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Countering the Hegemon: Pakistan's Strategic Response

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Abstract

The dynamics of South Asian security are in a transition phase. On the one hand is India with her economic, military and strategic rise, and its propping up as a strategic bulwark to China and on the other Pakistan faced with multiple internal, external, economic, military, and strategic constraints. It is argued that the constraining environment makes it critical for Pakistan's national security to take drastic doctrinal and strategic initiatives to prevent the emerging hegemon's coercive tactics. This requires a well-calculated doctrinal, command and control, and architectural restructuring as a response strategy that vertically strengthens its nuclear deterrent posture. Additionally, Pakistan has to evolve a mechanism for pre-delegation of authority to its regional commands — central, northern and southern — well interfaced with the National Command Authority (NCA) along with resilient delivery systems to robustly reinforce its nuclear deterrent capabilities. Vertical strategic strengthening would go a long way in not only deterring the rising hegemon's military muscle with an adequate array of strategic, non-strategic battlefield nuclear weapons with multiple delivery systems but, at the same time, by being well-integrated with NCA's organizational configurations, make its doctrine effective.

Keywords: India, Pakistan, Delivery System, Nuclear Deterrence, Hegemon.

Introduction

There is a growing conventional military and economic asymmetry between India and Pakistan. This has qualitatively and quantitatively enhanced India's international clout thereby leading to its emergence as a regional hegemon. This has triggered multiple consequences for Pakistan. In spite of its declared nuclear weapon state (NWS) status, its fragile internal situation is marred by terrorism, governance, economic, narrow sectarian and political polarization issues that consequently increase

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its external woes due to India's predominant position as an economic and strategic powerhouse of South Asia and Indian Ocean. For any state to construct its economic, political, governance, social and psychological foundations on a vibrant model is an essential prerequisite to enhance its internal and external security structures in a growing competitive and interdependent globalized world.[1] Richard Haass writes that, in the 21st century world politics would be defined by a number of states with potentials in economic and military, diplomatic and cultural realms to influence the emerging contours of the "Brave New World."[2] He places India in the category of a major power — as a peer of United States (US), Russia, and China. Pakistan is in the group of regional powers like Chile, Argentina, Mexico, and South Africa.[3] Furthermore, there are two other significant factors increasing the "non-polarity" — technology and globalization — that are diluting governments' control over countries' interdependence, information, modern weapons and technologies in favour of state and non-state actors.[4] The new regionalization and globalization have created multiple regional actors that have overtaken some of the functions previously performed and controlled by states.[5]

Such changes in the dynamics of world politics have created a multi-dimensional "security dilemma" for Pakistan.[6] Pakistan's strategic dilemma that whether it should be complacent with the hegemon's growing economic and strategic-military profile, which has a track record of bullying its smaller neighbours, or to devise a *counter-strategy* to sustain its sovereign independence without diktat, compellence, and coercion from India. In international politics, whether it is a "*global hegemon*" or a "*regional hegemon*" — it endeavours to establish its supremacy over a particular geographical area.[7] The yardstick that determines the power potential of a state includes its material capabilities like socio-economic condition, technology, population, skilled manpower; and military strength to balance the adversary's power.[8] It is argued that Pakistan being a declared Nuclear Weapon State (NWS) needs to calibrate an appropriate *response strategy* against its arch rival India. In this context, its strategic

[1] See Richard N. Haass, *Foreign Policy begins at Home: The Case for Putting America's House in Order* (New York: Basic Books, 2013), 121-122.
[2] Ibid., 15-20.
[3] Ibid., 15.
[4] Ibid., 17.
[5] Ibid.
[6] See Glenn H. Snyder, "The Security Dilemma in Alliance Politics," *World Politics* 36, no. 4 (July, 1984): 461-495.
[7] John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W.Norton & Co., 2001), 40.
[8] Ibid., 55.

nuclear command and control mechanism need to be robustly arrayed on multiple trajectories in order to ensure the vibrancy of its command and control (CC) architecture even in extreme existential threat scenarios, and to create multiple components of delivery systems to reinforce and to ensure the survivability of its deterrent capabilities during crises. In the perspective of international law and strategy, the threat of use of force is essentially "a continuation of politics by other means," that does not necessarily include "actual" employment of force; rather it hangs in-between a "twilight zone between diplomacy and war."[9] Obviously, it requires an effective stratagem to conceal strategy and intentions vis-à-vis the adversary.[10] This requires a diversification of CC on multiple tiers — from central command to well-established regional nuclear command centres to prevent erosion of its deterrent capability, and to ensure assured second-strike potential even if its *central* command is decimated. In this context, a survivable CC and delivery system in parallel with "dispersal and delegation of the authority" in crises would reinforce the country's capability to strike even under threats of decapitation, and pre-emption.[11] For this, the central command can ensure compliance, coordination, and adherence by the regional commands in accord with the country's nuclear policy.[12] Therefore, it would require a highly diversified, but at the same time, compact and resilient CC system at the central and regional command levels to compensate for its geo-economic and geostrategic limitations.

There are numerous lenses to study the doctrinal factors that influence a state's behaviour in the international arena. Generally, states behave in a "conflictual" manner due to their distinct national interests, and identities that influence their foreign and security policy formulation processes.[13]

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[9] See Carl Von Clausewitz, *On War* (Baltimore: Penguin, 1982), 119, 157.

[10] Ibid., book III, chapter 10.

[11] At the core of delegative CC structure lies a highly structured and a fool-proof system of reliability; safety; security; accidental or unauthorized use; code-management systems; personnel monitoring; and Permissive Action Links (PALs-codes); Peter D. Feaver, "Command and Control in Emerging Nuclear Nations," *International Security* 17, no. 3 (Winter 1992-1993):163, 164, 166, 167.

[12] For instance, since 1945 the US CC system fluctuated back and forth between assertive and delegative axis. In fact, US was arrayed to "near-instantaneous" use policy with a view to respond to any Soviet surprise attack. While the present-day new and mature nuclear weapon states would be predisposed toward delegative command structure; Ibid., 169, 170, 173, 179. For more detail on prospective nuclear strategy, see Colin S. Gray, "Nuclear Strategy: the Case for a Theory of Victory," *International Security* 4, no. 1 (Summer 1979):54-87.

[13] Alexander Wendt, "Constructing International Politics," in *Theories of War and Peace*, ed. Michael E. Brown, Owen R. Cote, Jr., Sean M. Lynn-Jones, and Steven E. Miller (Cambridge: The MIT Press, 1998), 426.

According to constructivists, a country's national interests are of primary significance in shaping its strategic objectives.[14] In this context, Pakistan like any other rational-actor can use different lenses to come up with a vibrant CC to meet the emerging threats to its security.[15] In essence, there are three lenses to evaluate the doctrine and CC system,[16] and to premise it on a flexible, crises-centric response strategy vis-à-vis India. According to the *Organization Theory* the system of standardized operating procedures and decision-making processes is evolved in the light of parochial organisational interests. Similarly, the military hierarchy also tends to protect its narrow institutional interests as well as the national and organizational interests in order to increase its leverage, prestige, and power base.[17] Similarly, the *realist approach to doctrinal formulation process* hypothesizes that a state's relative power in the self-help international system is the critical and determining factor that motivates it to a *balancing* behaviour. The "self-help logic," writes Kenneth N. Waltz, has two dimensions: internal and external balancing endeavours.[18] For this objective, different states adopt distinct measures to enhance the foundation of their military doctrines, including defensive and offensive strategies to cater for the emerging threats to their security.[19] Therefore, the states in the self-help culture of international politics are constrained to formulate compatible military doctrines[20] and relevant CC system to hold their

[14] Ibid., 417-419.

[15] For rational actor model see, Bruce Bueno de Mesquita, 'Foreign Policy Analysis and Rational Choice Models,' www.isacompss.com/info/samples/foreignpolicyanalysisandrationalchoicemodels_sample.pdf (accessed February 1, 2014); D. Wittman, 'How a War Ends: A Rational Model Approach,' *Journal of Conflict Resolution* 23, no.4, (1979): 743–63; Frank C. Zagare, 'Rationality and Deterrence,' *World Politics* 42, no. 2 (1990): 238–60; S. J. Brams, *Game Theory and Politics* (New York: Free Press, 1975); B. Russett, 'Pearl Harbor: Deterrence Theory and Decision Theory,' *Journal of Peace Research* 2, (1967): 89–105; and H. A. Drake, *Constantine and the Bishops: The Politics of Intolerance* (Baltimore: Johns Hopkins University Press, 2002).

[16] Scott D. Sagan, "The Origins of Military Doctrine and Command and Control Systems," in *Planning the Unthinkable: How New Power will use Nuclear, Biological, and Chemical Weapons*, ed. Peter R. Lavoy, Scott D. Sagan and James J. Wirtz (Ithaca: Cornell University Press, 2000), 17

[17] Ibid., 18-23.

[18] Kenneth N. Waltz, *Theory of International Politics* (New York: Random House, 1979).

[19] Barry R. Posen, *The Sources of Military Doctrine* (Ithaca: Cornell University Press, 1984), 59-79.

[20] As per Marshal V. D. Sokolovsky, "Military doctrine is not thought up and codified by an individual or single group of people; it is formed on the basis of the entire life-experience of a state and is the result of an extremely complex and

stronger adversaries at bay. In this context, the constructivist school of thought (Copenhagen Peace Research Institute, Denmark) argues that security is a social construction, which is formulated because of influence of prevalent conditions; securitizing strategies by states to face threats; existence of regional security complexes in a geographical area; desecuritization in order to remove the issues and actors from the radar of day-to-day politics; and other important security sectors like economic, political, environmental, and military as referent points.[21]

The existence of a secure retaliatory capability and a survivable CC is the foremost and imperative perquisite for ensuring the reliability and effectiveness of deterrence posturing, and the prevention of the coercive tactics of the stronger adversary.[22] The other lens that exerts tremendous influence upon CC is the strategic culture theory, which remains under the influence of *domestic politics* and the culture of *military* doctrine.[23] The domestic strategic culture is evolved eventually, and in the light of the state's historical experiences with its adversary.[24] Pakistan's strategic culture and experience is heavily influenced by divergent trajectories that both India and Pakistan had adapted right after their inception in 1947. Their divergent insights had propelled them to have opposing doctrines vis-à-vis each other, which were liable to misfire principally because of their divergent beliefs.[25] The India-Pakistan rivalry is characterized by an extreme form of psychological hostility fundamentally governed by their attitudes toward each other.[26] Secondly, this relationship has primarily been responsible for their mistrust and conflicts since 1947[27] which has created various concerns for them and trapped them in a neurological security

protracted historical process of creation and development of state ideas. Therefore, military doctrine is national in character;" Marshal V. D. Sokolovsky, ed. *Military Strategy: Soviet Doctrine and Concepts* (London: Pall Mall Press, 1963), 42.

[21] For constructivism and securitization processes see, Barry Buzan, Ole Waever and Jaap de Wilde, *Security: A New Framework for Analysis* (London: Lynne Rienner Publishers, 1998).

[22] Sagan, "The Origins of Military Doctrine," 25.

[23] Ibid., 30.

[24] Ibid., 42.

[25] Robert Jervis, "Deterrence and Perception," in *Strategy and Nuclear Deterrence: An International Security Reader*, ed., Steven E. Miller (Princeton, New Jersey: Princeton University Press, 1984), 59.

[26] John Vasquez, *The War Puzzle* (Cambridge: Cambridge University Press, 1993), 75-76.

[27] According to Thomson's study, world's three-fourths of wars take place due to mutual rivalry between the states; see William Thompson, "Identifying Rivals and Rivalries in World Politics," *International Studies Quarterly* 45, no. 4 (December 2001).

dilemma impasse.[28] Such conflicting security dilemmas create various issues that lead to formation of alliances, trigger military build-ups and arms races, escalate tensions/crises, and consequently lead to involvement of major regional or extra-regional powers in the conflict.[29] There strategy plays a pivotal role in determining the contours of state policy that harnesses all elements of national power to achieve its objectives and to maximize its power.[30] Pakistan's primary objective is to dilute, if not to prevent the enemy's will to perpetrate violence.[31] As the French strategist, Andre Beaufre elaborates, strategy is fundamentally "the art of the dialectic of two opposing wills using force to resolve their dispute" under psychological effect.[32] In this realm, since the dawn of the nuclear age, the strategic dialectic has been focused on intertwined parts – nuclear and conventional forces during the Cold War, which has now been further cemented with the Information Age's (IA) Revolution in Military Affairs (RMA). The RMA basically combines all the "innovative operational concepts and organizational adaptation in a way that fundamentally" transforms the very conduct of a war.[33] In the context of Pakistan, formulation of a right and versatile strategy in consonance with national policy would tremendously enhance the potentials of its armed forces to influence the future conduct and direction of a conflict?

The subsequent sections of this paper would outline the different dimensions that are influencing the conflicting doctrines, organizational, cultural, and realist approaches of India and Pakistan to establish their primacy and counter-primacy strategies. India's growing military potential would also be analysed with a view to deducing the factors responsible for its perceived intransigent approach toward the regional security paradigm In such a hostile environment, it is observed that Pakistan's national security imperatives warrant it to take appropriate measures to prevent the hegemon's coercive prospects and strengthen its own CC and nuclear deterrent capabilities. A national security culture is understood to have four distinct aspects — immediate external environment and the dynamics of

[28] John Herz, "Idealist Internationalism and the Security Dilemma," *World Politics* 2, no. 2 (1950): 150-180.

[29] For the study of root-cause of rivalries between the states, see Brandon Valeriano, *Becoming Rivals: The Process of Interstate Rivalry Development* (New York: Routledge, 2013), 11-51.

[30] Lawrence Freedman, *Strategy: A History* (New York: Oxford University Press, 2013), 193-194.

[31] Ibid., 194.

[32] Beatrice Heuser, *The Evolution of Strategy* (Cambridge: Cambridge University Press, 2010), 4-5.

[33] Andrew F. Krepinevich, Jr., "Cavalry to Computer: The Pattern of Military Revolutions," *The National Interest* 37 (Fall 1994): 30.

international politics; the state's national identities and interests; instrumental preferences like statecraft, economic, military or soft power; and interaction preferences, including the state's cooperation structures to meet the security threats.[34]

Growing Militarization

Contemporary India enjoys considerable conventional military advantage over Pakistan. In strategic weapons, both countries are increasing the sophistication and size of their arsenals. In this connection, in June 2012 India's Nuclear Command Authority urged "faster consolidation" of the country's nuclear arsenal and nuclear deterrence posture structured on the principles of an operational triad of nuclear forces.[35] During 2008-2012, India remained the top importer of military hardware, claiming a 19 per cent share in global arms trade while Pakistan was fifth in conventional weapons imports.[36] Yet India claims that China is the biggest strategic threat to its security in spite of its primary doctrinal and military focus on Pakistan.[37] In conventional military strength (see Table 1), India is in league with the US, Russia, China, the United Kingdom, and France with its defence expenditure at $38.5 billion in comparison to US, Russia, UK, France, and China's - $645.7, $59.9, $60.8, $48.1 and $102.4 billion, respectively.[38] During 2011-2012, the annual defence increases in the case of China and India were 19.1 and 5.0 per cent respectively[39] while India's and Pakistan's defence spending at current price and exchange rate rose to 12.2 and 1.8 per cent respectively.[40] In addition, according to *Military Balance* India's projected armed forces expansion is reflected in Table 2.

According to *The Military Balance 2013*, overall South Asian defence spending increased in real terms by 3.74 per cent in 2012 — at US$ 49.6

[34] Peter J. Katzenstein, *The Culture of National Security* (New York: Columbia University Press, 1996); and T. Berger, *Culture of Anti-Militarism: National Security in Germany and Japan* (Baltimore, MD: Johns Hopkins University Press, 2003).

[35] *SIPRI Year Book 2013: Armaments, Disarmament and International Security: Summary*, 13, www.sipriyearbook.org, (accessed August 9, 2014). For Indian military modernization, doctrine and operational readiness, Gurmeet Kanwal, "Indian's Nuclear Forces: Doctrine and Operationalization," *India's Military Modernization: Challenges and Prospects*, ed. Rajesh Basrur, Ajaya Kumar Das, and Manjeet S. Pardesi (New Delhi: Oxford University Press, 2014), 88-113.

[36] Ibid., 10.

[37] *The Military Balance 2013*, 245, http://dx.doi.org/10.1080/04597222.2013.757012 (accessed August 9, 2014).

[38] Ibid., 41.

[39] Ibid., 42.

[40] Ibid., 249.

billion, which accounted for 15.8 per cent of total 2012 Asian defence spending. India's defence expenditure comprised of more than three quarters of the entire South Asia. Alternatively, Pakistan's defence spending in 2012 was enhanced by 4.84 per cent.[41] This indicates that India's visible defence spending accounted for 77.7 per cent of South Asia's total expenditure. In comparison to India, Pakistan's military expenditure accounted for 11.7 per cent of the region.[42] Furthermore, India has formalized a number of joint Research and Development (R&D) projects with the US to produce the latest generation of weapons along with enhancement of their defence trade and partnership in defence technology transfer.[43]

Table-1
Existing Indian Conventional Defence State

Army	Air Force	Navy
Active manpower (100,000 per unit) — 1,325,000	Heavy/Medium Transport Aircraft — 30	Cruisers/Destroyers — 12 Major landing ships — 11
Artillery (1,000 per unit) - 9,682	Tanker and multi-role tanker/transport aircraft — 6	Frigates — 11
Modern main battle tanks (1,000 vehicles per unit) – 609 Total main/modern battle tanks — 3,883	Airborne early—warning and control aircraft — 3	Nuclear powered submarines — 1 Submarines —15
Modern armoured infantry fighting vehicles (1,000 vehicles per unit) - 1,105	Heavy unmanned aerial vehicles – 4	Principal Amphibious Ships — 1
Attack helicopters (250 per unit) — 20	Imagery satellites - 3	Aircraft carriers - 1

[41] Ibid., 250.
[42] Ibid., 251.
[43] N C Bipindra, "India, US to Jointly Develop, Produce Military Hardware," *New Indian Express*, September 29, 2013.

Heavy/medium transport helicopters (500 per unit) - 117	Fourth-generation tactical aircraft (500 per unit)— 322 Combat aircraft — 904	Principal surface warships - 45

Source: *The Military Balance 2013*, 244, http://dx.doi.org/10.1080/04597222.2013.757012 (accessed August 9, 2014); and Andrew T. H. Tan, *The Arms Race in Asia: Trends, Causes and Implications* (Abingdon: Routledge, 2014), 6, 7.

Table-2
Projected Indian Conventional Defence Expansion

Army	Air Force	Navy
Airborne early-warning and control aircraft (100 per unit) - 3	Heavy/medium transport aircraft (100 per unit) - 30	Aircraft carriers – 2
Heavy unmanned aerial vehicles (50 per unit) - 4	Tanker and multi-role tanker/transport aircraft (100 per unit) - 6	Cruisers/destroyers (25 per unit) - 11
		Frigates (25 per unit) - 11
		Nuclear-powered submarines (25 per unit) - 1
		Principal amphibious ships (25 per unit) - 1

Source: The Military Balance 2013, 245, http://dx.doi.org/10.1080/04597222.2013.757012 (accessed August 9, 2014); "India to Build Second Aircraft Carrier," and Andrew T. H. Tan, *The Arms Race in Asia: Trends, Causes and Implications* (Abingdon: Routledge, 2014), 6, 7.

Both countries want to expand the orbit of their joint collaborative framework from R&D to strategic-cum-diplomatic realms as well. For instance, US appears to be supportive of India's bid to join the multilateral export control regimes, including Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, the Nuclear Suppliers Group (NSG) to regulate [the use of] of nuclear-

related technology, the Australia Group (AG) for control of chemical and biological technology, and the Missile Technology Control Regime (MTCR) to manage the rockets, and aerial vehicles that are competent to deliver weapons of mass destruction (WMD).[44] In the context of Foreign Direct Investment (FDI), reportedly the government of Prime Minister Narendra Modi had planned to allow 49 per cent shares in its defence industrial production and R&D sectors.[45] This appears to be in line with India's plan to modernize its armed forces, expand, and to indigenize the production capabilities of its defence industries, and to convert the country into a significant exporter of arms as well.[46] In this connection, in June 2014, the US Under Secretary of Defence for Acquisition, Technology and Logistics, Frank Kendall, offered India defence technologies, including a helicopter and an unmanned aerial vehicle programme, and coproduction and co-development of next generation Javelin missile programme.[47] To further cement this relationship, in August 2014, US Defence Secretary, Chuck Hagel, reportedly during visit to New Delhi — agreed to replace the ten years Indo-US defence framework agreement that is expiring in 2015, to reinvigorate the Defence Technology and Trade Initiative, enhance the bilateral defence cooperation in the field of defence technology, and the strategic partnership.[48] Earlier, US Secretary of State, John Kerry, had visited India in July 2014 to co-chair the India-US Strategic Dialogue before Modi's scheduled visit to Washington on September 29-30, 2014, to expand the aforementioned strategic architecture between the two

[44] Ibid.

[45] Dev Chatterjee, "India Inc against 100% FDI in Defence Sector," *Business Standard*, June 10, 2014.

[46] Azeem Khalid, "India's Opening of Defence Industry to Foreign Investors: Implications for Region," *Weekly Pulse*, July 7, 2014, www.weeklypulse.org/details.aspx?contentID=5071&storylist=10 (accessed August 10, 2014). For Indian armed forces expansion and modernization plan, see Ashok Sawhney, "The Navy in India's Socio-Economic Growth and Development," in *India's Military Modernization: Challenges and Prospects*, ed. Rajesh Basrur, Ajaya Kumar Das, and Manjeet S. Pardesi (New Delhi: Oxford University Press, 2014), 22-47.

[47] "US offers Groundbreaking Defence Technologies to India," *Times of India*, June 14, 2014, www.timesofindia.indiatimes.com/india/US-offers-groundbreaking-defence-technologies-to-India/articleshow/36527493.cms (accessed August 10, 2014).

[48] "India-US Defence, Strategic Ties get Fillip as Hagel Meets Modi," August 8, 2014, www.newkerala.com/news/2014/fullnews-89303.html (accessed August 10, 2014).

countries.[49] The strategic reciprocity of India and the US hinges on the former's imperative to speed up US-India security relationship to balance China's growing military power whereas Washington would like Modi to revoke India's discriminatory nuclear liability legislation, which had undermined the US-India Civil Nuclear Agreement. Essentially, both countries are each other's "central 21st century partners."[50] While during Modi's visit, both countries in a "Vision Statement" did not explicitly announce a formal statement of alliance; it did outline that their strategic partnership is a joint venture for prosperity and peace, including enhancement of joint armed forces exercises, sharing technology to develop Indian defence industry, and strengthening of international peace, security and cooperation to combat terrorist threats.[51]

In addition to the above mentioned developments, India is extensively investing in its military modernization and expansion programme. For modernization, it will be spending around $80 billion by 2015 that includes the "2009 launch of India's first indigenously designed nuclear submarine," and earmarked over $20 billion to purchase 126 multi-role fighter aircraft — ostensibly to achieve "military superpower status" and essentially to establish its hegemony.[52] According to an Indian scholar, Ali Ahmed, in the next decade India is expected to import conventional weaponry worth $250 billion. In addition, India plans to receive up to 49 per cent foreign investment in the defence sector manufacturing.[53] Furthermore, it was in 2009 that India had unveiled its nuclear submarines development programme — INS (Indian Navy Ship) Arihant that is likely to be commissioned in 2015. Additionally, Indian government has planned to introduce 4-6 nuclear-armed submarines into IN by the end of the decade.[54] This would accord Indian Navy (IN) a tremendous boost in ensuring second-strike capability, and consequently enhancing its deterrent capability

[49] Ibid. Also see, Michael J. Fratantuono, David M. Sarcone, and John Colwell, Jr., *The US-India Relationship: Cross-Sector Collaboration to Promote Sustainable Development* (Carlisle: US Army War College Press, September 2014).

[50] Nicholas Burns, Á Second Chance with India," *Washington Post*, September 29, 2014.

[51] "Modi Seeks Closer Ties with US on Counterterrorism," *Nation*, October 1, 2014, www.nation.com.pk/national/01-Oct-2014/modi-seeks-closer-ties-with-us-on-counterterrorism (accessed October 2, 2014).

[52] Iskander Rehman, "The Military Dimensions of India's Rise," *LSE Research Online*, http://eprints.lse.ac.uk/43444/ (accessed August 12, 2014).

[53] Ali Ahmed, "Demystifying India's Volte-Face on Pakistan," *The Diplomat*, September 10, 2014, www.thediplomat.com/2014/09/demystifying-indias-volte-face-on-pakistan/ (accessed September 14, 2014).

[54] Yogesh Joshi and Frank O'Donnell, "India's Submarine Deterrent and Asian Nuclear Proliferation," *Survival* 56, no. 4 (August-September 2014): 158.

- both against China and Pakistan. On the other hand, the Indian Air Force has 665 combat aircraft in its inventory (also see Table-1), and is still vying for the procurement of fourth-fifth generation fighters.[55] Furthermore, reportedly India has earmarked $20 billion for an ambitious weapons acquisition plan.[56] In this context, for instance, in 2012 a Stockholm International Peace Research Institute (SIPRI) study suggested that Indian defence expenditure had increased by 66 per cent in the last decade.[57] This, as a consequence, is expected to transform the South Asian Regional Security Complex (RSC) from *bipolarity* to unipolarity due to India's rise, and Pakistan's weaker position. Another significant development in the RSC framework is China's rise, which has shifted and linked the South Asian centre of gravity with the East Asian RSC.[58] In spite of overt nuclearisation of South Asia, India and Pakistan are still locked in a vicious circle of enmity, and intransigent attitude toward their unresolved issues.[59]

Survivable Command & Control

The survivable CC structure in addition to other critical aspects like resolve, capability, means of delivery, and appropriate strategic doctrine goes a long way in reinforcing any nuclear weapon state's deterrent and defence resilience. Pakistan has to premise its nuclear options based on more flexibility, with the possession of assured destruction capability in order to cater for the eventuality of a deterrence failure.[60] It is significant to consider that deterrence is not a static posture or a concept, nor is it a "sum total of strategy," rather it is the adaptability of doctrines to the emerging challenges and environment that propels the strategy of a state towards a certain direction.[61] Van Cleave and Roger Barnett write that assured destruction should fulfil the four criteria for strategic resilience: sufficient second-strike capability; provide no incentive to the adversary to strike first; minimizing the prospects of damage in the case of a conflict; and the

[55] Rehman, "The Military Dimensions."
[56] Ibid.
[57] Palash Ghosh, "India's Aggressive Military Build-Up: Keeping up with China," *International Business Times*, April 18, 2012, http://www.ibtimes.com/indias-aggressive-military-build-keeping-china-214482 (accessed August 12, 2014).
[58] Barry Buzan, "The South Asian Security Complex in a Decentring World Order: Reconsidering *Regions and Powers* Ten Years On," *International Studies* 48, no. 1(2011): 2.
[59] Ibid., 3.
[60] William R. Van Cleave and Roger W. Barnett, "Strategic Adaptability," *Nuclear Strategy and Security Point of View*, ed. Robert J. Pranger and Roger P. Labrie (Washington, DC: American Enterprise Institute for Policy Research, 1977), 203.
[61] Ibid., 204.

establishment of defence against accidental launches.[62] In inter-state relationship, war, since time immemorial, has defined civilizations that used it to outmanoeuvre adversaries. Its centrality has always been considered of fundamental significance.[63] During peace time, calibrating strategies and plans to improve the defence potential of a state is considered as the most decisive factor in determining the future course of its survivability, or otherwise.[64] As a matter of fact, the policymakers' foresight, resolve and adherence to some basic principles of *realpolitik* are in essence nothing but purely and simply Machiavellian tactics and strategies to ensure the state an honourable existence.[65] Sun Tzu indicates five cardinal principles to lay down the foundations of a prospective victory in war: expertise to deploy both the inferior and superior forces; timing to fight or not to fight; spirit of the rank and file of armed forces; taking on the enemy when it is not in a conducive situation; and its military capability.[66] For Tzu the 'acme' of strategic calibration was embedded in war avoidance, or one can say — deterring the enemy.[67] In fact, the Cold War nuclear power equation between the US and the erstwhile Soviet Union was a "deterrence-dominated system,"[68] which is still considered to be in vogue in the strategic planning of de jure and declared NWS. Practically, the centrality of deterrence theory and strategy rests on two distinct streams — deterrence strategy that revolves around military-nuclear posturing and, a strategy that essentially deals with operationalising different concepts and principles into a practical strategy.[69] Essentially, a state's grand strategy is the apt utilization of national power potentials to achieve national security objectives in any conceivable situation.[70] Without going into any theoretical and strategic debate about the different precepts of nuclear posturing or theorizing, it can be argued that it is an ever evolving learning process to understand the dynamics and the consequences of these terrible weapons. There are various assumptions concerning the nuclear weapons utility or

[62] US Secretary of Defence Melvin R. Laird cited in ibid, 212.
[63] Sun Tzu, *The Art of War*, trans., James Clavell (London: Hodder & Stoughton, 1981), 15.
[64] Ibid.
[65] Sun Tzu states that, "All Warfare is Based on Deception" and knowing the adversary, see ibid, 17, 26, 36.
[66] Ibid., 26.
[67] Ibid. 7.
[68] Patrick M. Morgan, *Deterrence Now* (Cambridge: Cambridge University Press, 2003), 241.
[69] Ibid., 8.
[70] John M. Collins, *Grand Strategy: Principles and Practices* (Annapolis: Naval Institute Press, 1973), 1-7.

non-utility[71] in the contemporary world due to the onset of RMA and the emerging transformation in warfare in today's IA. Whatever may be the basic prescription of deterrence theory — in fact, it is its destructive potential that is persistently desisting NWS from crossing the fine balance of nuclear threshold, or Rubicon. In Pakistan's context, in spite of its relative economic and military weaknesses, it is vital to understand that both the concepts of "general" and "immediate" nuclear deterrence are equally relevant. For instance, in *general* deterrence it is the capability to unleash military strength to counter threats of an attack while *immediate* deterrence teaching emphasises the neutralization of an imminent threat of attack by outlining categorical threats or redlines to prevent the adversary from any misadventure.[72]

In fact, generally the states are still depending upon nuclear weapons for deterrence and coercive objectives.[73] Today, even a military hegemon like the US fundamentally relies on nuclear weapons as a potential instrument of statecraft to protect its vital national interests.[74] There is a renewed interest in nuclear and strategic conventional weapons in spite of the existence of the 'New Triad' comprising "nuclear and advanced conventional weapons; proposals for conventionally armed intercontinental ballistic missiles; and, more generally, the concept of Prompt Global Strike," writes Michael Gerson.[75] There is an increasing debate among the strategic community about the growing relevance of the "advanced conventional capabilities [that] can substitute for some missions previously relegated solely to nuclear weapons."[76] Gerson observes that presently US policymakers are endeavouring to reduce its heavy reliance on nuclear weapons, and has reportedly integrated the concept of strategic deterrence with the emerging military technologies, including advanced conventional weaponry, diplomacy, economic clout, and other elements of International Affairs (IA) to formulate a 21st century-centric deterrence.[77] In addition, the

[71] Ibid., 1-41.
[72] Ibid., 9.
[73] Bradley A. Thayer and Thomas M. Skypek, "Reaffirming the Utility of Nuclear Weapons," *Parameters* 42, no. 4/43, no. 1 (Winter-Spring 2013): 42
[74] Ibid. According to *International New York Times* editorial, President Obama plans to spend $355 billion, while another study put the estimate to $1 trillion over the next decade for the modernization, rebuilding and refurbishment of its nuclear arsenal; see "Backsliding on Nuclear Promises," *International New York Times*, September 24, 2014.
[75] Michael S. Gerson, "Conventional Deterrence in the Second Nuclear Age," *Parameters* (Autumn 2009): 32.
[76] Ibid.
[77] The US Strategic Command's *Strategic Deterrence Joint Operating Concept* cited in ibid.

US, too, retains a comprehensively robust nuclear war plan under the arc of a Single Integrated Operational Plan (SIOP) since the 1960s. The SIOP's apparent operative clauses include elaborate system of "when, how, and by whom enemy target would be struck."[78] The fundamental principle behind activation of SIOP rests on nuclear operations that "must be pre-planned for automatic execution to the maximum extent possible."[79] Furthermore, nowadays the RMA "characterizes the current and on going transformation" of military technology (MT) relating to modern warfare.[80] Elinor Sloan explains that RMA is "a major change in the nature of warfare brought about by advances in military technology." That "combined with dramatic changes in military doctrine and organizational concepts, fundamentally alter the character and conduct of military operations."[81] This plan moreover included a phased activation standard operating procedures (SOPs), including the "alert force" that would be "launched within the first hour, the 'full force' in waves over the course of twenty-eight hours" under CC of the US Strategic Air Command. In addition, the epitome of modern IA revolution is premised on three tiers of MT developments - surveillance, rapid information process, and precision guided weapon systems.[82] In such a dramatically transformed strategic environment, it is important to restructure the CC of Pakistan with the evolving MT revolution and other changes associated with its economic and military power potentials that would assist it in making its deterrent vibrant in the technologically transforming landscape of world politics.

In strategic parlance, it is generally the sustaining of a fine balance of "ends, ways, and means" in conjunction with the state's resources, and approach towards the achievement of national objectives that the realistic foundation of the state's strategy lies.[83] In an environment where there is a conflict and collusion of interests, the role of strategy becomes much more significant in warding off challenges and securing "opposing interests and concerns."[84] Lawrence Freedman has aptly described strategy "as a duel, a clash of two opposing wills," in which the pivotal "political art" is employed to achieve the maximum "out of a situation than the starting

[78] Eric Schlosser, *Command and Control* (London: Allen Lane, 2013), 203.
[79] Ibid.
[80] Gotz Neuneck and Christian Alwardt, "The Revolution in Military Affairs, its Driving Forces, Elements and Complexity," *IFSH-IFAR Working Paper 13* (Mai 2008): 5.
[81] Elinor Sloan, "Canada and the Revolution in Military Affairs: Current Response and Future Opportunities," *Canadian Military Journal* 1, no. 3 (2000): 7.
[82] Morgan, *Deterrence*, 208.
[83] Freedman, *Strategy*, xi.
[84] Ibid.

balance of power would suggest."[85] He observes that essentially "it is the art of creating power."[86] Pakistan does possess sufficient conventional and strategic power; however, it is required to aptly and *artfully and assertively craft* this power into an effective strategy to balance the asymmetrical military balance equation of South Asia. Therefore, in spite of massive armament imports and expansion by India, Pakistan's counter-strategy is expected to create a security dilemma for India *constraining its* capability to contain the conflict as reportedly conceived in its 'Cold Start Doctrine' (CSD) at the lower spectrum with its conventional forces advantage. It is important to understand that the adversary, what with his advantageous power, has an "Achilles' heel", which is susceptible to exploitation and is to be taken advantage of.[87]

Nowadays, essentially both the strategic and non-strategic battlefield nuclear weapons (commonly called tactical nuclear weapons — TNWs) still accord tremendous leeway to the NWS to extend their nuclear deterrence credibly and effectively,[88] and to protect their vital national interests. Originally, the TNWs were inducted into the nuclear strategy of North Atlantic Treaty Organization (NATO) for the development of a graduated nuclear war response doctrine, and to make nuclear war amply costly, moreover, to reinforce deterrence and defence, and to deny advantage to the rival.[89] Although there is still a persisting lack of clarity regarding the utility of TNWs, however, apparently the NATO's strategic community is in favour of retention of the capability to "conduct sub-strategic nuclear strikes" [90] in spite of the Soviet Union's disintegration in 1991. In the

[85] Ibid., xi, xii.
[86] Ibid., xii.
[87] Jenny Strauss Clay, *The Wrath of Athena: Gods and Men in the Odyssey* (New York: Rowman & Littlefield, 1983), 96.
[88] Thayer and Skypek, "Reaffirming the Utility," 42.
[89] Richard Weitz, "The Historical Context," in *Tactical Nuclear Weapons and NATO*, ed. Tom Nichols, Douglas Stuart and Jeffrey D. McCausland (Carlisle: US Army War College, 2012), 4.
[90] Tom Nichols, Douglas Stuart and Jeffrey D. McCausland, "Summing up and Issues for the Future," in *Tactical Nuclear Weapons and NATO*, ed. Tom Nichols, Douglas Stuart and Jeffrey D. McCausland (Carlisle: US Army War College, 2012), 509, 510. In fact, there is no universally accepted definition of TNWs available, but, it is interchangeably used to describe non-strategic, short-range, sub-strategic, shorter-range, theatre and battlefield weapons. For conceptual and definitional clarity, see Harald Muller and Annette Schaper, "Definitions, Types, Missions, Risks and Options for Control: A European Perspective," in *Tactical Nuclear Weapons Options for Control*, ed. William C. Potter, Nikolai Sokov, Harald Muller and Annette Schaper (New York: United Nations Institute for Disarmament Research, 2000), 15-19; and Andrea Gabbitas, "Non-Strategic Nuclear Weapons: Problems of Definition," in *Controlling Non-*

present day's constraining geostrategic environment of South Asia, where conventional and strategic asymmetries between the two nuclear rivals are increasing; a relatively weaker state — Pakistan — has to credibly and effectively reorganize its military doctrine and CC infrastructure with the aim of preventing its adversary from vying to enforce its military primacy to achieve a hegemonic status, and to frustrate it from intruding into its territories under some whimsical strategic military doctrine like Cold Start Doctrine (CSD) of 2004.[91] The relative economic, military and diplomatic clout of India vis-à-vis Pakistan is amply discernable from India's and Pakistan's defence expenditures in 2013 — $36.3 billion and $5.58 billion, respectively.[92] As a whole, Pakistan's future nuclear deterrence's credibility and effectiveness is expected to come under enormous *stress* due to these asymmetrical (conventional and strategic forces) developments along with induction of dual-use technologies in India's strategic-conventional arsenal.[93] In the strategic cooperation context, India has formalized MT along with conventional weapons' procurement/development programmes with various countries, including Russia, US, France, UK and Israel. According to *The Military Balance 2013*, India's "Current procurement programme," includes induction of new aircraft carriers in the next decade with a view to increasing its strategic outreach and power projection capabilities well beyond the environ of regional boundaries.[94] This is in addition to already existing aircraft carrier Viraat, and the indigenous INS Vikrant (see Table-2) that is expected to be commissioned in 2015, and a nuclear powered submarine.[95]

Strategic Nuclear Weapons: Obstacles and Opportunities, ed. Jeffrey A. Larsen and Kurt J. Klingenberger, (CO.: United States Air Force, Institute for National Security Studies, July 2001), 23-39.

[91] Zulfqar Khan and Rizwana Abbasi, "Regional-Centric Deterrence: Reassessing its Efficacy for South Asia," *The Korean Journal of Defence Analysis* 25, no. 4 (December 2013): 494; and Walter C. Ladwig III, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, No. 3 (Winter 2007/08): 158.

[92] *The Military Balance 2014* (London: Routledge, 2014), 241-269.

[93] Zulfqar Khan, "South Asian Security Structure: New Technologies and Nuclear Deterrence," *Strategic Studies* 33, no. 3 & 4 (Autumn & Winter 2013): 97.

[94] *The Military Balance 2014*, 297.

[95] "India Unveils Home-Built Aircraft–Carrier," *USA TODAY*, August 12, 2013, http://www.usatoday.com/story/news/nation/2013/08/12/india-unveils-home-built-aircraft-carrier/2642519/ (accessed November 23, 2013). Also see Sawhney, "The Navy in India's," 22-47.

Survivability & Credibility of Deterrence

The above mentioned expanding military programme of India calls for Pakistan to take some appropriate measures to strengthen its military muscle and to restructure its CC and refine its doctrine. Apparently, India is posturing a strategy of *deliberate escalation* as an instrument of foreign and security policy[96] to enforce its primacy over the region, in particular over Pakistan. In enacting a deliberate act of escalation, deterrence can play a pivotal role. Most significantly, the survivability and credibility of nuclear forces and CC can be best ensured by triangulating manifold strategies wired for all sorts of eventualities, including containment of limited incursion under doctrines like CSD. It is vital for the credibility of deterrence to be efficiently and forcefully communicated to the adversary.[97] Fundamentally, the "effectiveness of a threat depends," writes Thomas Schelling "not only on the severity of the punishment threatened but also its credibility."[98] There are also three cardinal principles that make deterrence effective and credible: sufficient "military force" for bargaining purposes; strategy and potential "power to hurt;" to make the threat convincing to "deter aggressor;" and resolve to "display your intentions" to adopt certain course of action.[99] In the asymmetric strategic equation of South Asia, the prevention of a limited conflict is directly linked to the above mentioned factors, including the fear of its spiralling to a total war.[100] Logically, both countries need to sustain "stability in the strategic balance so that neither side feels compelled or tempted to initiate general" or even a limited war.[101] Besides, technological developments in the realm of MT can be utilized to stabilize rather than to destabilize the regional security environment.[102] That's why, it is reasoned that Pakistan's nuclear command and control architecture — functioning under the NCA interfaced with its regional commands — is required to be equipped with all available strategic and non-strategic battlefield nuclear weapons and conventional assets in order to make its threat of punishment more credible. The delivery systems for the conventional and strategic weapons may include bombers, drones

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[96] Forrest E. Morgan, Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff, "Dangerous Thresholds: Managing Escalation in the 21st Century," *RAND Project Air Force* (Santa Monica: RAND Corporation, 2008), xiii, 22-23.

[97] Morgan, *Deterrence*, 17.

[98] Thomas Schelling cited in, Francis Grimal, *Threats of Force: International Law and Strategy* (Abingdon: Routledge, 2013), 90.

[99] Thomas Schelling cited in ibid., 93-94.

[100] Thomas C. Schelling and Morton H. Halperin, *Strategy and Arms Control* (New York: The Twentieth Century Fund, 1961), 31.

[101] Ibid., 30.

[102] Ibid.

(Uninhabited Aerial Combat Vehicles - UACVs),[103] and re-useable cruise missile systems,[104] to ensure the diffusion of all forms of threats emanating from any adversary. Concerning the future role of UAVs, Andrew Brewer writes that they "will take over many of the cruise missiles' traditional missions, future cruise missiles will be able to complement them." He further elaborates that, "Their responsiveness, survivability and ability to operate from a wide range of different platforms ensure that in many scenarios they will continue to be as relevant in future conflicts as they are today." Their speed, low-flying, stealth capability and survivability would go a long way in degrading the adversary's air defence systems.[105] The drones and re-useable cruise missile systems can land, refuel, and fly with an inbuilt computer programming system for target engagement in a situation of extreme national crisis with the intention of dealing with any threat to the country's survival, and to *sustain* the strategic assets in *air* to ensure a second-strike capability. The cruise missiles possess the capability to strike with precision and effectiveness, and are considered as "the paradigmatic weapon of the RMA" by Lawrence Freedman.[106] Additionally, in *future* warfare, the Unmanned Combat Air Vehicles (UCAVs) are expected to play a critical role not only to deliver conventional air-to-ground guided munitions, but also the "micro-munitions, Directed Energy Weapons and weapons for air-to-air combat" operations.[107] The integration of UCAVs technology needs to be harnessed on priority, not necessarily to catch-up with the rival in quantitative terms, in fact to increase the strategic outreach, targeting, air defence systems penetration, surveillance and reconnaissance capacity, and to ensure strategic stability with its robust

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[103] Accord to Carlo Kopp, "The basic idea underpinning most UCAV development is that of a low cost, stealthy robotic combat aircraft capable of undertaking very high risk, or typically very high attrition, roles in which the used of manned aircraft is regarded to be problematic;" Carlo Kopp, "Uninhabited Combat Aerial Vehicles: Panacea or Pipe Dream?," *Air Power Australia*, March 2003, http://www.ausairpower.net/TE-UCAV-2003.html (accessed August 19, 2014).

[104] For detail regarding the utility of re-useable missiles and platforms, see Thomas Hamilton, "TECHNICAL REPORT: Expendable Missiles vs. Reusable Platform Costs and Historical Data," *RAND Project Air Force*, 2012, http://www.rand.org/content/dam/rand/pubs/technical_reports/2012/RAND_TR1230.pdf (accessed August 19, 2014).

[105] Andrew Brewer, "UAVs or Cruise Missiles?" RUSI Challenges of Autonomous Weapons, *RUSI DEFENCE SYSTEMS* (October 2008), 92.

[106] Lawrence Freedman, "The Revolution in Strategic Affairs," *Adelphi Paper 318* (London: Oxford University Press, 1998), 70.

[107] Michael Franklin, "Unmanned Combat Arial Vehicles: Opportunities for the Guided Weapons Industry," *RUSI Occasional Paper* (September 2008): 1.

nuclear deterrence posture to meet the emerging operational challenges and requirements of 21st warfare.[108]

In South Asia, India is already reportedly working to develop re-useable cruise missiles after successful launch of its Agni-5 Intercontinental Ballistic Missile (ICBMs).[109] Such weapon systems can be used to conduct air-to-ground strike missions.[110] This would further bolster its deterrence posture. The significance of drone's can be gauged from heavy reliance by the US in the ongoing 'war on terror'. The US supposedly has 7,000 aerial drones.[111] This technology can be effectively employed for non-strategic battlefield nuclear weapons delivery, surveillance, monitoring, and for other objectives. The synergizing of reconnaissance, surveillance, and targeting acquisition potentials into a single integrated system with satellites, ground detectors and receivers, manned aircraft, surface ships, unmanned air vehicles, and submarines with common data would make the strike systems more precise and lethal. Such capabilities would enable the policymakers and the regional commanders to efficiently see and analyse all significant developments and movements of the adversary on the battlefield. Furthermore, if India can fence its international border and craft misconceived strategies like CSD, then, Pakistan *too* can consider the option of operationalising nuclear mining in extreme volatile crisis situation as an offensive-defensive measure to thwart India's ostensible plan of pre-emptive limited military strikes.[112] In addition, the IA's military technologies have changed the very grammar of war, and if any country fails to induct them into its system it would either have to adapt to the new environment or face imminent defeat. "The ability to inflict nodal or systemic degradation of an enemy's capacity to resist, command, or communicate will be a feature of future war," writes Robert A. Johnson, which involved the "paralysis of communications, greater emphasis on informational-psychological cyber, or, in the future, even neurological

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108 Ibid., 3, 5.

109 "India all set to develop reusable rockets," April 22, 2012, http://zeenews.india.com/news/nation/india-all-set-to-develop-reusable-rockets_771139.html (accessed August 19, 2014).

110 Hamilton, "TECHNICAL REPORT," 1.

111 See Elisabeth Bumiller and Thom Shanker, "War Evolves with Drones, Some Tiny as Bugs," June 19, 2011, http://www.nytimes.com/2011/06/20/world/20drones.html (accessed August 15, 2014).

112 For more detail on Pakistan's offensive-deterrence posture, see Zulfqar Khan, "Tactical Nuclear Weapons and Pakistan's Option of Offensive-Deterrence," in *Nuclear Pakistan: Strategic Dimensions*, ed. Zulfqar Khan (Karachi: Oxford University Press, 2011).

warfare."[113] Therefore, it is important to use "multiuse platforms, able to operate on land, sea, and air, and electronically," which would require a "highly trained, well-equipped, and versatile Special Forces" to acquire precision, accuracy, great speed in targeting, and versatile military power to conduct operations.[114]

Pre-programmed standard Operating Procedures (SOPs) can be instituted by the NCA interfaced with the regional commands to guarantee assured strike/second-strike capabilities in a crisis or when its national leadership is decapitated, either its communication system is destroyed, disabled or its vital national security *red lines* are crossed by its opponent. Interestingly, India's claimed no-first-use policy; plan of a limited conflict under CSD; use of weapons of mass destruction (WMD) against its armed forces personnel anywhere in the world; clearly negates the very core of its oft cited no-first-use guiding principle.[115] This policy was officially sanctified by India's Cabinet Committee on Security in January 2003. With the foregoing in view, SOPs need to be evolved with "clear and distinct'[116] guidelines for the employment of nuclear and non-strategic battlefield nuclear weapons, and even with a plan to use the prospective nuclear mining in the case of a serious escalation of a crisis — on its own territory *irrespective* of the consequences. Rationally, it is all in line with Pakistan's apparent first-use strategy. As far as the criminality of the use of Technical Nuclear Weapons (TNWs) or nuclear mining is concerned, the onus of such crises would rest with the aggressor. In fact, in the recent past, BLU-82B or the 'Daisy Cutter' bombs — used in Iraq and Afghanistan by the US — possessed destructive power to level a 600-yard radius with 15,000 pounds ordnance.[117] Such weapons in fact blur the distinction between conventional precision-strike and non-nuclear strategic weaponry,[118] and the strategic weapons. Its operationalisation requires an extensive and elaborate system of Command, Control, Communications, Computers, Intelligence, Information, Surveillance, and Reconnaissance (C^4I^2SR) to integrate with

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113 Robert A. Johnson, "Reconsidering Future War: Predicting Future War," *Parameters* 44, no.1 (Spring 2014): 75.

114 Ibid., 74.

115 Gurmeet Kanwal, "Indian's Nuclear Forces: Doctrine and Operationalization," in *India's Military Modernization: Challenges and Prospects*, ed. Rajesh Basrur, Ajaya Kumar Das, and Manjeet S. Pardesi (New Delhi: Oxford University Press, 2014), 90-108.

116 For clarity of command instructions, see Tzu, *The Art*, 9.

117 Carolyn Lauer, "The Daisy Cutter Bomb," http://www3.nd.edu/~techrev/Archive/Spring2002/a8.html (accessed August 13, 2014).

118 For debate on conventional deterrence with offensive strategic conventional weapons, see Gerson, "Conventional Deterrence," 36.

different types of weapon systems with the objective to increase its strategic efficacy.

The Pakistani leadership may take into account the revolutionary technological changes that are impacting individuals' lives and the states' future prospects thereby increasing vulnerabilities in the 21st century. Technological changes in the fields of bioscience, artificial intelligence, computing, satellite communications, and nanotechnology have been called the "Age of Transition" that is expected to "last for at least a half-century," states US National Science Foundation. Its influence and impact is discernible in all domains ranging from educational institutions to national security.[119] In fact, warfare has evolved to its present position over the ages – from the shield of Achilles[120] to the culture of war[121] in which the warriors were simply trained to kill, but, nowadays, its complexity has increased to new heights. Actually, the modern day's technological changes have brought about quantum changes in almost every realm of human and countries' lives — ranging from unmanned to artificial intelligence revolution, which has made the states' security much more complex, and as a consequence created number of "new security dilemmas and problems"[122] clearly originating from the technological revolution. In the contemporary world, the culture of war is being influenced by the culture of modernity itself, which is making the narrow civilizational lenses, associated with the Islamic and Judeo-Christian West, of little use to understand the intricacies of modern age's violence, writes John Dower.[123] But unfortunately, presently the world is being perceived through the narrow lens of civilization, and there is a growing use of terminology like 'Islamic terrorism' which tends to demonize the world's second largest faith and its humane teachings.

The modern warfare requires integration of synergies of technologies and weapon systems. The *synergizing* of technologies in the case of Pakistan can produce "a military force that is smaller in size, more lethal, and more effective."[124] Incidentally, it is not with intent to *lower* Pakistan's nuclear threshold; on the contrary, it is to *strengthen* its deterrent posture to withstand the rival's aggressive and flawed strategies like CSD. Even some

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119 P. W. Singer, *Wired for War: The Robotics Revolution and Conflict in the 21st Century* (New York: Penguin Books, 2009), 428, 429.

120 For an excellent study of warfare, see Philip Bobbitt, *The Shield of Achilles: War, Peace, and the Course of History* (New York: Anchor Books, 2003).

121 John W. Dower, *Cultures of War: Pearl Harbor/Hiroshima/9/11/Iraq* (New York: W. W. Norton & Co., 2010).

122 Singer, *Wired*, 430.

123 Dower, *Cultures of War*, xix-xx.

124 Ibid., 16.

Indian scholars have misunderstood and plainly construed that Pakistan's doctrinal restructuring efforts were "rattled" by India's CSD, and questioned the very essence of Islamabad's nuclear strategy vis-à-vis India.[125] Actually, Pakistan may be some years behind in integrating its space programme with its military, strategic and doctrinal utilization; but, it is assumed that it possesses sufficient capability to employ the unmanned aerial vehicles and bombers to strengthen its delivery system, and to robustly reinforce CC architecture with the aim to increase and reinforce the effectiveness of its nuclear deterrence posture vis-à-vis a predominant regional military power, India.

The induction of the latest technologies into the country's CC and doctrinal infrastructure would assist Pakistan in achieving the milestone of assured strike capability and to hold the tilting conventional military balance under control. This would prevent the rival from initiating a highly destabilizing and offensive strategy like CSD — knowing full well the implications of such plans. To intimidate a declared NWS with a punitive conventional military strike is *highly consequential* and an *ominous* sign that could only trigger further escalation and inadvertent conflict. According to Alexander L. George, an inadvertent war may breakout due to a variety of reasons as well as to secure national objectives, to avoid unacceptable diplomatic outcome, and the diffusion of the rival's ambitious designs leading to more risk taking.[126] Thomas Schelling and Morton H. Halperin write that dangerously flawed doctrines can be unpredictable and lead to brinkmanship, which consequently could initiate "accidental war" that in most cases is "pre-emptive war" caused by "some occurrence...outside the control of the main participants and unintended by them."[127] Therefore, it would be fool-hardy to consider operationalising CSD type destabilizing doctrines when both India's and Pakistan's nuclear forces are ostensibly well *intertwined* with their *strategic military planning and doctrines*. Therefore, the coupling of C^4I^2SR capabilities with military and space assets as well as strategies and tactics to construct new doctrines

[125] Rajaram Nagappa, Arun Vishwanathan and Aditi Malhotra, "HATF-IX/NASR - Pakistan's Tactical Nuclear Weapon: Implications for Indo-Pak Deterrence," *NIAS Report R 17-2013* (July 2013): 25, *International Strategic and Security Studies Programme*, www.isssp.in/wp-content/uploads/2013/07/R17-2013_NASR_Final.pdf (accessed September 20, 2014).

[126] Alexander L. George, "Introduction to Part Two," in *Avoiding War: Problems of Crisis Management*, ed. Alexander L. George (Boulder: Westview Press, 1991), 31.

[127] Schelling and Halperin, *Strategy*, 15-16.

with robotic and drones controlled through joysticks from a distance[128] would be of immense advantage to Pakistan. In fact, the employment and deployment of such technologies, writes P. W. Singer, would raise a host of legal and ethical issues in relation to processes and mechanisms to regulate such weapons, which, of course, create all sorts of complex doctrinal and security dilemmas relating to scenarios of future wars.[129] More importantly, as Murphy's Law suggests — "Anything that can go wrong, will at the worst possible moment"[130] — making mistakes being part of human nature, to act and to react to different technological inputs would be an immense challenge for the civil and military leadership during crises.[131] This would still leave too much at the mercy of *circumstances* and *chance*, which would continue to haunt policymakers and military commanders. However, in fact, such technologies do have great utility in modern warfare and doctrinal planning; but, at the same time, it is a double-edge weapon that can go wrong, especially during crises and conflicts. It is also true that today we are already living in *A Brave New World* in which the joystick commanders of unmanned weapon systems — that refuse to take their "blinders off," concludes Singer.[132] Humans have attained great technological achievements but they still have not demonstrated their ability to overcome or circumvent the culture of war and violence. In fact, the emerging technological revolution in development of various weapon systems is also "wired for war," observes Singer.[133] This indicates that with the unravelling of RMA vintage weapon systems in IA, simultaneously the associated uncertainties and vulnerabilities will also be increasing.

In future, the states' power potentials would be determined on the yardstick of their possession of space capabilities.[134] Of course, at present, Pakistan does not possess a sufficient infrastructure to acquire space capabilities. But, it is a NWS that seemingly has constructed a reliable delivery, communication, surveillance, reconnaissance, and data processing

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128 Singer, *Wired for War*, 430.

129 Ibid., 431.

130 Cited in ibid., 433.

131 P. W. Singer cites one army officer's reaction to such technological developments: "We will only be able to react, and by the time we have responded we will be even further behind the next wave of change and very quickly left in the dust of accelerating change…. Change is coming, it is coming faster than nearly everyone expects, and nothing can be done to stop it;" ibid., 434-435.

132 Ibid., 435.

133 Ibid., 436.

134 Robert L. Pfaltzgraff, Jr., "International Relations Theory and Space Power," *Toward a Theory of Space power*, ed. Charles D. Lutes et al., (Washington, D.C.: National Defence University Press, 2011), 40.

means to meet the emerging challenges to its national security of the fast evolving IA. There were times when the military weapons were fundamentally based on mechanical and chemical energy, but now the 21st century weapons are being designed on electromagnetic energy. It means that the future armed forces would be lethally equipped with modern weaponry with enhanced range to interdict and to engage targets with precision, and to meet other challenges. Furthermore, RMA is not merely confined to C^4I^2SR, precision guided munitions, command and control, and communication gadgets — in fact it can enable the possessors to enhance their power projection and stealth capabilities. This is IA's version of *technological blitzkrieg* that is capable of engaging the adversarial forces from a great distance, even before their physical presence on the adversary's territories. These structural, organizational, doctrinal and technological synergic changes can enable Pakistan to handle the challenges emanating from conventionally superior forces of its arch rival, India.

Emerging Challenges

For contemporary Pakistan, India's close strategic cooperation with the US, and with a number of other countries, like Russia, France, Japan, and Israel, in the realms of R&D projects to manufacture the latest weapons, defence trade, strategic partnership, and defence technology transfer agreements, is the biggest challenge. India's economic rise has given it a platform to rise militarily and diplomatically. In reality, we are living in a globally interdependent world that has led to the emergence of new political actors on the world stage under the architecture of post-Westphalian states, which voluntarily accepts "mutual governance between states…to meet common challenges or threats" of the IA. This has created a state of "interdependencies formed by economic openness, the political imperative of welfare maximization, and democratic political principles," writes James Sperling. This "perforated sovereignty has rendered post-Westphalian states incapable of meeting their national security requirements alone; security has become a structurally conditioned (impure) collective good."[135] In this perspective, lately India's economic, diplomatic, strategic significance and clout has tremendously enhanced its military muscle and relative position in world affairs. For instance, in the last one decade, India and the US formalized a number of comprehensive agreements, including the June 2005 New Framework for the US-India Defence Relationship; July 2005

[135] James Sperling, "National Security Cultures, Technologies of public goods supply and Security Governance," in *National Security Cultures: Patterns of Global Governance*, ed. Emil J. Kirchner and James Sperling (Abingdon: Routledge, 2010), 2-3, 4.

US-India Disaster Relief Initiative; Indo-US Framework for Maritime Security Cooperation; 2006 Indo-US Framework for Maritime Security Cooperation; US-India Counterterrorism Cooperation Initiative (CCI) signed on July 23, 2010; and November 2011 Report to Congress on US-India Security Cooperation that outlined military-to-military relations, joint military exercises, issues relating to operational cooperation, personnel exchanges and armaments cooperation, enhancing US-India security, implementing cooperation on maritime security and counterterrorism matters, expanding defence trade and armaments collaboration, and Joint Strike Fighter and potential co-development of military weapons systems. In addition, they have also established US-India Defence Working Groups with a host of other institutionalized networks - Defence Policy Group (DPG), Defence Joint Working Group (DJWG), Defence Procurement and Production Group (DPPG), Military Cooperation Group (MCG), Joint Technical Group (JTG), Senior Technology Security Group (STSG), Executive Steering Committee Group (ESG), Executive Steering Committee Group (ESG), and Executive Steering Committee Group (ESG).[136]

All these bilateral agreements between India and the US, as such are in addition to many similar agreements with other countries like Israel and Russia, that would eventually accord a tremendous boost to its defence and indigenous R&D, weapons production capabilities, which Pakistan has to take into account while formulating a compatible strategy to thwart India's designs to enforce its supremacy over Pakistan. This exponential increase in India's geopolitical, economic, and its military's asymmetrical potentials vis-à-vis Pakistan intrinsically would make it even more imperative for the latter to invest in the domain of RMA vintage instruments necessary to

[136] S. Amer Latif, "US-India Military Engagement: Steady as they go," *A Report of the CSIS Wadhwani Chair in US-India Policy Studies, CSIS* (December 2012), www.csis.org/event/us-india-military-engagement (accessed on August 16, 2014), 1-64. For detail of US supplies of various typed of weapons, see K. Alan Kronstadt and Sonia Pinto, "India-US Security Relations: Current Engagement," *Congressional Research Service* (November 13, 2012), www.fas.org/sgp/crs/row/R42823.pdf (accessed August 16, 2014). According to another perspective, India-US "strategic partnership" still requires a "kick-starting," of their "Strategic Partnership," which was conceived to "preserve a continental balance of power that would prevent Beijing from dominating Asia to the disadvantage of both Washington and New Delhi." This partnership is expected to be rejuvenated during Indian premier's scheduled visit to US in September, 2014; see Ashley J. Tellis, "Kick-Starting the *Carnegie Endowment for International Peace*, September 22, 2014, 1-7, www.carnegieendowment.org/2014/09/22/kick-starting-us-indian-strategic-partnership/hpoa (accessed September 23, 2014).

reinforce its existing CC systems — especially relating to management of nuclear weapons. The criticality of CC system rests on the effectiveness of its crises management mechanisms, C^4I^2SR to facilitate expeditious decision making by the policymakers, and to minimize, if not to eliminate altogether, the prospects of "consequential errors" and strengthening of the cyberwar defensive infrastructure designed to minimize vulnerabilities of the systems.[137] Besides, RMA is a "major change in the nature of warfare brought about by the innovative application of new technologies which, combined with dramatic changes in military doctrine and operational and organizational concepts, fundamentally alters the character and conduct of military operations."[138] So, in the IA the "virtual war" scenarios are persisting even during the *peace times* as the speed becomes a potent tool of power that sometimes hardly accord sufficient opportunity to the policymakers and the military commanders to deliberate and to make correct assessments and decisions.[139] Additionally, the present-day RMA developments would also increase the prospects of the "fog of peace."[140]

In *realpolitik*, nuclear deterrence or the balancing of economic and military equation "is not automatic" suggests Albert Wohlstetter; therefore, in the self-help world the states are constrained to initiate necessary steps to balance and to upgrade viability of their deterrence.[141] In the prevalent asymmetrical situation of South Asia, Pakistan instead of striving for a "mutual assured deterrence" (MAD) — a 20th century concept — may contemplate to move toward the "Unilateral assured destruction of an adversary's nuclear assets for the purposes of deterrence." The unilateral MAD concept was put forward by William Walker that outlines the "new triad strategy representing the latest move towards attaining the elusive ability to control and dominate the escalatory process of conflict." This in Walker's perspective would require "a redefinition of deterrence that

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137 Bruce D. Larkin, "Nuclear Weapons and the Vision of Command and Control," in *Cyberwar, Netwar and the Revolution in Military Affairs*, ed. Edward Halpin, Philippa Trevorrow, David Webb and Steve Wright (Houndmills, Basingstoke: Palgrave Macmillan, 2006), 130.

138 "The Battlefield of the Future — 21st Century Warfare Issues," Chapter 3, 1, www.cdsar.af.mil/battle.bfoc.html (accessed September 4, 2014).

139 Jari Rantapelkonen, "Virtuous Virtual War," *Cyberwar, Netwar and the Revolution in Military Affairs*, ed. Edward Halpin, Philippa Trevorrow, David Webb and Steve Wright (Houndmills, Basingstoke: Palgrave Macmillan, 2006), 68.

140 Ibid., 67-69.

141 Albert Wohlstetter, "The Delicate Balance of Terror," *Foreign Affairs*, xxxvii, no. 2 (January 1959): 212, 222.

entailed a form of nuclear superiority over prospective adversaries."[142] The *unilateralist deterrence posturing* would enable Pakistan to sustain its minimum credible nuclear deterrence, sovereignty and territorial integrity from the emerging hegemon.[143] Therefore, Pakistan would be better off by calibrating its strategies in harmony with the establishment of forces on three distinct trajectories — strategic forces, theatre nuclear forces, and the conventional forces[144] amalgamated on the principles of offensive-deterrence and punishment approaches, which should be well indoctrinated into its strategic and conventional doctrines.[145] In the presence of India's aggressive military doctrines, the prospects of conflict between the two would continue to exist. Therefore, it is critical for Pakistan to maintain its deterrence's credibility and effectiveness to ward off the chances of a limited war. The strategy of unilateral deterrence and 'deterrence by denial'[146] essentially may form the primary pillars of its military doctrine to vertically enhance its strategy vis-à-vis the arch rival. The *vertical deterrence* posture based upon interfaced pre-delegative authority to the regional commands by NCA to deal with the eventualities of escalation under different scenarios, including CSD by unleashing "deterrence-by-punishment strategy."[147] In this context, one Indian scholar writes that Pakistan is following a "catalytic and asymmetric escalation" strategy against India, while the latter is adhering to "assured retaliation" policy.[148] While in actual fact, India's crafting of an offensive CSD is apparent reflection of its adherence to principles of *pre-emptive* and *deliberate escalation strategy*, as observed in the preceding sections, against Pakistan. Therefore, to operationalise an effective strategy, it is essential to credibly and effectively integrate Pakistan's conventional, counter-value and counter-force potentials in its doctrinal, and CC structural design sequentially to robustly reinforce its offensive-deterrence policy.[149] To achieve this particular objective, Pakistan's possession of numerous

[142] William Walker, "Weapons of Mass Destruction and International Order," *Adelphi Paper 370* (2004): 10.

[143] Khan, "Tactical Nuclear Weapons," 5.

[144] James R. Schlesinger, "The Theatre Nuclear Force Posture in Europe," in *Nuclear Strategy And National Security Points Of View*, ed. Robert J. Pranger and Roger P. Labrie (Washington, DC: American Enterprise Institute for Public Policy Research, 1977), 168.

[145] Khan, "Tactical Nuclear Weapons," 18-19.

[146] Robert Jervis, *The Illogic of American Nuclear Strategy* (Ithaca, New York: Cornell University Press, 1984), 75.

[147] Khan, "Tactical Nuclear Weapons," 19.

[148] Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton: Princeton University Press, 2014), 39-45.

[149] Khan, "Tactical Nuclear Weapons," 33.

delivery systems would be quite critical in parallel with diversification of some authority to the regional commands for assured strike contingency plans, because it would provide them a persistent and forceful vertical deterrent capability to keep its strategic weapons in air through bombers, drones and re-useable cruise missiles — particularly during *looming crises*. Diversification of delegative authority to the regional commands — central, northern, and southern with an effective interface with NCA hierarchy, would efficiently divide the entire CC structure of Pakistan into three regional strategic force commands with an over-arching NCA management to robustly and assuredly react to evolving threats. These commands logically need to be equipped with various means of delivery, including aircraft-bombers, ballistic and cruise missiles, and other unconventional systems like drones and re-useable missiles.

Concluding Remarks

Since the independence of India and Pakistan, both countries have been in a perpetual state of rivalry and conflict with lingering deep mutual mistrust and divergent threat perceptions vis-à-vis each other. Lately, India has emerged as a predominant regional economic and military power with much expanded strategic outreach, with a web of strategic partnership arrangements with some powerful extra-regional powers, and arms procurements and conventional weapons R&D arrangements with number of states, including US, Russia, and Israel. The West, particularly the US, is propping up India as a potential bulwark to China. On the other hand, China is channelling billions of dollars into building Indian infrastructure and manufacturing projects, writes Ellen Barry, to pacify its frontiers with India to counterbalance its tense ties with US, Philippines, Vietnam, and Japan. However, simultaneously Beijing too is viewing New Delhi's budding relations with the US, Vietnam, and Japan with scepticism.[150] All these

[150] For more detail, see Chinese President Xi Jinping's visit to India on September 17-19, 2014; Ellen Barry, "Chinese Present on Visit to India," *Express Tribune*, September 18, 2014; "Modi Voices Concern over China Border Issues," *Express Tribune*, September 19, 2014; and "Both Sides Vow to Resolve Border Issue at Earliest," *Asian Age*, September 20, 2014, wwv.asianage.com/india/both-sides-vow-resolve-border-issue-earliest-532 (accessed September 20, 2014). According to Daniel Twining, Jinping had offered to invest $20 billion with intent to "win India over and ensure that it will not gravitate rapidly to the emerging anti-China coalition" led by the US and Japan. On the other hand, during Modi's visit to Japan in September 2014, Tokyo reportedly had announced special strategic partnership along with investment of $35 billion to India. Twining writes that both China, Japan, and Australia, considers India as a key "swing state" to balance the strategic

developments, especially India's asymmetrical economic, diplomatic, strategic and military pre-eminence has intensified Pakistan's security concerns thereby making it necessary for the latter to calibrate a doctrinal and CC restructuring to ensure effectiveness and resilience of its nuclear deterrence posture against the hegemon — India. It is deduced that Pakistan may opt for a *vertical* deterrence posture well interfaced with effectively controlled pre-delegative authority to its regional commands functioning under the NCA based on the principles of "deterrence-by-punishment strategy." Therefore, it appears logical to establish a parallel robust means of delivery systems and CC structures at the central and regional levels as well to ensure the strike-ability and survivability of Pakistan's sovereignty, strategic assets, and robustness of deterrence posture even in the grimmest of the prevalent asymmetrical strategic equation of South Asia.■

equation in the wake of converging international focus on the geopolitics of Asia-Pacific; see Daniel Twining, "When Obama meets Modi: The Superpower and the Global Swing State," *Foreign Policy*, September 28, 2014, http://shadow.foreignpolicy.com/posts/2014/09/28/when_obama_meets_modi_the_superpower_and_the_global_swing_state (accessed October 2, 2014).