range interceptors would be fielded in Redzikowo in northern Poland, to protect Europe from the Iranian missile threats.²¹ Hence, while the missile defence system has been planned in Europe, the threat perceptions of the host country and the country fielding the defence system are different. This divergence in threat perceptions can seriously undermine the missile defence programme in the near future, if not addressed successfully.

This divergence was reflected by Otfried Nassauer, head of the Information Centre for Transatlantic Security, when he stated, "Traditionally, Polish security objectives are strongly oriented towards the US" and Poland has always tried to "underline" its "special relationship" with the US. On the other hand, according to Nassauer, Poland has always had a "defensive attitude" towards Moscow.²²

There is also little doubt that with the worsening of the Crimean crisis worsened, the United States is exploiting the vulnerability of

19. "US Reassures Poland Over Missile Defense Change," CBS News, March 18, 2013, at <http://www.cbsnews.com/news/us-reassures-poland-over-missile-defense-changes/>

20. Jaganath Sankaran, "Missile Defense Against Iran Without Threatening Russia," *Arms Control Association*, November 2013.

21. n.19.

22. Nassauer is quoted in "Poland's Fear of 'the Russian-Bear,'" *Deutsche Welle*, March 4, 2014, at <http://www.dw.de/polands-fear-of-the-russian-bear/a-17472541>

ex-Soviet territories like Poland, Latvia, Lithuania and Estonia by assuring them that it would protect them in case the Kremlin tried to annex them. Missile defences in Poland, Romania, Spain enable Washington to gain firm ground in Europe.

OPTIONS FOR POLAND?

Even though the Ukrainian crisis has made Poland apprehensive of Russia's intentions, it would be wrong to assume that this crisis was the sole reason for Poland to modernise its missile defence systems. Prior to the crisis, Warsaw had already planned to spend \$45 billion "to build new missile defence systems and upgrade its weapon systems."²³

Amongst the bidders for tenders were "France's Thales, in a consortium with the European group MBDA and the Polish state defence group; the Israeli government; Raytheon of the United States; and the MEADS consortium led by Lockheed Martin."²⁴ In March 2014, the United States decided to offer Poland the medium extended air defence system. This system is expected to offer a 360 degree search radar for the anti-missile system.²⁵ Its sensors, missiles and command centres can be carried on the C-130 or A400 airlifters. The Patriot, on the other hand, covers 90-120 degrees of the horizon and is heavier than the MEADS system, and also would require much airlift.²⁶ In fact, according to reports, even with the PAC-3 MSE system, which is equipped with technological advancements, "future Russian aircraft and weapons will begin to outpace its capabilities."²⁷ The Patriot is also not really an ideal system which

23. Andrius Sytus and Pawel Bernat, "As Ukraine Crisis Deepens, Russia's Neighbors Boost Missile Defenses," *Reuters*, March 7, 2014, at <http://www.reuters.com/article/2014/03/07/us-ukraine-crisis-defence-idUSBREA260NW20140307>

24. Marcin Geottig and Andrea Shalal, "Poland Fast-Tracks Missile Defence Plan Amid Ukraine Crisis," *The Sydney Morning Herald*, March 21, 2014, at <http://www.smh.com.au/world/poland-fasttracks-missile-defence-plan-amid-ukraine-crisis-20140321-hv13r.html>

25. Mark Weiner, "As Tensions Rise with Russia, Poland Considers Syracuse-Made MEADS Anti-Missile Radar," *Syracuse.com*, March 19, 2014, at http://www.syracuse.com/news/index.ssf/2014/03/as_tensions_rise_with_russia_poland_may_buy_lockheeds_syracuse-made_meads_anti-m.html

26. Loren Thompson, "Ukraine Crisis: Poland's Air Defenses Become a Pressing Concern For Washington," *Forbes*, March 17, 2014, at <http://www.forbes.com/sites/lorenthompson/2014/03/17/ukraine-crisis-polands-air-defenses-become-a-pressing-concern-for-washington/>

27. "Alone, If Necessary: The Shield of Poland," *Defense Industrial Daily*, March 23, 2014, at <http://www.defenseindustrydaily.com/if-necessary-alone-the-shield-of-poland-022785/>

can manoeuvre with the attacking US forces.²⁸ Along with 360 degree coverage, MEADS could also construct another plant in Poland where it could upgrade the existing PAC-3 missiles.²⁹ Apart from this, MEADS has also offered to develop long range missile systems which could be fired from the MEADS system against “complex targets like aircraft.”³⁰

Recent reports in May 2014 confirm that Poland may choose the United States over Israel for its missile defence system. But, in future, the United States could offer the David’s Sling for sale to Warsaw.³¹ There is little doubt that this decision of choosing an American company is solely to strengthen ties with the United States amidst the recent Crimean crisis.

The Polish indigenous shield will comprise mobile radars and surface-to-air missiles and will also be able to counter bombers, fighters, drones, tactical ballistic missiles and cruise missiles.³² Poland’s own missile defence system, called the Tarcza Polski, has three-tier systems which include Local Thunder in Tier 1, NAREW Air Defence in Tier 2 and WISLA Air/BMD (Ballistic Missile Defence) in Tier 3.³³ The Grom missile is an old Soviet version of the SA-18 with Polish modification and has been used by Georgia in the Russia-Georgia conflict. Tier 2 includes short range conventional air defence missiles with no anti-ballistic missile capability.³⁴ Tier 3 would be capable of countering short to medium range ballistic missiles. While SAMP/T of Tier 3 could be an option for Poland, MEADS is reported to be able to provide improved mobility and compatibility with other air defence systems.³⁵

28. “Beyond Patriot? The Multinational MEADS Air Defense Program,” *Defense Industrial Daily*, November 7, 2013, at <http://www.defenseindustrydaily.com/34b-development-contract-signed-for-meads-0639/>

29. Andrea Shalal, “Poland Said to be Eyeing Missile Defense Decision in June, July,” Reuters, May 13, 2014, at <http://www.reuters.com/article/2014/05/14/poland-defense-idUSL1N0O005L20140514>

30. Ibid.

31. Spencer Ho, “Israel Likely to Lose out on Polish Missile Defence Contract,” *The Times of Israel*, May 15, 2014, at <http://www.timesofisrael.com/israel-likely-to-lose-out-on-polish-missile-defense-contract/>

32. Thompson, n.26.

33. n.27.

34. Ibid.

35. n.28.

According to Russia's Foreign Minister, Lagrov, the SM-3 interceptors to be fielded by the United States would be "too slow to engage Russian strategic ballistic missiles."³⁶ The SM-3 interceptors are not able to intercept missiles of intercontinental range.³⁷ They can only intercept missiles of intermediate range, a category of missile system Russia does not possess.

RUSSIA'S CONCERNS

In 2008, when the deal between the United States and Poland to field the US missile defence system in Poland was in progress, there was a hue and cry in Moscow. Russia opposed the plan, claiming that the missile defence plan would "worsen"³⁸ relations with Washington. Russia felt that the Iran threat was just a farce and that the missile defence system in Europe was meant to nullify Russia's nuclear deterrent capability. In 2009, Obama planned to cancel the missile defence deployment in Poland and the Czech Republic, inviting criticism from the Republicans and being accused of "caving in to Russia in a naive bid for diplomacy."³⁹ However, in March 2014, when the Patriot missile defence system arrived in Poland, Moscow did not take it positively. Moscow had always felt that the missile defence system near its own borders could "be a security threat and could destroy the strategic balance of forces in Europe."⁴⁰ Some Russians also feel that the US missile defence plans in European states like Poland were primarily to alter the Russian stance on Crimea. Hence, many Russians are viewing missile defence as a tool to put pressure on Russia regarding its annexation attitude.

According to the Stratfor reports, choosing Kaliningrad, bordering Poland, as the region to place Moscow's missile systems, is a strategy by the Russians to "influence public opinions" in Poland regarding

36. Steven Pifer, "Would an Iran Deal Obviate Missile Defense in Europe?," Brookings Blog, December 2, 2013, at <http://www.brookings.edu/blogs/up-front/posts/2013/12/02-iran-deal-obviate-missile-defense-europe-pifer>

37. Kris Osborn, "Ukraine Refocuses Debate on US Missile Defense," Military.com, March 12, 2014, at <http://www.military.com/daily-news/2014/03/12/ukraine-refocuses-debate-on-us-missile-defense.html>

38. Shanker and Kulish, n.6.

39. Ken Dilanian, "Obama Scraps Bush Missile-Defense Plan," ABC News, at <http://abcnews.go.com/Politics/obama-scraps-bush-missile-defense-plan/story?id=8604357>

40. US, Poland Work on SM-3 Interceptors Deployment- Pentagon," *Ria Novosti*, July 26, 2012, at http://en.ria.ru/military_news/20120726/174782217.html

NATO's missile defence shield."⁴¹ Moscow has explained its stance on deploying tactical nuclear weapons in Kaliningrad as a "right" to do so and also as a "logical response" to the missile defence system in Europe. Long back, in 2008, when Poland agreed to host the Bush era ground-based interceptors in its territory, Moscow even threatened Warsaw of a nuclear attack.⁴²

CONCLUSION

When Poland accepted to host the Bush era missile defence system, it was subjected to sharp criticism from several European countries. It withstood all the criticism and also dealt with Russia's warnings of being attacked by nuclear weapons only to be left dejected later when Obama cancelled the SM-III missile defence programme. Hence, Poland was aware that deployment of this system would to a large extent depend on the political ambience in the United States. Many Poles were of the view that the American Phase Adaptive Approach system would only serve American interests since it was meant solely to counter threats from Iran. On the other hand, Poland hardly faced any threats from Iran. At the same time, according to the Polish defence minister, "Poland and Europe need the United States to be strong and present, leading an alliance which is based on collective reliability of its members and the development of real military capabilities."⁴³

The United States, on the other hand, is in no mood to annoy the Russians over the missile defence system. There are several reasons for that. Washington wants Moscow not to withdraw from nuclear arms reduction treaties like the Strategic Arms Reduction Treaty (START) and Intermediate Nuclear Forces (INF) Treaty. Moreover, Washington also realises that effective defence in

41. "Russia Moves Nuclear-Capable Missiles Closer to EU," *Space Daily*, December 18, 2013, at http://www.spacedaily.com/reports/Russia_moves_nuclear-capable_missiles_closer_to_EU_999.html

42. Harry de Quetteville and Andrew Pierce quoted President Medvedev in "Russia Threatens Nuclear Attack on Poland over US Missile Shield Deal," *The Telegraph*, August 15, 2008, at <http://www.telegraph.co.uk/news/worldnews/europe/russia/2566005/Russia-threatens-nuclear-attack-on-Poland-over-US-missile-shield-deal.html>

43. "US Drops Key European Missile Defense Component," *RT*, March 16, 2013, at <http://rt.com/news/us-cancels-missile-interceptors-350/>

Europe is possible only if Moscow also becomes a party to the programme. Hence, missile defence cooperation with Moscow was high in the priority list of the United States. Moreover, in order to prevent Europe from becoming a nuclear flashpoint, the United States could consider having Russia become a part of the missile defence system.⁴⁴

For the time being, Poland views the missile defence system of the United States as a credible defence system against the Russian threat, but the United States has different plans. Hence, unless the threat perceptions of both states are addressed individually, it could be difficult for both Poland and the United States to jointly host a missile defence system in Poland, especially with the command and control of the system in the hands of the US. Amidst the development of the US missile defence system, Poland must work towards developing its own robust missile defence system in order to be able to address its individual threat perceptions on its own.

44. Debalina Ghoshal, "In Westernmost Russia, a Tactical Nuclear Base Emerges as a Threat to NATO Countries," *Global Post*, May 6, 2014, at <http://www.globalpost.com/dispatches/globalpost-blogs/commentary/westernmost-russia-tactical-nuclear-base-emerges-threat-nato->

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