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Thru' the Desk of the Editor

A nation's strategic culture is developed on the basis of not only its traditions but also on the basis of recreational activities and language.

Owing to peculiar geographic features with her vast plains interspersed with forests, ancient India states had to make extensive use of mounted forces which comprised of cavalry, chariots and elephants, in addition to infantry, which was collectively known as 'Chaturangabala'. This name is also shared by an old game of chess and this game is mentioned in Rig veda, Atharva veda and in Buddhist and Jaina books. According to Taylor, Chess is based on a game of war, with the Ashtapada board as a field of battle. The vales of chess pieces were identical with the relative values of different arms as laid down by Kautilya, Sukra and Vishampayana.

Juxtapose this with the 500 B.C Chinese game – WeiQui (Go in Japanese). Time honored traditions of both India and China is to link chess and Go to the formal education of princes and scholars to learn the statecraft. Chess is much easier to learn, with less than 10 raised to 123 moves, where Go has 10 raised to 360 moves or more. In chess one kills the opponent's pieces, where in Go, one has to encircle. In Go, what matters is positioning with give and take across the board. Chess is like a take-over- bid, while Go is like capturing market share.

Chinese military theory and Go, are both manifestations of the same philosophy – sun Jsu's art of war' warfare is almost always the option of last resort. Wit trumps the weapons. The preferred and superior approaches are to convince your enemy, by whatever means, that you are invincible. Any subsequent battlefield encounter thus becomes a mere ratification of results already obtained.”

Chess is more logical – left brain. While Go is perceptive, something that represents patterns. Sanskrit is decoded by left brain, while Mandarin – Character based, tonal language that engages the right brain.

Thus, tactical orientation, like deep penetration raid is a particular art come of chess theory, where there is heavy emphasis on the use of force. Chinese strategy of encirclement involves broad patterns like string of pearls. Philosophy behind chess is to win decisively, in Go, into compete for relative gain. The chess players typically focus on the powerful military units as centre of gravity and decisive point. The Go player must always keep the entire complexity in mind till the end.

It is therefore important that the strategic thinkers need to keep different philosophical undertones of strategic community, while perusing the nations core objectives.

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Changing Contours of Strategy In The Age Of Quantum Computing

Introduction:

Quantum Computing is inspired by the laws of Quantum Physics. The goal of quantum computer is to perform fast processing in less amount of time. It's like you get computing power of lakhs of computer server systems combined in a single chip. Quantum computing represent the data in the form of states. In a typical computing paradigm, the data in each physical state is represented as binary "0" or "1". However, in quantum computing paradigm, each quantum state can maintain both binary "0" and "1" simultaneously, officially called Qubits (quantum bits). The QuBits operate on the two properties that create quantum effect i.e. superposition and entanglement where QuBit is the unit of quantum information. A Quantum computer will need multiple qubits to operate.

The concept and implementation of Qubits opened a new horizon in the field of data processing and AI enabling fastest computing operations till date. Since the inception of achieving "**quantum supremacy**", officially announced by Google, one of the areas that we must focus in is the future threats to all applications dependent on IT, not just restricted to military applications, power distribution, smart cities but all automated infrastructures (critical infrastructure).

Microsoft is another corporate which has been ambitiously conducting the research in quantum computing. Microsoft service, named **Azure Quantum**, integrates quantum programming tools the company released previously with its cloud service. Coders can run quantum code on simulated quantum hardware, or real quantum hardware from conglomerates like Honeywell, and start-ups such as IonQ, or QCI. Though they haven't claimed the quantum computer hardware being ready, Microsoft Azure Quantum aspires to provide various cloud-based services with the quantum computing capabilities and also provides an open-source Quantum Development Kit for the developers.

Though not participating in the race of building a computing hardware, Amazon has announced it will partner with three firms to offer online access to prototype quantum processors. The firm has come up with a new service called **Amazon Braket**, customers will be able to test algorithms and calculations on quantum processors from D-Wave Systems, IonQ and Rigetti Computing, in addition to the classically-powered simulation environment and will allow them to get some hands-on experience with qubits and quantum circuits, through a notebook-style interface. Amazon also recently introduced a Quantum Ledger Database, that would record a log of transactions and be able to automatically scale and execute two to three times more transactions than already existing products.

Advantaged of Quantum Evolution:

As all the previous technological advances in the IT field have contributed in optimizing the functions in a diverse range of fields, quantum computing also will aid in revolutionizing a variety of fields. Being a costly affair, initially it can find its implementation in the following domains.

1. Defense Applications of Quantum Computing:

An extensive amount of research has been happening in the communication mechanism using Quantum Computing capabilities with an aim to create a hack-proof quantum communication link. China has already implemented a proof-of-concept on first long distance, terrestrial quantum-communication link between Beijing and Shanghai using quantum computing capabilities to transmit the information instantly and securely in the year 2017. China is planning to use this type of communication channel for internal communications.

- **Quantum Applications in AI:**

One of the core challenges for AI practitioners is the time required for the AI applications to learn and identify the pattern of big data which can help the AI applications to do predictions, recommendations, etc. Computers with quantum capabilities can perform AI learning tasks with a few seconds which conventional system would take a number of days, opening a wide scope in all AI domain not just limited to medical, banking, finance, healthcare, and automobile.

Threats to critical infrastructure:

Brute-forcing was considered one of the best techniques when it comes to password cracking to performing cryptanalysis. A typical brute-force algorithm tries all possible combinations to figure out the correct combination to crack into the system or software. However, brute-force is one of the slowest methods of hacking since our processors or cluster computing techniques was not capable to speed up the operations. Whereas, now due to quantum processor, brute-force can now be one of the best methods when it comes to cracking critical information. Some of the possible future threats that can be introduced due to quantum computing on critical infrastructures and communication channels are as listed below:

1. Breach of existing Secure Communication Channel:

Compromising secure end-to-end data encryption channels used by military or financial institutions for transferring critical data would be very easy if the hacker has access to quantum processing engines which has the capability to process 10 million bits in a second. The current encryption mechanism was termed secure based on the time required to get compromised. Some of the common algorithms used is RSA and AES algorithms which claim the fact that if the same needs to be compromised using brute-force technique, it will take years to crack using the supercomputers. However, using systems having quantum capabilities, the same can be cracked in some seconds. So, if an intruder is capable to perform “Man in the Middle” attack on a secure channel, he can sniff and collect the data and can decrypt the same at the same time period resulting in data confidentiality breach.

- **Decrypting Encrypted Drives using Quantum Cryptanalysis:**

Many companies archive the data in offshore data premises and its security is maintained using “data-at-rest” encryption algorithms. Compromising encrypted data stored in overseas servers containing critical information would become an easy task if quantum capabilities are used for decrypting the same.

- **Autonomous Unmanned Explosives based on AI Object Detection, Real-time Trajectories Recognition and Object Tracking mechanisms:**

With the evolution of AI and its capabilities to identify real-time trajectories, object detection and recognition, there is a fair possibility of developing Unmanned Bombs which can easily bypass most of the existing security mechanisms like RADAR/SONAR sensors, motion detectors, thermal sensors etc.

Quantum computing could crack the existing cryptographic schemes such as the widely used RSA, Diffie-Hellman and Elliptic Curve Cryptography (ECC). These schemes protect government classified data, businesses' intellectual property, and citizen's privacy as well as all communications across these entities.

There is a degree of urgency in the drive towards creating a cryptography that is resistant to quantum computing. Such schemes are commonly referred to as "quantum-proof cryptography". As the Quantum communication links will be established, they will make the existing Web infrastructure obsolete. Though the transition will take at least a decade. Asymmetric cryptographic algorithms used in key exchange protocols appear to be the most vulnerable to compromise by known quantum algorithms, specifically by Shor's algorithm.

The countries which will be able to achieve the post quantum cryptography, will enjoy an asymmetric advantage in terms of not only securing their critical infrastructure, military communication but also acquiring the capability to breach the security of the adversaries.

Major Power Competition in the age of Quantum Computing:

China has aggressively pursued the research in the field of quantum computing. National strategy of China established in 2016 by President Xi Jinping emphasized on China to become technologically self-reliant. China aims at becoming the global leader in technology and innovation by surpassing USA. The **Worldwide Threat Assessment Report** to the US Senate points out at US's lead in science and technology being eroded by Chinese advances in the field.

According to a market research firm called Pat informatics, China had nearly twice as many patent filings as the United States for quantum technology overall, a category that includes communications and cryptology devices. The United States leads the world in patents relating to the most prized segment of the quantum computers domain, due to the heavy investments by the private firms like IBM, Microsoft and Google. A number of North American companies like Northrup Grumman, HP, Raytheon, QinetiQ, and Magiq Technologies have substantial patent portfolio. On the other hand, the Chinese firms such as Qasky, QuantumCTek, and Shenzhou Quantum are also worth watching in terms of the number of patent portfolios they are building.

Jian-Wei Pan, also known as China's "father of quantum", carried out the launch of Micius satellite, named after an ancient Chinese philosopher, in August 2016. China also aims to complete its QUESS Micius satellite program by 2020, creating a quantum-encrypted connection between Europe and Asia.

Scott Aronson, the David J. Bruton Centennial Professor of Computer Science and the Director of Quantum Computing Centre at University of Texas, has also mentioned about the possibility of China being ahead of the US in terms of Quantum Communication. Although, due to the large investments by the three American firms Google, IBM and Microsoft, USA still maintains a lead in terms of the hardware capabilities. Google's Sycamore is a 53-bit quantum computer whereas the Chinese have been working on a 50-bit Quantum Computing hardware as of now.

As the technology matures, its penetration in the civilian domain applications will increase, hence leading to the data vulnerability and larger risk of invasion of privacy. Though the exposure has already been happening with the incorporation of AI frameworks like Machine Learning and Deep Learning. One of the ways to keep the infrastructure protected is to migrate existing infrastructure to quantum-based infrastructure. Quantum computing being a costly affair and the prototypes being accessible to a selected few actors, its proliferation will take place at a very slow pace and taking into account the strategic implications of sharing the same.

Better late than never, in January 2019, India set out to build quantum computers, that will not only place the country in league with select countries including the US, China, and a number of European Countries like Netherlands among others, but it will also help in improving the state of national security as quantum-level encrypted information becomes a common communication standard.

In the first phase of India's quantum computing program, the country will lay out the basic infrastructure that is needed to promote research in this field. The Department of Science & Technology has set up a programme called Quantum-Enabled Science & Technology (QuEST) with an initial investment of Rs. 80 Cr. Once the first phase is completed, the Indian Space Research Organization (ISRO), Defence Research and Development Organization (DRDO), and Department of Atomic Energy (DAE) are expected to jointly allocate a sum of Rs. 300 crores to push QuEST to Phase 2 to meet the international standards.

"We are late, but not so late that we cannot make a global impact." says Dr. R. Vijayaraghavan, head of the only established experimental group in India which is working on superconducting quantum devices at the Quantum Measurement and Control (QuMaC) Lab in Tata Institute of Fundamental Research (TIFR). The group which started in December 2012, became fully operational in January 2014. They have a number of important publications which include the development of a new type of ultra-low noise broadband amplifier for quantum measurements and a novel three-qubit quantum processor called the "Trimon".

Other than quantum computing hardware, India also needs to develop post quantum cryptography and quantum communication channels, in order to benefit from the same, as building a standalone hardware will not be sufficient to provide the desired results as the necessary dataset cannot be practically gathered in real time to exploit these quantum computing capabilities to the fullest. In the years to come, a coordinated effort to link the quantum communication channels with the quantum and classical computer hardware secured with the post quantum cryptographic algorithm will essentially decide India's future as a quantum computing capable state.

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Novel Corona Virus Disease (COVID-19), Conspiracy theories and India

Novel Corona Virus Disease (COVID 19) is an infectious disease caused by a virus from SARS family, denominated as SARS-CoV-2. A Chinese Ophthalmologist from Wuhan Central hospital in China, Dr. Li Wenliang, was the first whistle-blower who warned his colleagues on December 30th, 2019 of seven confirmed SARS Coronavirus cases of unknown subtype and asked them to inform their friends and families to take due care. Dr. Li and seven other whistle-blowers from Wuhan were admonished by The Police Department for spreading “misleading information” on the internet about COVID-19.

Dr. Li himself contracted the viral infection while attending a SARS-CoV-2 infected shopkeeper from Huanan Seafood market with a heavy viral load. He lost his life while battling COVID-19 on February 7th, 2020.

Since then, the virulent disease spread across the Hubei Province and its provincial capital, Wuhan like wildfire. WHO declared on 30th January 2020 that the virus represents a PHEIC (Public Health Emergency of International Concern) status and upgraded the status to Pandemic on March 12th, 2020. In spite of flight and border restrictions imposed by many nations from China, the spread of COVID-19 could not be contained. In spite of massive restrictions on flights, lockdowns becoming a common feature in most of the countries, COVID-19 is still spreading like wildfires. As on 31st March 2020, almost 425,000 confirmed cases¹ (though it is suspected that China has not been reporting asymptomatic cases making the data skewed), 26000+ deaths all over the world; US, Iran and Italy being other three major countries showing large numbers of infected patients and deaths outside China.

India scenario

Indian response to COVID-19 was quick. Within a fortnight of first reports, Indian authorities started thermal screening of incoming travellers on international airports for COVID-19 symptoms from 18th January 2020 and declared travel advisories (17th February 2020). Three travellers positively diagnosed were quarantined, treated successfully in Kerala and let off after ensuring that they are completely free of the virus. Students and other travellers evacuated from China too were quarantined and let off. This quick response and systematic approach helped India remain relatively free from COVID-19 in early days of spread of the infectious virus. Eventually, the nation would be required to deal with the epidemic, but this precious lead time required to prepare to defend against a new infectious agent would prove to be a boon for India. Though number of positive cases in India are increasing by the day, even after three months of global COVID-19 spread, India has not entered third phase of community transmission. In a massive effort of quarantine, isolation, identification and treatment of COVID-19 travellers and tracing of people coming in contact with asymptomatic travellers, Indian authorities have been successful so far to contain the disease spread to Phase 2. National lockdown has been declared from 21st March 2020 to contain the spread and further delay the entry into phase 3 of community transmission.

India needs to be vigilant during this COVID-19 pandemic for domestic bioterrorism conspiracies to intentionally spreading the disease. In spite of social distancing instructions and lockdowns Nizamuddin Markaz congregation of 1746 including 216 foreigners and 1530 Indians were staying together as well as 824 foreigners spread across the nation for Tabligh Jamaat activities. About 441 show symptoms of COVID-19 and are suspected to be infected as 24 of them were found to be positive for COVID-19. Most of them have been screened and quarantined and their contact tracing is on-going. These incidences raise the risk of such intentional spread of the disease across India.

Origin of SARS-COV2 and Gain of Function Research

With the highly virulent and infectious spread of COVID-19 of a global epidemic nature, it is reasonable to question and look for the origin of the disease and virus. Species jumping of an animal virus to humans resulting in a global epidemic needs to be critically analysed to understand the nature and to prevent future occurrences of such zoonotic incidences. This global spread of COVID-19 has again brought into focus the debate surrounding “Gain of Function” research using highly pathogenic microbes, especially viruses of zoonotic origin. The need and the ethical standards of the Gain of Function research and its boundaries and risks of possible misuse or accidental spreads has been debated extensively.²

Conspiracy theories and suspicious origins

As news became rife with hundreds and thousands of Chinese citizens, healthcare workers getting infected with virulent strains of SARS-CoV2 and death tolls started rising dramatically, the global media was bubbling with conspiracy theories of SARS-CoV2 being used as a Bioweapon. Some claimed it to be an extremely virulent strain developed by China and got either accidentally leaked or intentionally spread to the seafood market in Wuhan. Some claimed that this virulent strain was smuggled from Canada/ US by Chinese scientists. Another theory claimed it be isolated from bats in deep caves of interior China. Another proposed an international conspiracy theory to ‘deal’ with US-China trade war.

Social media was flooded with all sorts of claims and counterclaims making it difficult to look for authentic information to agree or rule out any of these views. A string of coincidences and prominent events/ comments which raised questions were

- Dr. Charles Lieber, Chair of the Department of Chemistry and Chemical Biology at Harvard University and his Chinese students having links with Wuhan Institute of Virology were arrested on 28th January 2020. One of his arrested students Zheng, was arrested at the airport trying to smuggle out vials of “some biological material” and the another student, Ye, is a Lieutenant of the People’s Liberation Army (PLA), the armed forces of the People’s Republic of China and member of the Chinese Communist Party (CCP).³ What’s the link?
- Why was the article by Chinese scientists “The possible origins of 2019-nCoV coronavirus” about the COVID-19 virus originating from Wuhan Institute of Virology retracted?⁴
- BSL-4 (P-4) labs are the labs involving study of the greatest biological threats and are designed to have the highest level of biosafety precautions to contain all infectious agents used by scientists. Wuhan lab is the only BSL-4 lab in China. There is a history of such leakage from Chinese labs⁵. Is it a Chinese Bioweapon under development in Wuhan lab,⁶⁻⁸ gone wrong or an international conspiracy theory⁹ of US attack on China to ‘deal’ with US-China trade war is a subject in itself to investigate.
- Where did the viral strain originate? What’s the hypothesis of Chinese scientists for the spread? A study by Chinese scientists suggested that their phylogenetic study suggest that bats might be original hosts of this virus, and an animal sold in seafood market in Wuhan might be an intermediate host facilitating the emergence of this virus in humans.¹⁰
- If not HIV inserts¹¹ (as suggested by a paper, later retracted¹²) or genetically modified, had evolutionary passages through hosts occurred naturally or were they synthesised in the lab?
- Extensive data analysis shows no proof that the viral strain is manipulated.^{13,14}
- China announced their plans to fast-track their biosecurity legislation, an umbrella law on all aspects of biosecurity related issues.¹⁵

- News of China buying back stakes in large Chinese corporations previously held by American and European investors and their buying spree to take over Italian companies have raised eyebrows giving rise further speculation of COVID-19 being a Chinese conspiracy for global economic supremacy.
- There are voices being raised for reparation from China for negligence in warning the global community of a super-infectious virus first reported in November 2020 in 52 year old patient in Hubei province.

Such conspiracy theories whether baseless or with some valid reasons, bring about a horrendous economic impact on global economy and create an environment of all pervasive fear psychosis. Instead of such speculative accusations, systematic analysis of data for each claim from each perspective needs to be carried out. If it is proven to be a naturally occurring strain crossing over species to humans without any human intervention, it is a nightmare from public health perspective. And still the questions of its sources and sudden crossovers remain unanswered.

On the other side, just a hint of the strain being an underdevelopment or developed bioweapon, completely changes the dimensions. It raises a possibility of another international biological weapons race after the one witnessed during World War II and in Cold War era. However, the technological developments and availability of biotechnological tools nowadays paints doomsday pictures.

BWC and COVID-19

As SARS virus SARS-CoV is classified according to Article X of BWC and COVID-19 virus novel SARS-CoV2 is its variant, does it have implied classified status of SARS virus? It in effect means that any state- or non-state group responsible for intentional or unintentional spread of COVID-19, has committed an international crime of bioterrorism and is liable to be prosecuted under BWC. This situation makes it imperative for international community to NOT dismiss the conspiracy theories without conclusively proven otherwise.

In this mayhem of claims, counterclaims and hurriedly put up scientific data to prove or debunk the other side, Indian experts need to process, dissect and analyse every bit of information an unbiased critical eye. With China at the centre of such a huge international public health controversy, Indian security experts cannot simply rubbish the bioweapon angle. In fact, looking back each and every such suspected case involving an unusual debilitating virus cases like Ebola, SARS, MERS and Nipah in India or abroad need to be critically evaluated from a national preparedness point of view. And, the nation needs an investigative research facility with this sole mandate.

Can any conspiracy theories be dismissed even before proven otherwise? Any scientific hypothesis needs to be proven, either ways. Till then, the world must live with the question marks.

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Indo – Pacific Quad: Beyond Geo-Strategic Construct and Confluence of Two Seas

U.S. President Donald Trump's decision to use the term 'Indo-Pacific' to describe a region that is more commonly known as the 'Asia Pacific', during his extended tour of the region in November 2017 surprised many observers, including those in India. But the conception of the 'Indo-Pacific' has steadily gained traction in recent years amidst China's rise and growing interests in the Indian Ocean and India's expanding footprint in the Pacific Ocean. According to Raja Mohan (2018) the rise of China and emergence of India are reshaping the world's political geography. As a neighbour of China, India feels multiple consequences of China's rapidly growing national power. The essence of change from 'Asia Pacific' to 'Indo-Pacific' is the new emphasis on India's role in shaping the regional order as India has become world's sixth largest economy gaining immense significance in influencing the world around it (Raja Mohan, 2018).

Idea of Indo-Pacific Not New

The idea of Indo-Pacific is not new. At the turn of 20th century, Alfred Thayer Mahan, a famous naval historian, talked of the region stretching from Asia Minor to Korean Peninsula emerging as a decisive theatre in global politics (Mahan, 2000). Mahan in 1890 predicted about the primacy of sea power in India and the Pacific Ocean stating, "whoever controls the Indian Ocean will dominate Asia....In the twenty-first century, the destiny of the world would be decided on its water" (Bhatia and Sakhuja, 2014). Indo-Pacific for a long time has been used as an area defining the bio-geographic region. In 1948, the Food and Agricultural Organisation (FAO) set up the Indo-Pacific Fisheries Council in the Philippines. Noted Geographer, George B. Creasy uses it in a geographical context in his book, "Asia's Land and People" (1963). Creasy suggested that the region is called as 'Indo-Pacific' since it lies between two oceans and culture (Sardesai, 1981). Its use in geopolitical context is not very old. The German strategist Karl Haushofer spoke of the Indo-Pacific space in 1920s (Sempa, 2015). Karl Haushofer, a German Geographer understood the geopolitical potential of the Indo-Pacific in 1930s (Sardesai, 1981). According to Haushofer, "the region contains the two greatest concentrations of mankind ever witnessed in the history of the world....Those countries are beginning to rise and stir" (Haushofer, 1939). He calls Indo-Pacific as 'Asiatic Monsoon Countries', since they have a "uniform climate rhythm" of the monsoon, "extending from the mouth of the Indus to that of the Amur and taking in the littoral of Southeast Asia as well as the divides of the large central highland of Asia" (Bhatia and Sakhuja, 2014). Importance of the region in Second World War was seen in Burma-China-India theatre where England, China and United States joined forces to end Japanese occupation of South East Asia (Raghavan, 2016). Kaplan (2011) regards, "the Indian Ocean comprising of the India, Chinese, Arabs and Persian trading arrangements creating a grand network of cross-ocean communal ties, brought even closer over the centuries by the monsoon wind.... "This Ocean is once again at the heart of the world, just as it was in the antique and medieval times". Malik (2014) writes "Current geo-strategic, economic, energy and demographic trends indicate that the Indian and the Pacific Oceans could well emerge as the strategic center of the twenty-first century, much as the Atlantic and the Pacific oceans played this role in the twentieth century". The Indo-Pacific region could also be viewed as a 'spatial concept'. Bhatia and Sakhuja, (2014) quote former Indian External Affairs Minister, Salman Khurshid, "Oceans neither begin nor end at any particular point, they connect and interact with each other creating numerous possibilities and opening new horizons....in this region, the strengths and complementarities of the Indian Ocean and the Pacific are in full play". As a geopolitical construct, the Indian Ocean has emerged as a focus of great power rivalry owing to its geopolitical dynamics and rise of India and China. Medcalf (2013) views "quintessential Indo-Pacific power in this region will be China and indispensable will be the United States.... And the big powers' interactions with some of the countries literally in the middle—notably Indonesia, Australia and Singapore, but also, for instance, Burma—will influence whether strategic differences can be reasonably controlled".

Initiation of Quadrilateral (Quad) cooperation

Quadrilateral cooperation was initially borne out of the Indian Ocean tsunami of December 2004 which struck South and South East Asia. “Tsunami Core Group” was established by the United States, Japan, Australia, and India to facilitate coordination of relief activities. This group was intended to address the immediate challenges presented by the tsunami and its aftermath, and was never meant to be permanent (Grossman, 2005; Envall, 2015). The naval forces of the United States, India, Australia, and Japan took the lead and an ad hoc coordinating mechanism was born to consult on regional challenges, in dealing with maritime emergencies and security threats. The four countries contributed over 40,000 troops and humanitarian responders, in addition to planes, helicopters and ships who assisted victims of the disaster (Wadhwa, 2018). But the Quadrilateral idea soon evolved into something more (Madan, 2017). Japan was keen to establish values-based connections in order to create an “arc of freedom and prosperity” through the region (Aso, 2017). On sidelines of the Association of Southeast Asian Nations (ASEAN) Regional Forum summit held in the Philippines in August 2007, the four nations met to discuss options for further engagement (Thakur, 2018). The idea was resurrected when Japanese Prime Minister Shinzo Abe, addressing the Indian Parliament on 22nd August 2007, brought about a coupling of the Pacific and Indian Oceans, and called for an “arc of freedom and prosperity.” Prime Minister Shinzo Abe talked about ‘confluence of the two seas’. “We are now at a point at which the ‘*Confluence of the Two Seas*’ is coming into being. The Pacific and the Indian Oceans are now bringing about a dynamic coupling as seas of freedom and of prosperity. A “broader Asia” that broke away geographical boundaries is now beginning to take on distinct form. Our two countries have the ability – and the responsibility – to ensure that it broadens yet further and to nurture and enrich these seas” (Abe, 2007, Hayao, 2014).

The Quad enjoyed a brief revival when the four countries, along with Singapore, held naval exercises in the Bay of Bengal in September 2007, which drew criticisms from China. By 2008, Australia had expressed concerns about the Quad and its impact on Sino-Australian relations and had withdrawn from further dialogue (Smith, 2008; Ching, 2008). India too was worried about the impact the Quad might have on its own foreign policies (Madan, 2017). Enthusiasm for the Quad subsequently dissipated and the idea largely disappeared from national diplomacy (Envall, 2018). The Quad fell into disuse for a while due to political compulsions (Wadhwa, 2018).

Renewed Interest in Quadrilateral Dialogue

Yet the Quad was not dead but merely in hiatus (Envall, 2019). By 2017, a renewed interest in the dialogue had emerged (Thakur, 2018). The four countries restarted their dialogue, meeting once again in the Philippines, on the sidelines of the East Asia Summit. They promised to pursue “continuing discussions and deepening cooperation based on shared values and principles” (DFAT, 2017). The Quad was “back” (Panda, 2017). The reason for the resurrection of this ad- hoc grouping at Manila in September 2017 is the changed geo-politics in the Indo–Pacific (Wadhwa, 2018). Graham (2018) argues that future of the new Quad will be shaped primarily by degree to which there is alignment between four partners’ threat perceptions and national interests. Since the last Quad engagement a decade ago, the Asia policies of the members have shifted notably. The United States undertook its ‘pivot’ to Asia and the re-election of Japanese Prime Minister Shinzo Abe restored the Quad’s champion in Japan, as Abe has pushed to expand Japan’s partnerships in the Indo-Pacific region. Australia’s 2017 foreign policy White Paper emphasized the need for coordinated maritime engagement in the region, and legislation was introduced in December 2017 to curb Chinese influence in domestic politics and education (Sandhu, 2017). The primary reason is China, which has moved aggressively to enter the geopolitical and economic space vacated by the United States in the Indo–Pacific. Meanwhile, China’s position in the region has also shifted considerably as it has pursued island building in the South China Sea, asserted claims in disputed waters and significantly expanded the People’s Liberation Army Navy (PLAN). Additionally, the Maritime Silk Road component of China’s Belt and Road Initiative (BRI) has raised concerns about the intent of this project, and whether it is another avenue through which China can exert its influence in the region (Sandhu, 2017).

Although all partners of the Quad are also cooperating with a rising and powerful China, it is using economic inducements and penalties, influencing operations, and implying military threats to persuade others to agree to its political and economic agenda. Its infrastructure and trade policies reinforce its desire for political dominance. The assertive policy of China in the South China Sea has resulted in the occupation, transformation, militarization, and effective control over a large number of islands in the South China Sea. In the Indian Ocean, China has been aggressively acquiring port assets and potential bases, including in Myanmar, Bangladesh, Sri Lanka, the Maldives, Pakistan, and Djibouti. A “Joint Observation Station” proposed by the Chinese in the Maldives is likely to have military capabilities along with provisions for a submarine base, identical to the one in Jiwani, near Gwadar, in Pakistan. The Mukunudhoo Island in the Maldives where China is building the observatory is part of the northernmost tip of the archipelago nation. It is close to the northern sea lanes of communication—running between India’s Minicoy Island and the northernmost atolls of the Maldives—as well as to India’s south and southwest coast. Chinese aggressiveness is driven by the need to acquire resources of oil, minerals, and other raw materials around the world. The strategic assets are being acquired by China with the enormous trade surpluses. From the Chinese point of view its sea lanes must be protected to ensure the continued flow of raw materials. The Indo–Pacific therefore becomes important as an important supply line. Despite Chinese dominance and use of force vis-a-vis a number of disputed islands in the South China Sea, its competing claims with Vietnam, Malaysia, the Philippines, Brunei and Taiwan on islands and their associated economic zones within the South China Sea will continue, and economics, politics, and nationalism will continue to make this area a potential “hotspot” for conflict. Chinese traditional rivalry with Taiwan, tense relationship with Japan and the economic rise of Southeast Asia has resulted in an enhancement of the strategic significance of this region. In the northeast region of Asia, the North Korean regime is steadily advancing its nuclear, cyber and ballistic missile programmes. A free, open, inclusive, transparent and balanced Indo–Pacific region, where sovereignty and international law are respected and differences are resolved through dialogue, can become a guarantee of enduring security and peace in the region. A revived Quad had its first meeting in the new avatar at the level of middle-level officers in Manila on November 12, 2017, who identified the need to address common challenges of terrorism and proliferation linkages impacting the region. Quad members were supportive of upholding a rules-based order and respect for international law in the Indo–Pacific, ensuring freedom of navigation and overflight, maritime security in the Indo–Pacific, peaceful resolution of disputes and increasing connectivity consistent with international law and standards (Wadhwa, 2018). The United States’ grand strategy still exhibits a strong focus on maintaining its regional hegemony and resisting China’s rise (Nelson, 2017). Japan and India are also seeking to maintain or advance their own regional leadership, check Chinese power, and where possible hedge between the United States and China (Envall and Hall, 2016). For Australia, as the Quad’s lone middle power, building closer relations with the great powers of the Indo-Pacific has long been viewed as an important national interest. Australia sees that traditional alliances might be usefully supplanted by minilateral arrangements to extend shared norms and rules around the region (Tow and Envall, 2015; Tow and Envall, 2011). The Quad reflects the wider proliferation of strategic partnerships across Asia (Envall and Hall, 2016).

Although some Indo-Pacific commentators have viewed the second Manila meeting as the revival of the Quad, it is clear that sustaining the dialogue will be challenging, especially if some participants have doubts about the Quad’s strategic value. The four partners’ common interest in a “rules-based” order is clear. In recent years, Japan has been especially active in making this case, such as by promoting the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (TPP11). In 2012, Japan’s Prime Minister Shinzō Abe envisaged a “democratic security diamond” that would help “safeguard the maritime commons stretching from the Indian ocean region to the western Pacific” (Abe, 2012). In 2016, while meeting with India’s Prime Minister Narendra Modi, Abe argued that a “free and open Indo-Pacific” was “vital to achieving prosperity in the entire region” (JMFA, 2016).

In this regard, India's commitment to maintaining the relationship remains questionable. Unlike the other three parties, India's statement after the 2017 Quad meeting avoided any mention of maritime security or international law – a sign that it was perhaps more cautious of China's reaction than other three. However, over the past decade India has become concerned by China's growing presence in the Indian Ocean and therefore its willingness to participate in the meeting may signal that India is looking for a viable solution to ensure it maintains a leadership position in the Indian Ocean, as well as expands its economic prospects and naval presence into Southeast Asia. Would India's participation in the Quad ultimately help advance its maritime interests in the Indo-Pacific region? Or would the potential strain on its relationship with China, as well as other limiting factors, prevent it from committing to developing the strategic dialogue? (Sandhu, 2018). India's commitment to the Quad is complicated by its relationship with China and attachment to non-alignment (Envall, 2019).

What divided the four powers in 2007–2008—China's rise—is now bringing them closer together. When Xi Jinping assumed power in 2012 in China, he began dismantling the “hide your strength, bide your time” strategy, moving instead toward a “community of common destiny” (Tobin, 2019). China's growing assertiveness has challenged the regional order across a range of issues, including territorial disputes (e.g. in the South China Sea) and economic relationships (as a result of China's Belt and Road Initiative) (*Economist*, 2018).

For Japan, India and Australia there is also the issue of how to keep the US in the region despite Trump's “America First” agenda. The new Quad thus holds out the promise of achieving enmeshment as well as balancing objectives (Envall, 2019).

Quad and ASEAN

It is important that the Quad sticks to ASEAN centrality as the pivot on which the Indo-Pacific is viewed. Already, there is some unease in ASEAN about the “Indo-Pacific” as a concept, and at the recent India-ASEAN Commemorative Summit Meeting in New Delhi, there was no widespread usage of the term by ASEAN states. The Quad, therefore, needs to keep ASEAN on its side. India continues to deal with a large and contested land border with China which has now been complicated by the Chinese building the China-Pakistan Economic Corridor through the disputed area of Kashmir for an outlet into Gwadar port in Pakistan. China today has an interest in Australian assets and infrastructure, and influences its universities and politics. Security concerns about China's intentions have risen in Japan since a territorial dispute over the Senkaku Islands flared up in 2010. The U.S. pivot to Asia and its alliance system is under pressure due to Chinese success in dividing ASEAN by political influence and financial doles for weaker and poorer countries, in return for controlling stake in their economies, politics, and foreign policies. Despite a favourable International Court of Justice ruling in The Hague in its favour on China's aggressive actions in the South China Sea, China has managed to convince President Duterte of Philippines to pursue bilateral negotiations to settle outstanding issues. The physical proximity in Asia and its geographical location has been used by China to convince ASEAN countries that it is the force to deal with in this part of the world rather than the United States. Many countries in ASEAN are increasingly coming under the influence of China due to economic dependence—especially projects under the One Belt One Road Initiative—and countries like Laos and Thailand are building high-speed railways from Kunming in China to Malaysia and Singapore. China is offering an alternative over the U.S. for military hardware and joint training exercises. In this scenario, constructive and mutually beneficial ties between Quad members and ASEAN would benefit the Indo-Pacific as a whole and provide benefits to each nation (Wadhwa, 2018).

The idea of cooperation in the Indo-Pacific, however, cannot just be centered on China. The Quad should have a practical agenda of cooperation. There are differing perceptions among the partners on what the Indo-Pacific encompasses geographically. The National Security Strategy of the United States identifies the Indo-Pacific as stretching from the “West coast of India to the western shores of the United States.” Others may have a different perception (Envall, 2019).

Quad to build confidence and cooperation between partners

Wadhwa (2018) suggests that the Quad needs to build confidence and cooperation within the partners, through:

- Maritime security and collaboration, addressing issues related to maritime challenges in the Indo-Pacific region, anti-piracy operations, joint escorts of international shipping, countering emerging maritime threats, maritime domain awareness, intelligence sharing.
- Improving infrastructure and connectivity in the wider Indo-Pacific region. China's Belt and Road Initiative is a means to have greater say in international economic engagements by funding and building global transport and trade links with Asia and Europe. China has pledged U.S. \$ 124 billion for funding the plan.
- The idea of an alternative infrastructure plan was discussed recently between Australian Prime Minister Malcolm Turnbull and President Trump. Japan has already let it be known that it will promote a "Free and Open Indo-Pacific Strategy," including "high quality infrastructure" with the Asian Development Bank (ADB).
- India, under its "Look East Policy," is funding the Trilateral highway connecting its northeast with Thailand via Myanmar by road. Thailand and Myanmar are also chipping into this project. India has announced plans to align the project with the ASEAN Master Plan on Connectivity and to extend the trilateral to Laos, Cambodia, and Vietnam later. It is building the Kaladan Multi Modal transport system which will link India's northeast with Myanmar and provide connectivity avenues to Bangladesh. The two policies can be aligned to create synergies for supply chains in ASEAN.
- At the Africa Development Bank meeting in May 2017, there has been an attempt to spell out a strategy called the "Asia Africa Growth Corridor," which will link economies, industries and institutions of Africa and Asia in an inclusive fashion.
- Japan has emerged as a major partner in India's efforts for development of the northeast and connectivity to ASEAN. "Japan India Act East Forum" has been set up, which will seek synergies between India's "Act East Policy" and Japan's "Partnership for Quality Infrastructure" located in the ADB and link it with Japan's "Free and Open Indo-Pacific Strategy."
- Strengthening cooperation with ASEAN.
- Security cooperation and dialogues, including joint exercises, defense equipment and technology cooperation in such areas as surveillance and unmanned system technologies.
- Collaboration in cyber security, information and communications technology, countering proliferation of WMDs and terrorism.
- Coast Guard collaboration and mine-sweeping technologies, anti-piracy operations, joint communications, deep-sea mining and pollution control.
- Developing the blue economy, collaborating and working together in maritime security capacity-building for ASEAN and Pacific countries between themselves through groupings like the India Ocean Rim Association, Indian Ocean Naval Symposium, and Western Pacific Naval Symposium to avoid overlaps and duplication of efforts.
- Jointly countering non-traditional threats to security like pandemics, help and rescue at sea, humanitarian and disaster relief. Quad partners are already collaborating in these areas under the rubric of the East Asia Summit.

The advocacy of the Indo-Pacific construct has been accompanied by a call for the creation of a coalition of Asian democracies. In his speech to the Indian Parliament in 2007, Abe argued that the 'broader Asia' formed by the strategic partnership between Japan and India, 'will evolve into an immense network spanning the entirety of the Pacific Ocean, incorporating the United States of America and Australia. Open and transparent, this network will allow people, goods, capital, and knowledge to flow freely.' The Quad seemed to perish after just one round of consultations between senior officials of the four countries in the summer of 2007 amidst protests from China. In 2008, the newly elected Australian government led by Kevin Rudd publicly rejected the concept of the Asian Quad. That was not the end of the Quad though.

After he returned as the prime minister of Japan at the end of 2012, Abe sought to revive the Quad. Amidst China's assertiveness in the East and South China Seas and its power projection into the Indian Ocean, Abe envisaged a strategy 'whereby Australia, India, Japan, and the US state of Hawaii form a diamond to safeguard the maritime commons stretching from the Indian Ocean region to the western Pacific. I am prepared to invest, to the greatest possible extent, Japan's capabilities in this security diamond.' Abe certainly kept his word and stepped up maritime activism in the Indo-Pacific and pressed India, United States and Australia to revive the Quad. Although the Indian leaders across the political spectrum had special warmth for Abe, they seemed reluctant to revive the Quad (Raja Mohan, 2017).

Amidst the deteriorating relationship with China through 2016-17 and persistent calls from US and Japan to resurrect the Quad, India appears to have made a fresh calculation on the pluses and minuses of joining the forum. After India gave the green light, senior officials from the four countries met on the margins of the November 2017 East Asia Summit in the Philippines. There were no dramatic outcomes from the meeting. That the four countries issued separate statements at the end of the meeting underlined that the construction of the Quad is work in progress.

There are also worries in India, Japan and Australia about the political direction of the US under Trump and the concerns about America's isolationist turn. Nevertheless, India's readiness to explore the prospects for the Quad mark an important moment in India's great power relations and the Indo-Pacific construct has now become part of India's strategic discourse. The dramatic expansion of China's reach and weight in the Indo-Pacific puts India in a big bind. India is back in play in the maritime world by accepting the Indo-Pacific idea and opening itself to the Quad.

The government of Narendra Modi, which took charge of India in May 2014, began to adopt the term 'Indo-Pacific', slowly but certainly. Under Modi, India has also endorsed the conception of a 'free and open Indo-Pacific' articulated by Abe. By the end of 2017, the US too was adopting the theme of free and open Indo-Pacific. In his speech during October 2017 the US Secretary of State, Rex Tillerson called for a hundred year partnership in the Indo-Pacific between the United States and an India that was 'rising responsibly'. 'The world's centre of gravity is shifting to the heart of the Indo-Pacific. The US and India – with our shared goals of peace, security, freedom of navigation, and a free and open architecture – must serve as the eastern and western beacons of the Indo-Pacific. As the port and starboard lights between which the region can reach its greatest and best potential' (Tillerson, 2017). The more strategic change is the attempt to construct an anti-China coalition which had been in progress since India's Look East policy of the 1990s but which Modi has intensified. The coalition consists of the United States, Japan, Australia, and Vietnam, who, except for South Korea, are key military powers in East Asia. The culmination of the coalition building process has been India's membership in the resurrected Quadrilateral of democratic powers – the United States, Japan, Australia and India. Vietnam is not part of the Quad, but Vietnam is certainly a part of India's larger effort to build an entente in Asia. It is important to underline that the coalition is not an alliance: no one in the coalition is expected to come to the aid of any other member in case of hostilities with a third party. Its objective is to increase India's bargaining power with China, not to build an alliance. The key elements of the coalition are: raising the level of diplomatic and defence dialogue among members; actual military cooperation in terms of naval exercises and interoperability; the purchase and sale of equipment; and discussions on military co-production and R&D (with the United States, Japan and Australia). With the US, military cooperation has gone furthest: most recently, India finally signed the LEMOA agreement which allows both countries to access each other's bases for refuelling and replenishment on a case by case request. In addition, defence talks with Japan and Australia have deepened. Japan has become a permanent member of the Malabar naval exercises (which involve India and the United States), and Australia and India for first time have a defence agreement (Bajpai, 2018).

Although Indian officials have been sitting down with their American and Japanese counterparts for some years now, the Quad comes amidst the growing Chinese unilateralism in Asia. India did much the same when it sought to hedge against America's unipolar moment by forming a political triad with Russia and China that later became the BRICS to include Brazil and South Africa. If the explicit purpose of the triad was to promote a "multipolar world", the Quad has the big task of preventing the emergence of a "unipolar Asia" dominated by China. All the renewed Quad did was to identify their shared interests on promoting connectivity, countering terrorism, addressing proliferation of nuclear weapons, and encourage respect for international law (Raja Mohan, 2017).

India and Quad

How does India, the "strategic fulcrum" of the Indo-Pacific, perceive the Quadrilateral Security Dialogue, or the Quad, comprising Australia, India, Japan, and the United States? More than Japan and Australia, it is India, China's immediate and largest neighbour, that holds the key to the Quad's prospects. The Quad members are advocating for a "free and open Indo-Pacific". During his September 2017 visit to India, Japanese Prime Minister Shinzo Abe expressed the view that "a powerful Japan and powerful India can protect each other's interests." The US, in its National Security Strategy released in December 2017, vowed that it will support India's role as a "leading global power" in the Indo-Pacific by expanding the India-US strategic and defence partnership. Australia, too, has acknowledged India's importance in the Indo-Pacific strategic calculus. India's role in the Quad is driven by New Delhi's rising ambitions. The intent behind these statements is unequivocal. The US, Japan, and Australia want India to play a central and constructive role in shaping the Quad's role in the Indo-Pacific, which is often seen as one of an "anti-China" bulwark (Panda. 2018). How is India responding?

As America turns inward under Trump, there are concerns about credibility and sustainability of United States alliances in the Indo-Pacific. Most countries including traditional US allies and new partners like India will be compelled to hedge their bets and find ways to develop regional partnerships within the Indo-Pacific. The dominant view in India cautions Indian Prime Minister Narendra Modi on the dangers of being sucked into an unfavourable alliance with the United States. They reflect the entrenched political distrust of America that expresses itself on any issue involving partnership with the United States – whether it was the multilateral nuclear initiative, mini-lateral regional coordination through the Quad or the bilateral defence framework.

If America has become more empathetic since then to India's concerns on terrorism, Kashmir and global nuclear order, a rising China has turned hostile. To make matters worse, tensions on the disputed Sino-Indian border have become more frequent and intense. Russia, which once helped India balance China, is now in a tight embrace with China. Russia and China, which are both eager to cut separate deals with America, can't demand a veto over India's ties to United States (Raja Mohan, 2017). In spite of the support for the Quad, Modi is not about to abandon its independent foreign policy and is confident that the Quad will improve India's overall standing in the region (Raja Mohan, 2015).

India's decision to revive the Quadrilateral security dialogue with Japan, the United States and Australia marks an important departure in its engagement with the great powers. It is a decisive step towards consolidation of the strategic partnerships with the United States and its Asian allies and in enhancing India's bargaining power vis-à-vis China. As he seeks a say in defining the agenda of the Quad, Indian Prime Minister Narendra Modi is heralding India's self-confident pursuit of enlightened self-interest with all the major powers.

One argument in favour of committing to the Quad now is that India's strategy in the Indo-Pacific region has shifted since 2007 and could be advanced through its participation in the multilateral partnership. As an estimated 90% of India's trade volumes – including 90% of its oil imports –

are carried by sea, it has an interest in ensuring security and openness of key maritime trade routes in the region (Jain, 2017). These interests are reflected in new policy iterations, such as the 2014 Act East Policy, by which New Delhi planned to deepen its economic and security ties with states in the region. For example, India allocated USD \$1 billion to promote connectivity between India and the Association of South East Asian Nations (ASEAN) states, and the Indian Navy has conducted multiple bilateral exercises with member-state navies (Sajjanhar, 2016). India has also bolstered its naval ties with Japan, Australia and United States, albeit not all together, in the Indo-Pacific region over the last decade. The IN's Malabar exercises with the US Navy have expanded to include the Japanese Maritime Self-Defense Forces and India has fostered maritime relations with the Royal Australian Navy through bilateral exercises since 2015 (Madan, 2016). This shift towards broader engagement in Asia would be aided by participating in the Quad as all parties have an interest in preventing the contested region from being dominated by a single power (Sandhu, 2018).

Commitment to the Quad could help India balance against China's expanding influence in the Indian Ocean. For example, Beijing's BRI has led to its acquisition of a site for a military facility in Djibouti, as well as major port deals with Bangladesh, Sri Lanka and Pakistan (Singh, 2017). Establishing these strategic installations has given China a strong military and economic presence in the Indian Ocean, threatening India's influence in its maritime neighbourhood. In particular, the China Pakistan Economic Corridor, which will connect Xinjiang in northwest China to the Gwadar port in southwestern Pakistan as part of the BRI, has alarmed India. India has argued that as the corridor runs through Pakistan-occupied Kashmir, it violates Indian sovereignty and gives legitimacy to Islamabad's claim over the contested area. Although China has stated that it supports India's position in the dispute, it has done little to pacify India, which responded by boycotting China's May 2017 BRI summit. China's assertion over disputed territories, maritime and otherwise, has revealed that its adherence to international law is not consistent. For instance, its refusal to abandon a road development project that would cut through India-allied Bhutan without its consent led to a prolonged border dispute between China and India on the Doklam plateau in the summer of 2017. China also completely dismissed a July 2016 decision by the Permanent Court of Arbitration (PCA) that ruled in favour of the Philippines in the matter of disputed territory in the South China Sea (Sandhu, 2018).

Key concerns that pushed India away from the Quad a decade ago have continued to dissuade it from pursuing a tighter relationship today. The ramifications of a strained relationship with China remain a significant calculation when India engages with other states internationally. India's trade relationship with China is substantial – bilateral trade between the two countries totaled approximately USD \$71.5 billion in 2016 (Venkatachalam, 2017). The concept of neutrality, distance and independence in relations persists as a part of India's national identity, and continues to play a role in its foreign policy decisions. Observers have noted that this legacy has made military cooperation difficult. For example, even though Indian Navy exercises with others have increased over the last decade, India's reluctance to share data and use common communication systems has hindered these cooperative drills (Miglani, 2017). India's hesitance to integrate could hurt the Quad's ability to establish an effective strategic maritime relationship, and hurt India's strategic interests. Singh (2017) argues that rhetoric from India that insists on being first among equals in the Indian Ocean prevents India from confronting the reality that its naval capabilities may not be developed to the degree that it can unilaterally balance against China's expansion into the Indian Ocean.

India is not going to simply line up behind the United States and Japan on the Quad. It has no desire to be a 'junior partner' to America that many in India fear. Prime Minister Modi appears quite confident that he can negotiate the terms of engagement on the construction of the Quad. Underlying that proposition are three important factors. The first is the extraordinary self-assurance of Modi, who is ready to explore the limits of India's bargaining power, which previous governments were hesitant to play for high stakes. Second, Modi is aware that China's rise and political assertiveness, the growing regional concerns about China's unilateralism and America's efforts to retain its longstanding primacy have generated a rare

moment of strategic opportunity to elevate India's regional standing. At the same time, India has learnt from its previous experience with the Quad that the temptations for the US, Australia and Japan to cut separate deals with China are real. Therefore, Prime Minister Modi wants to develop the Quad slowly and deliberately and retain a big say for India in its agenda, heralding an India that is comfortable with playing hard-ball geopolitics in Indo-Pacific (Raja Mohan, 2017).

As has been the norm in the recent past, especially regarding India, China will threaten, raise objections and use the leverages at hand to scuttle joint action. A payoff or deference to commercial terms or political diktat must be rebuffed and maritime ties strengthened amongst the partners for mutual benefit. The object must remain the creation of a multi-polar and increasingly connected Indo-Pacific, with processes to assure the mutual security of all stake holders. This process can be consolidated if the Quadrilateral Security Dialogue can be converted into a formal process, with regular meetings to coordinate cooperation in the security, economic, and political fields with an agreed road map (Wadhwa, 2018).

It remains to be seen whether the 2017 renewal of the Quad will outlast its previous iteration and grow to become a more permanent fixture in the Indo-Pacific region. At present it seems Australia, Japan and the United States are ready to, at the very least, hold another meeting. As for India, it is evident that concerns about China, as well as practical challenges with cooperation, will need to be addressed before it can be counted on to support a more substantial Quadrilateral dialogue structure. That being said, shifts in India's posture on its role in the Indo-Pacific region suggest that it is steadily moving towards supporting the Quad initiative. Its growing appreciation for international law in the face of China's maritime expansion has made it evident that India's participation in the four-state strategic relationship could help advance its interests in Southeast Asia, balance China's presence in the Indian Ocean and add credibility to its actions in the region. Ultimately, the Indo-Pacific remains a complex and strategically crucial maritime theatre in which a consistent, cooperative and communicative Quad could provide a viable alternative for regional engagement (Sandhu, 2018).

India does share a common perspective with the other Quad members that the Indo-Pacific must encourage a "rules-based order." But more importantly, India's role in the Quad is driven by New Delhi's rising ambitions. The Quad's "open-minded agenda" is relevant to India's strategic interests and the strategic compatibility that India enjoys with the other members. China is a strong factor in India's perspective on the Quad. But New Delhi's approach is more to advance India's position in the Indo-Pacific than simply to counter China. First, more than anything, India sees the Quad as a way of addressing the rising power asymmetry in Asia. India has long sought a power equilibrium with regards to China. Yet, China has surpassed India on many accounts to improve its "comprehensive national power" in Asia and the world at large. In addition, Beijing under President Xi Jinping's leadership is pursuing a "new era" in foreign policy strategy that is much more US-centric and thus neglects its neighbors in Asia. Furthermore, China's emergence as a "revisionist" power comes as a strategic challenge to India's interests in Asia. In order to address this power disequilibrium, India finds strategic consonance with the Quad members. Second, China's unilateralism in its Belt and Road Initiative (BRI) has constrained India's choice of interests in Asia and elsewhere. China's Maritime Silk Route (MSR) poses a challenge to India's maritime superiority in the region, as it focuses on infrastructure along "alternative" routes in the Indian Ocean. More than anything, India sees the Quad as a way of addressing the rising power asymmetry in Asia. China's increasing assertiveness in the South China Sea, East China Sea, India-China border disputes, and its maritime ambitions in the Indian Ocean have further complicated Asia's geopolitics. This has resulted in greater uncertainty for many countries. These developments have encouraged India to demand that the status quo in the Indian Ocean be upheld in a "free and open" maritime environment. Here, the Quad countries are seen as strategic partners. India looks upon Japan as a financial partner in bolstering its maritime infrastructure, and the United States as a military partner in the region. Likewise, Australia provides strategic comfort to India's growing Indo-Pacific ambitions. Third, India's vision of the maritime Indo-Pacific is based on an "inclusive" and "consultative" approach that establishes a strategic consonance with other democratic countries such as Australia, Japan, and the US.

India's advocacy of Security and Growth for All in the Region (SAGAR), which calls for inclusivity and universalism, is proof of this. There is no caveat in this inclusivity and universalism that excludes China. SAGAR invites all countries to promote transparency and transnationalism in maritime governance (Panda, 2018).

India-China Strategic Issues Are Not Going to Go Away

As emerging economies, India and China relate to each other in a range of regional and global fora. These fora include the IMF, WTO, World Bank, Shanghai Cooperation Organisation, BRICS, AIIB, BASIC climate group and the trilateral Russia-India-China (RIC) group. This makes the Quad a comparatively feeble proposition. But the India-China border disputes and the countries' growing discord in areas such as water, maritime security and regional politics often make them appear as Asian rivals. India's strategic consonance with the other Quad countries does not guarantee its security and the safeguarding of its territorial interests in the event of an India-China conflict. None of the other Quad countries has taken an exclusive stance in supporting New Delhi's position on the India-China border disputes. Most of their statements during the Doklam border stand-off involving India, China and Bhutan were virtually neutral. Likewise, the other Quad members broadly support BRI and consensus has not emerged among them to challenge either the MSR or BRI. India's stance on BRI has not been endorsed by the other Quad countries. In fact, all of the other members have offered tactical support for the continents-spanning project. Therefore, India's participation in the Quad is not an explicit move against China. Rather, it is a calculated measure to protect its interests in a rapidly changing Indo-Pacific. In addition, strategic contradictions among the Quad countries discourage India from forming a formal alliance against its immediate and largest neighbor. The India-China relationship is taking on a defining structure in the Indo-Pacific and India is more inclined to nurture it than repudiate it (Panda, 2018).

Quad believers tend to see the Indo-Pacific Quad as a coherent strategic construct while Quad sceptics dispute this. Quad believers contend that the Quad offers a way to manage the uncertainties of regional rivalries by embedding them in the Indo-Pacific region, while Quad skeptics view the Quad as an "empty gesture masquerading as a policy" but also dispute the coherence of the Indo-Pacific as a single international system (Envall, 2019). The Quad is decidedly not an alternative to China's BRI, though the four democracies are strengthening collaboration on regional connectivity initiatives that promote good governance, transparency, accountability and sustainable debt financing. Nor does the Quad represent a containment strategy targeted at China, a futile proposition so long as China remains a top trading partner for each member of the Quad. The Quad is a symbolically and substantively important addition to an existing network of strategic and defense cooperation among four particularly capable democracies of the Indo-Pacific. What makes the Quad unique is that its members are powerful enough militarily and economically to resist various forms of Chinese coercion while offering the "muscle" necessary to defend the foundations of a Free and Open Indo-Pacific from potential challengers (Smith, 2018). What are the Quad's prospects? The immediate challenge is one of aims. The Quad needs to be better at coordinating policy efficiently and developing an agenda that is more focused (Hall, 2017). A persistent criticism of the Quad is that it lacks common purpose or substantive agenda (O'Neil and West, 2019). The Quad partners need to better articulate their own unique rationale for cooperation (Zala, 2018). Quad's prospects will be shaped most by the logic (or lack thereof) of an emerging Indo-Pacific strategic geography (Envall, 2019). If the Indo-Pacific concept has any strategic value, it is to be found in the idea that an integrated maritime geopolitical complex is emerging that links the United States, China and India across the Indian and Pacific Oceans (Graham, 2018). If these linkages prove to be important, Quad might help with their institutionalization (Envall, 2019). Already, the Quad is moving to cooperate on supporting regional infrastructure projects (*Straits Times*, 2017).

Epilogue

Many perceive Quad as not merely a defence partnership, but also as an economic initiative, maritime disaster management, initiative promoting freedom, liberty and democracy. There are more questions rather than answers regarding the structure, intentions and goals of Quad. This makes it difficult for each member to align the combined vision of the grouping with that of the individual vision. Although all the four nations are committed to protecting the Sea Lines of Communication and free and open Indo – Pacific, the grouping is still loosely arranged and has not yet been formalised at ministerial level. India, although committed to the central idea of Quad, has still to balance at home, and its desire to avoid being identified with any particular group with regional security implications at international stage. India's de – hyphenation of Indo – Pacific and Quad emphasises on strategic continuum rather than geo – political fragmentation. This also underscores the regional security architecture. The underlying motivations, levels of engagement and views of the Quad as a possible instrument to balance against a strengthening Chinese role in the Indo-Pacific region vary for each of the grouping's members. In spite of converging interests among the Quad's members, the tangible risk of provoking China and unsteady normative foundations of the grouping are factors preventing a serious revival of the Quad. China's strategic initiatives in the South China Sea and the Indian Ocean make it imperative to include more countries like Indonesia and Philippines into the security architecture for the region. Other dimensions of Quad, beyond geostrategic, including economic, ideological, disaster management, anti – piracy, need to be explored urgently and dialogue established.

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Shanghai Cooperation Organization – an opportunity and a Challenge

An annual meeting of the Shanghai Cooperation Organization was held in Bishkek, the capital of Kyrgyzstan, on 13th and 14th June 2019. This is the first international meeting held after Narendra Modi was elected as Prime Minister of India for the second time. In 2017, both India and Pakistan were accepted as permanent members of the Shanghai Cooperation Organization. With this decision, Russia and China dominated SCO was expanded to South Asia and problems in South Asia, especially between India and Pakistan got a platform other than SAARC. For India, the membership of SCO is important as it is an opportunity to establish itself as an “Asian power” and to build connectivity with central Asia.

The background of Shanghai Cooperation Organization

The Shanghai Cooperation Organization was established in 2001 with the initiative of China and Russia. Other member states of the organization are the Central Asian nations – Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan who share border with Russia. Thus, it is a Eurasian organization made up of nations from Central Asia and Europe.

Russia and China, the hostile countries during the Cold War, took the initiative to establish an organization to address issues of borders and other conflicts with each other. Also, they had a common interest to challenge the dominance of US. The end of cold war and the collapse of the post-cold war Russia, the emergence of newly independent nations in Central Asia after the dissolution of USSR and their struggling economies provided an opportunity to US to integrate these countries into global system controlled by US and thus create a monopoly of power. Russia and China decided to form this union to take these Central Asian nations under their wings and thereby prohibit US from interfering into the internal affairs of these countries and thus evade US control of Eurasian politics.

Even the Central Asian nations that had become independent after the dissolution of the Soviet Union had some key questions. After Soviet Union withdrew from Afghanistan, the terrorist groups started entering Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan in Central Asia. The threat of terrorism entering their backyards and increasing extremist activities created the possibility of cooperation with each other and the big powers. Another recurring issue was the boundary disputes and internal unrest. The Central Asia with rich sources of mineral oil required peace and stability for their economic growth. SCO was formed with the main objectives of regional security, cooperation with respect of counterterrorism and extremism.

Why is this association important to India?

As noted above, regional peace and counter terrorism are the important agendas of the Shanghai Cooperation Organization. India has raised the issue of the threat of global terrorism on the various platforms and have consistently appealed for cooperation of all nations. Similarly, India has shown time and again how Pakistan is responsible for this terrorism. Also, China and Central Asia are facing the consequences of terrorism born in Pakistan-Afghanistan. There is a need to take a strong cooperative action against those nations who promote and finance terrorism. Though global opinion is building up against Pakistan, Pakistan’s approach does not seem to change. Hence, there is a need to increase pressure on Pakistan. As China, a permanent ally of Pakistan, has also backed Masood Azhar to be declared a terrorist, Shanghai Cooperation Organization can be considered as the perfect platform for this purpose.

Another important aspect of this organization for India is the recognition of India’s role in Afghanistan. Afghanistan has been in turmoil for the past several years. India is trying to establish peace in Afghanistan. But hardly anyone has noticed the importance of India’s role. The US and Russia want to underline their importance in this peace process. US tried to negotiate with the Taliban leaders, but it failed. Pakistan has never accepted and appreciated India’s participation in the peace process in Afghanistan. Individual meetings held on the occasion of

the summit may be important to convince Russia that the Afghan question will not be resolved through discussion with the Taliban. Also, the personal meetings help build an understanding between India, Russia and China and may create a positive approach about India's role in Pakistan, Afghanistan and terrorism.

India is taking rapid steps towards economic development. In that regard, two things are important for India. One is to expand India's communication network and the other is the availability of energy sources and mineral oil. India has conceptualized the International North South Transport Highway with the help of Russia to expand its network of communications. This highway will help India expand its trade with Central Asia. India is not part of the Belt and Road project. India was likely to lose the trade opportunities that arise from this, but the North South Transport Highway would provide trade opportunities for India. India's endeavour is to expand relations with Central Asian countries without the help of China and Russia. But given the dependence of these nations on China and Russia, it is a little difficult to establish these countries independently. For this, India needs to make consistent efforts. The platform of the Shanghai Cooperation Organization becomes important in solving such shared questions.

China dominates the region because of its greater trade with Central Asia. Given the trade war between China and the United States, it is certain that China will carry forward its belt and road project more quickly. Due to the belt and road project Chinese influence in the region is going to increase. The growing influence of China is a headache not only for India but China's growing importance is a concern for Russia and for Central Asian nations as well. Central Asian nations are sceptical about China's belt and road projects. India can support them to put their concerns on this platform. Though Russia-India relations are good, India has a concern over growing ties between Russia and Pakistan. As Russia and Central Asian nations value India in fighting China's domination, India can raise its concerns about Pakistan – Russia Relations on this platform. Another important benefit of this regional organization to India is the Turkmenistan-Afghanistan-Pakistan-India (TAPI) route, an important project to meet India's energy needs. The Shanghai Cooperation Organization's platform can play an important role in initiating an agreement among the concerned nations.

An important question facing the world today is the tensions between Iran and the United States and the far-reaching consequences of this tension. Iran is the observer of the Shanghai Cooperation Organization. India's relations with Iran have been strained due to US pressure. Dialogue can be initiated with Iran and Iran can be persuaded to solve the problem peacefully and emphatically. While such discussions do not solve the problem immediately, it does help to take definite steps.

A challenge for India?

There is no dispute that both India and Pakistan are members and that it is an important organization at the regional level working more efficiently than SAARC. While membership of this organization is beneficial to India, it faces many challenges.

Most importantly, with the help of this organization, both China and Russia can try to intervene in the bilateral conflict between India and Pakistan and the ongoing warring situation caused by the Kashmir issue. Relations between Russia and Pakistan have improved, and China is the all-weather friend of Pakistan. Further, China-Pakistan Economic Corridor passes through Gilgit area in Pakistan Occupied Kashmir. India is opposed to this route as it passes through contentious terrain. It is important for China to complete this task as soon as possible because of the investment made by China. Both Russia and China can put pressure on India in favour of Pakistan. Moreover, for both, given the close ties between India and the United States, it is also a balance of power game whereby Russia-Pakistan-China unite to challenge the US-India equation. In short, India must remember that the Shanghai Organization is not only an opportunity for India but also a challenge.

The Blue Dot initiative

By Aniket Jadhav

About the Blue Dot Initiative

This new initiative was unveiled by US Trade Secretary Wilbur Ross at the Indo-Pacific Business Forum held on the sidelines of the 35th ASEAN Summit in Bangkok in early November 2019.

This is named after astronomer Carl Sagan's observation that Earth looked like a 'pale blue dot' when viewed from space.

Blue Dot Network was announced by OPIC's Executive Vice President David Bohigian at the Indo-Pacific Business Forum in Bangkok, Thailand (Mahmood, 2019).

Reason to come up with the initiative

The network is an initiative that brings together governments, private sector and civil society to promote high-quality global infrastructure development in an open and inclusive framework which focuses Indo-Pacific countries.

This project will bring together the United States, through the US Overseas Private Investment Corporation (OPIC), Japan with the Japan Bank for International Cooperation (JBIC) and Australia with its Department of Foreign Affairs and Trade (DFAT) (Ascutia, 2019).

In an intention to compete with China's multi-billion-dollar Belt and Road initiative.

Role of extra regional power. How and Why?

The US with joint cooperation from Japan and Australia have unveiled Blue Dot Network with the aim to invest and trade more in Asia.

The Blue Dot is essentially expected to serve as a globally recognised evaluation and certification system for roads, ports and bridges with a focus on the Indo-Pacific region.

This intends to be a counter project to counter the BRI, but this initiative by US is still in nascent stage.

The objective of Blue Dot initiative by the US is to extend and strengthen its strategic and economic sphere of influence in the Asia region.

The initiative will develop infrastructure and sustainable economic growth with the help from Japan and Australia which are bigger partner in the Blue Dot initiative primarily focusing on Indo-Pacific region.

Main objective of Japan and Australia to get involved in this BDI is to counter China's strategic movements and economical aids to the under developed countries in the Indo-Pacific region.

China has taken the lead in providing development aid in PNG, Solomon Island and in throughout the region in the end of the year 2017 which is alarming for Australia and Japan (Spross, 2018).

On the other hand Japan-China relations seem back on track for mutual state visits in 2018 or 2019, but the future of the bilateral relationship will not be without significant challenges (Madoka Fukuda, 2018).

It is a tri country platform to coordinate and make Blue Dot initiative a success in the region where China has a strong foothold.

Importance of regional actors

The Blue Dot initiative which mainly focuses to build infrastructure and develop this region needs to take into consideration the countries which are geographically connected to this region and which has economic and political say in this region

The Blue Dot initiative largely ignores India, Indonesia, Vietnam, Philippines who plays a major role in this region politically and economically.

The joint efforts of US, Japan and Australia for the Blue Dot initiative is difficult to fulfill without participation of India, as India is a major power in Asia and if these countries have to counter the China's BRI they have to consider India to play a major role in this initiative.

Geographically the Blue Dot initiative will focus infrastructure development in Indo-Pacific and to construct a unified large market and make full use of both international and domestic markets, through political and culture ties with the Indo-Pacific countries they have to involve India, Indonesia, Vietnam, Philippines which plays an important role in this particular region with respect to the initiative.

To execute the future projects of Blue Dot initiative they will need labour, raw material, local companies to take contracts and this will be possible when this project will have integrated holistic approach when they will execute it.

The Indo-Pacific area which has tremendous economic and strategic potential and one needs to influence this area to get the maximum out of it.

China in 2013 started BRI to connect and expand its sphere of influence in this region and to counter this US has proposed the idea of Blue Dot which will be executed in coming years.

Current state of both the initiatives

It is very clear China is ahead largely involved in developing infrastructure and influencing this region.

Comparatively it is easy for China to do so as the geographical proximity favours China in BRI.

If US, Japan and Australia intend to compete China and make a strong foothold in Indo-Pacific they have to consider the role of countries with influence and geopolitical unrest with China which can help the Blue Dot initiative to be a success.

The developing states will have to choose between the Blue Dot network and the BRI.

This new program would become one tool among others for those states that are in dire need of infrastructure and keep the primary manifest to develop the region rather than being two competitive projects for political, economic and strategic influence.

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