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SYNERGIA CONCLAVE 2019

SPECIAL EDITION



Synergia Foundation - Conclave 2019



The Future of Security:
Digital (Cyber Space)



5G-AI-Cloud-Industry 4.0 – Promise
and Vulnerabilities



Future Security Ecosystems -
Beyond the Curve- Beyond our
Imagination



Mastering Agility in Geopolitical Uncertainty- The Curve & Beyond



Synergia Foundation - Conclave 2019

During a period of geopolitical uncertainty around the world, leaders and experts from around the world converged at the Synergia Conclave to discuss the ramifications of security. The biennial conclave, which is organised by Bangalore based think-tank Synergia Foundation, was conducted from October 17th to October 19th.

The conclave was inaugurated by a distinguished thought-leaders including CN Ashwath Narayan, Deputy Chief Minister of Karnataka, MK Narayanan, Former National Security Advisor to GOI & Governor of West Bengal, Satish Jha, IPS, Chairman NTRO, TM Vijay Bhaskar, IAS, Chief Secretary of Karnataka, PS Raghavan, Chairman, National Security Advisory Board GOI and Sanjay Jaju, IAS, Joint Secretary, Department of Defence Production GOI.

The founder of Synergia Foundation, Tobby Simon kickstarted the event by providing a larger perspective on what would be discussed and deliberated over the three-day conference. He noted that in an asymmetric world, world leaders should seriously consider the ramifications of what security represents nation states. He stated that given the geopolitical uncertainty that exists around so many facets, discussions regarding the future of security are extremely relevant.

Welcoming the participants, Tobby Simon, reiterated the mantra of Synergia- to be futuristic in our outlook and seek answers for problems which lie in the future and remain largely unknown. We were the pioneers in starting the debate on topics like counterfeit currency, supply chain disruptions, cyber security, pandemics, the Dark and Deep Web amongst others. We are futuristic in our outlook as we want our children to inherit a safer and a better world. Our Conclaves our pride and our motivation and we seek subjects which are topical, relevant and difficult to understand as not much is known about them.

We live in an asymmetrical world as was clearly shown a few days back when a few drones and missiles disrupted 5% of global oil supply and raised oil prices. The best of economic managers and finance ministers will be hard placed to handle their finances and balance budgets when such major disruptions strike straight out of the blue. Here lies the importance to be prepared for all such contingencies. A Think tank like Synergia endeavours to undertake this role by flagging critical issues for the Government at state and national levels as also the academia, industry and opinion makers.

MK Narayanan, Former National Security Advisor to GOI & Governor of West Bengal commended the Synergia team for their effort to get the conclave off the ground. He also noted that the end of the three days, the thought-leaders present would go back a bit wiser than they came as a result of the discussions that will be taking place. While acknowledging the unique role being played by Synergia he highlighted that like most of the delegates present, they attend a series of conferences around the world.

However, in the range and depth of theme and subject chosen for deliberations, their topicality and the quality of experts chosen for interventions, Synergia stands with the best in the world. Synergia Conclaves have over the years drawn a loyal set of thinkers and experts who return year after year to ideate and contribute. This is an opportunity for all the attendees, representing many countries, to go back and spread the ideas spoken here. The theme for the conclave this year is particularly at a crucial time as we are slipping into the dark ages.

Hon'ble Deputy Chief Minister of Karnataka, Shri **CN Ashwath Narayan**, complemented Team Synergia for conducting such a gathering of imminent thinkers in Bangalore. Synergia has been doing pioneering work in strategic thinking as vindicated by the 18 countries represented and over 60 speakers present to discuss a whole range of issues over 28 sessions. The presence of so many foreign experts is a testament to global reach and reputation of Synergia. Over the next three days you must explore the various fields of security – law enforcement, defence, industry etc, mutually share knowledge gained and exchange views to come up with solutions to problems our countries likely to confront in future.

Govts and academia must adapt to evolving challenges which are mutating on a daily basis, and find solutions. He summed up by stating that the conclave was one of the best platforms to “provide a 360 degree on human security.” He said, “Over the next few days we will be witnessing acclaimed experts from various fields including cyber security and strategic thinkers will provide their insights.”

Satish Jha, IPS, Chairman NTRO, warned that the “future of conflict will not be a conventional war. The future of conflict will be at space or at the cyberworld. We will be better off if we begin preparing for these possibilities.”

TM Vijay Bhaskar, IAS, Chief Secretary of Karnataka spoke about how non state actors can affect the security of a nation or even a small city or state. He said, “Distinction between external and internal security has gone down.” He added that

Bangalore is an ideal location to conduct the conclave as the city is one of the leaders of IT and information technology. He stated, “Bangalore should be at the forefront of discussing cybersecurity and cyberwarfare. We were amongst the first states to set up cybersecurity.

We have to think about how cybersecurity will impact our financial transactions and information tech will impact financial transactions in the country and the state.” He also spoke of vulnerability of a city like Bangalore to Cyber attacks citing the example of the water supply which is entirely based on pumps bringing Cauvery water.

PS Raghavan, Chairman, National Security Advisory Board GOI spoke about how the challenges within security is intricate especially given the unprecedented flux in global interactions. “In India this creates a need for some difficult compromises

that’s not necessarily in our best interests.” He stated that the nature of military conflict has transformed. He also noted that social media has now become a powerful tool for terrorism and counter terrorism. He wondered, “Can collective thinking and global collaboration bring change?”

Sanjya Jaju, IAS, Joint Secretary, Department of Defence Production GOI stated that the defence needs to be looked upon not just as an enabler of armed forces but also economy. He elaborated that now start-ups were getting involved in defence sector. He stated that the digital transformation of defence was going to be critical and should now be thought in terms of technologies such as artificial intelligence. Therefore, he noted, India needs to equip the forces to fight future war with smart ammunition and smart weapons.” He also brought out the fact that India is working towards increasing its defence exports seven fold and contribute at least \$5 billion towards the 5 Trillion economy.



I The Future of Security Digital (Cyber Space)

Former National Security Advisor, MK Narayanan paints a grim picture of the future faced by the world once Quantum Computers and AI combine to break into cyber space.

At the Synergia Conclave, MK Narayanan, Former National Security Advisor to GOI & Governor of West Bengal, signalled a dire warning to the distinguished participants: technology has turned nation-states highly vulnerable to a number of security threats. And things are about to get worse. Mr Narayanan noted that he was not seeking to be a “prophet of doom” but rather wanted shine the light on challenges so they could be deliberated upon.

Mr Narayanan noted that in the 21st century, there has been no rise of a new ideology. This, he stated, has resulted in the rise of nationalism. What that could mean for the future of security is something that needs to be considered, according to him. He warned, “If the present is in turmoil, then the future is even more uncertain.” He elaborated that even United States, the inarguable leader of military power in the world has still been unable to maintain its power in different parts of the world especially Venezuela and East Asia.

He painted a similar picture for China as well. Other challenges faced by nations have been the death of globalisation and deepening of economic downturn. This is why “we must hence prepare for radical changes.” He elaborated that cyber and cyber technology will play an increasingly bigger role in this new world and military warfare will be largely be regional conflicts especially in regions such as West and North West Asia. He also noted that nuclear threat is also likely to diminish but that the “real danger is likely stem from less developed nuclear powers especially

Iran”, which he warned would be tempted to use nuclear threats to address their problems.

Mr Narayanan continued to paint a grim picture of the threats looming nation-states around the world. He spoke about the weaponization of outer space no longer being a concept but a reality. He also noted that non-state actors are likely to play a major role in these threats. “Digital era has profoundly changed our operating environment. Technology is proving as much an enemy as a friend.” Even the internet, he stated, is now facilitating cyber criminality and tempting users to trade privacy for entertainment and distraction.

Mr Narayanan stated that the nature of cyber attacks have been rapidly transforming from attacks on IT infrastructure to attacks on operational technology infrastructure. He warned that artificial intelligence will not be providing “all-encompassing solutions to cyber problems” as “badly designed AI can cause more problems than otherwise.” He noted, “I am a little concerned that many experts claim to know how to meet these challenges. Don’t be content with the quantum of knowledge that you possess.” He added that there is now a vital need to have increasingly innovated exploitation of technology to come up with solutions for many of the challenges he had highlighted. He said that the new era called for new partnerships, and solutions that empowered people and embraced diversity.

He ended his session by providing hope for the future despite the exhaustive nature of challenges faced on a global level. He noted that the extensive talent and expertise at the Synergia Conclave will be able to come up with solutions to some of the challenges that have been raised.



5G-AI-Cloud-Industry 4.0 – Promise and Vulnerabilities

Most experts agree that the advent of Artificial Intelligence, smart platforms, 5G and the Internet of Things are likely to change the nature of the world. However, these technologies are also likely to bring in new vulnerabilities and threats. This was the nature of problem that Dr Paul Raj, Professor Emeritus, Stanford University, deliberated upon during the Synergia Conclave.

Background

“Intelligent Connectivity” while riding on the superhighway of 5G will enable a congruence of mobile edge computing, IoT, AI, automation, robotics, VR, etc. While it promises to transform professional and personal world, it offers lucrative targets for non-state and state-sponsored cybercriminal.

Analysis

Dr Paul Raj spoke during a session titled, “5G-AI-Cloud-Industry 4.0 – Promise and Vulnerabilities”. He noted that 5G, which comes on top of 2, 3 and 4G, will offer a significant faster form of connectivity. He noted that more than just mobile phones, 5G will be supporting other verticals such as industry 4.0, smart manufacturing, intelligent vehicles, intelligent transportation and more.

He stated countries will have to get these verticals aligned in order to successfully introduce 5G. He said that 5G is trying to change the nature of wireless and improve it.

He noted that when it comes to nations around the world, “China has already begun deploying 5G in a big way and the United States has also started the roll out. However, he noted that in 5G, China will be ahead of United States and that is a cause of concern for Washington”.

He also spoke about artificial intelligence and stated that the application of AI was much stronger in China than anywhere else even though the big ideas regarding this technology came from United States and partly from Europe. He stated that AI is “highly transformative and often worrisome.”

The loss of jobs would be one of the big problems that AI might usher in the near future, he warned. He said that previous industrial revolutions may have resulted in the decrease of low skilled jobs, it also resulted in the increase of high skilled jobs. He noted that this may not be a possibility when it comes to the revolution caused by AI.

He said that there are many vulnerabilities when it comes to cyber security. Some of them are in Border Gateway Protocol, Domain Name Servers, Certificate Authority and more. “Industry 4.0 will bring lots of vulnerabilities and that is a cause for concern,” he said. He also said that 5G will inherit 4G vulnerabilities. Additionally, he said that “IOT devices are going to be very very insecure and we will have to somehow deal with it.”

He left the audience with a final thought – “unfortunately the bad guys are winning and it is going to get worse before it gets better.”

Assessment

5G may revolutionise the way we look at the congruence of internet and mobile telephoning as this revolution will not be confined merely to buying a better smart phone. It would involve a change of life style and upgradation of our entire ecosystem to exploit the immense power of this super highway.

A world enamoured with high technology neglects the social impact of the new technology on the less fortunate members of the society. AI and 5G along with machine learning will render humans redundant in many professions, especially those that demand repetitive manual work.

Unless, the new technology creates greater overall prosperity whose fruits can be enjoyed by all, including those who are being displaced from their jobs, there will be greater turmoil and distress in the world. The policy makers must heed this timely warning of Dr Paulraj.

Future Security Ecosystems - Beyond the Curve - Beyond our Imagination



Rutger Van Zuidam, Founder and CEO, Odyssey took the gathering on a journey along the 'curve', beyond any one's imagination.

Background

The perception of security is undergoing transformation- from "for the public" to "with the public". In an increasingly complex world, top down linear approaches seem unable to cope with today's challenges which are borderless, have multitude of stakeholders and can't be solved by "throwing money at it". Governments must act beyond making new laws, policies, technology or allocating more resources.

Challenges cannot be solved by one organisation, one country, no one can hold all critical information. Multitude of stake holders who must all be brought together to work out workable solutions. Solutions arrived in such a manner belong to all and have universal acceptance.

Analysis

Rutger Van Zuidam raised the question - what is the curve that we are trying to look beyond. He explained it with the example of the Hubble Telescope which took an iconic picture through a single exposure of 15 days which showed 400 galaxies with billions of stars in each. How many of these are supporting life? That is the deep look that human mind needs to get at real problems confronting us now and in the future. The implications of imagining comes from our aspirations. The focus of Odyssey, his company is to build a secure future with mass participation.

Complexity of challenges root from the fact that one organization and/or one industry cannot find an ideal solution. Collaboration and cooperation of information is the key to secure our future. Complexity involves ecological divide, social divide and spiritual divides. There is always a huge gap between those who are suffering with a peculiar problem and those who can find a solution to those problems. But who will bring them on a common platform?

Counterfeit goods plague the world today and can have catastrophic consequences. The supply chain integrity is based on ethics and something that cannot be controlled in today's day and time. For example a fake smart phone with poor quality fake battery is carried in the hold of an airliner, it puts the life of all passengers at risk as the battery can explode any time. Most products are sold by a third party. There are limits to manage the supply chain. With blockchain one can prove, the route or process from end to end and fight counterfeiting of goods. The idea of an "Virtual Twin" emerged from one of these blockchain projects which is a very effective way of unmasking fakes as any individual can compare the fake with its Virtual Twin on the web.

Emergence of the third generation of web is a collaborative layout that allows global massive scale delivery. Cost of production decreases if worked in an ecosystem which the collaboration enables. The impact rises beyond the organization and that is how complexities are handled.

He elaborated on his logic with a project which was undertaken by his company. A pilot study was undertaken in Europe on how solar energy can be generated atop a roof. The mass collaboration to solve the problem included government agencies, private entities and competitive organizations. Hackathons by over 1500 people were conducted to find solutions. The way we think about a problem is the uniqueness of dealing the complexities, rather than sticking to traditional methods which will only give traditional solutions.

Block chain comes in where transactions and settlements are done. A bank is not required for the same. Public and institutional trust are key factors. An open AI model without proprietorship, checks the data source, a certified authority legitimizes the process as it is all open source.

Assessment

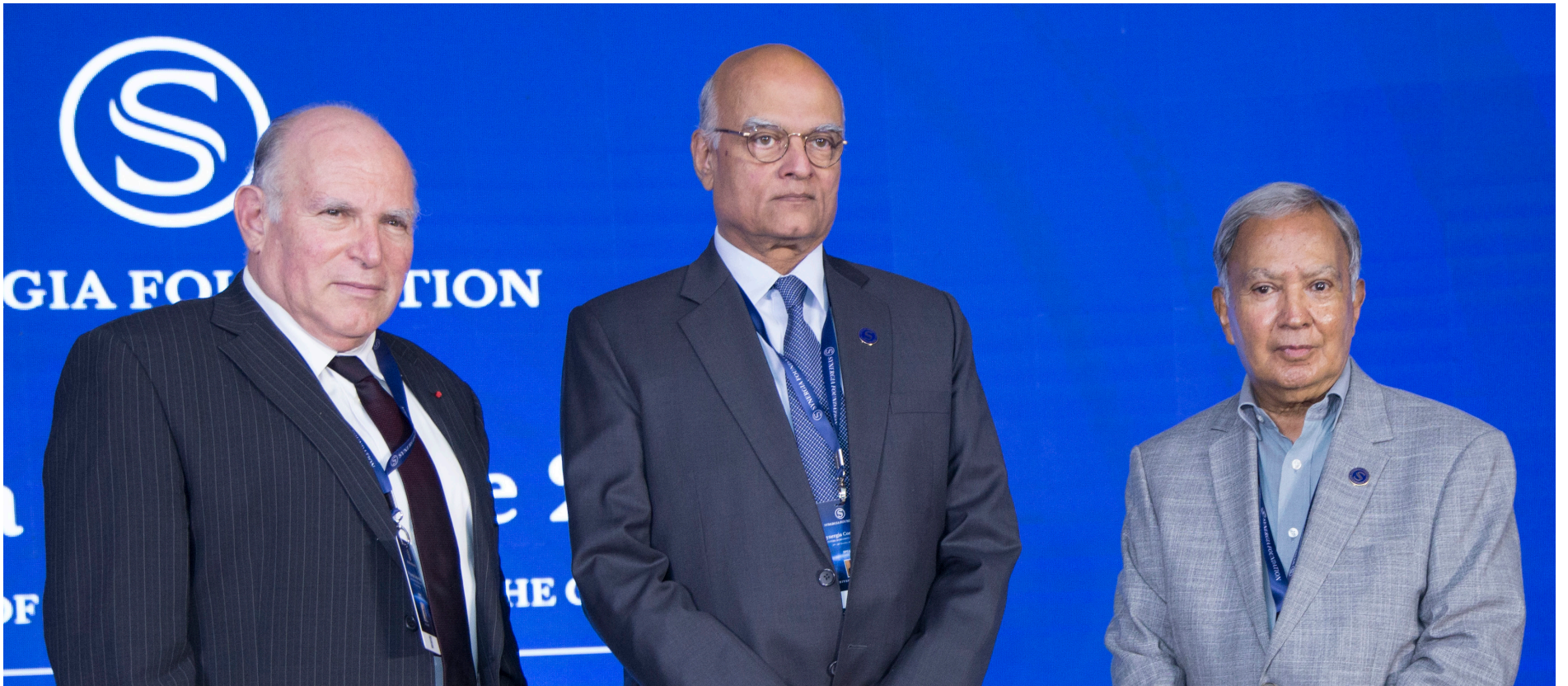
The future challenges are so complex and so much beyond our imagination, the solutions we seek must not be traditional ones arrived at using old methods. Towards this end, block chain has the potential to change the way problems are studied and solved. The danger lies in narrow economic interests and fear of losing a position of advantage which deter national leaders and wealthy corporations to share their solutions and methodologies on an open domain.

In today's world everything is being done in silos - money is with few, data is money and is jealously guarded, individual and organisational expertise too is hidden in silos. So the dilemma is how to select the right solution and how to scale it.

Challenges cannot be solved by one organisation, one country, no one can hold all critical information. Multitude of stake holders should be encouraged and supported.

Mastering Agility in Geopolitical Uncertainty- The Curve & Beyond

Panel comprising of Mr Uzi Arad, Former NSA, Gov. of Israel, Shivshankar Menon, Former NSA & Foreign Secretary GOI and Krishnan Srinivasan, Former Foreign Secretary GOI tried to gaze at the crystal ball to make sense out of the geopolitical uncertainties facing the world.



Background

The consensus of the panel was rather foreboding as they were unanimous in their opinion that the future is far more uncertain than what is commonly understood. In fact, no clear solution is visible on the horizon from which we can take solace.

Analysis

The panel covered a wide canvas highlighting how countries big and small are faced with populist parties which have belied predictions to continue to make political hay despite falling quality of life. For example, France, Brazil and Philippines where leaders have been advocating anti-environment and openly being racial yet achieving electoral success. It appears that the common man has abandoned mainstream political parties with a liberal centrist outlook as they feel they have failed them.

Globalisation has not been a happy story for all strata of society- 1% of the population saw a rise of 138% in their income- while bulk, especially lost jobs. Leaders are today use immigration and minority issues to lobby with the public and are apparently succeeding. The face of protests is also undergoing a change, leading to uncertainty in government as how to deal with them without being accused of human rights violence.

Exploiting the full power of internet, protesters 'manipulate' chaos in peaceful protests producing Molotov cocktails and other devices to incite law enforcement agencies. Therefore, the question which arises is whether liberty can be unlimited and unrestrained?

Another worrying feature is that the stabilising role played by US to ensure world peace is being replaced by populist and isolationist policies of the Trump administration. A world order established in the killing fields of the Second World War and nurtured by US till date is being abandoned, to the detriment of mankind.

China-US faceoff dominates all geostrategic discussions and this one was no different. US considers China's rise as an affront to its position and has clearly displayed its intentions to curb it, irrespective of its implications for the world at large.

The panel felt that despite the criticism, BRI is on the path of succeeding even though US and India and many other important countries have stayed out of it. Chinese have set 10 objectives for themselves to achieve by 2025 to include robotics, quantum engineering, AI and ICT.

Major Conventional war was not likely although minor ongoing conflicts will continue. However, accidents can draw major powers into a conflict – North Korea

being a prime contender for this honour. Big powers will continue to fight local conflict with their proxies.

Terrorism has become a catch all cause to justify all ailments including lack of governance, this has been compounded by declining quality of national leadership who are on record making stat to stat interventions using ludicrous logic. The intelligence agencies are playing a larger role under such leadership and now they have technological means to collect information of "all the people, all the time, at all the places".

There has been a clearly discernible shift in global power, largely due to globalisation. Most of the growth has taken place in Asia and some feel that the centre of gravity is shifting to Asia, powered largely by China and to some extent by India. Traditional power centres in the West have to come to terms with this reality.

Assessment

Multilateralism, not isolation is the answer to China's rise. By putting them in a corner, the situation is only being exacerbated which will only harm the entire human kind.

India will not be able to achieve a big player status as long as its leadership in South Asia remains questionable and not universally accepted.

Rise of new authoritarians in almost all great powers across the world is a worrying trend. There is tendency to distort the facts and what is achievable- as growth declines, leaders' promises are getting bigger. The world desperately needs mature and sagacious political leaders who can grow above narrow electoral gains.



Synergia Conclave 2017

I Asymmetric Conflicts

Inequality in arms, indeed, significant disparity between belligerents, has become a prominent feature of various contemporary armed conflicts. Such asymmetry is not a new phenomenon in the field of warfare.

At the Synergia Conclave – Security 360, three experts from the field spoke about the subject in-depth while culling from their own expertise. Major General Yossi Ben Hanan-former head of Israeli SIBAT, Dr Shekhar Dutt - former Governor of Chhattisgarh, former Deputy National Security Advisor & Defence Secretary, Government of India and Latha Reddy - former Deputy National Security Advisor, Government of India, all spoke on the issue.

Background

Asymmetric warfare (or asymmetric engagement) is war between belligerents whose relative military power differs significantly. It also refers to the kind of warfare where two or more military powers engage with strategies that are significantly different. An asymmetric war generally takes place between an insurgency or resistance

movement, and a professional and standing army part of a full-fledged government.

Analysis

Dr. Shekhar Dutt began his session by remarking that if the world is to succeed, it has to learn from India and the way in which the country handles the multitudes of variety that it possesses.

Maj. Gen Yossi Ben Hanan shared from his own experiences of being in the thick of asymmetric warfare in Israel as a young soldier. He remarked that he never participated in any war that was symmetric, and reminded the audience that there was much to learn from World War 2.

Latha Reddy said that tactical success could depend on many factors. She noted that this “could depend on technological advantages; it could depend on targeting of critical infrastructure. It could also be achieved through training and technology together.”

Assessment

Our assessment is that as the insurgency continues to grow across the world, nations should begin addressing these threats by doing more than just expanding the size of the military. Technology, especially the internet and social media, has fundamentally altered the battlefield. We believe that the most difficult challenge comes from hybrid foes that claim the trappings of statehood and political.



I Beyond Bitcoin

Examining the three sides of crypto coins - their privacy, security and transparency- at the Synergia Conclave-Security 360, Pindar Wong (internet pioneer and Managing Director of VeriFi, Hong Kong) highlighted the innovative and interesting security model that emphasizes the importance of having a security economic architecture which challenges traditional ‘security perimeter’ thinking.

Background

Bitcoin is a peer-to-peer electronic cash system. It is a digital currency in which

encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank.

Analysis

Since 2017, the value of Bitcoins, and cryptocurrencies in general has continued to surge. Pindar Wong began by explaining that his focus was more on security economics. And his themes were centred around the points that complexity is increasing, variety is increasing, and scale is increasing. How do we reimagine solutions in this space? He said most of the games that have already been played are architectures based on World War II.

As the Chief Architect of the Belt and Road Project, Wong said that there is a new geometry in cyber – and cyber may not be all of the problems that we are currently envisioning it to be. It could be a new space which we use to find solutions. He reminded all present that reimagining requires creativity and imagination. Using

the analogy of a coin – he said that every coin does not have two sides, but three. The ‘edge’ is the space in which we need to find solutions.

He shared that one of the challenges faced in Hong Kong, which is a major financial sector, is that the technology of cryptocurrencies does not require a middleman. The change in architecture brings market changes, changes in assumptions and its own set of pros and cons. We have heard of the hard infrastructure, but there is also this other domain of soft infrastructure – which is where, he said, he hopes India will play a big role – in helping to build the soft infrastructure. ‘Not necessarily is everything a threat... there are also opportunities’, he said.



The Grand Strategy

With the advent of technology and the expansion of the internet, there are heightened threats to national security of nation-states across the world. Can there be a “grand strategy” that can reimagine security in the 21st century in order to prevent societies from succumbing to potent threats?

Background

National security is the concept that a government, along with its parliaments, should protect the state and its citizens against all kind of ‘national’ crises through a variety of power projections, such as political power, diplomacy, economic power, military might, and so on. Initially focusing on military might, the concept now encompasses a broad range of facets, all of which impinge on the non-military or economic security of the nation and the values espoused by the national society. Accordingly, in order to possess national security, a nation needs to possess economic security, energy security, environmental security, etc.

Analysis

The session, titled, “Reimagining Security in the 21st Century – The Grand Strategy, had esteemed speakers HE MK Narayanan - former NSA to the government of India, Governor of West Bengal and former Director of Intelligence Bureau, India; Dr Uzi Arad - National Security Advisor to Israeli Prime Minister Benjamin Netanyahu;

Assessment

Our assessment is that as cryptocurrencies are decentralized, in the next few years we are going to see national governments take the step towards cashless societies where people transact using decentralized digital currencies. In a networked world, an electronic cash system will significantly reduce transaction costs. We believe that cryptocurrencies, viewed as hard money, will find increased users from all sectors.

Michael Chertoff - former Secretary, US Homeland Security; and Praveen Swami - National Editor, The Indian Express.

HE MK Narayanan spoke about the security paradigm and provided a more theoretical construct on the subject. He spoke about the main drivers of the 21st century with regards to security and uncertainty - that these centered around global security, urbanization and a global economy that is confronting “newer and newer challenges as the century advances”.

Michael Chertoff provided an American perspective on the subject. He said that there no longer can be one ‘grand strategy’ to fight external threats to a nation’s sovereignty. Instead, he said that there can be numerous smaller strategies.

Dr. Uzi Arad said that the very notion of “what Grand Strategy is about, is not uniform among those who use it.” He said that it has become popular in recent decades and that nations across the world ‘scrambled’ to produce a ‘grand strategy’ or grand strategies. He said that Israel as a nation never had a grand strategy.

Assessment

Our assessment is that given the evolving nature of threats in the 21st century, having one “grand strategy” to tackle security concerns may not be feasible for nation-states. It is perhaps prudent to have multiple smaller strategies geared towards tackling specific threats. While a nation can evolve a single national security doctrine, for implementation of the said doctrine, it will need many strategies leading to the overall goal – securing national interests.

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SYNERGIA FOUNDATION

Synergia Foundation is an independent and strategic think tank whose purpose is to augment decision-making at a policy level while enriching individual discourse and public dialogue. With fact based insights, the Synergia Foundation provides impactful solutions that challenge the status quo, turning risks in to opportunities.

SYNERGIA FORUM

The Synergia Forum is a by-invite only session where we invite eminent subject matter experts to discuss the challenges and disruptions that governments, academia and businesses may face today and in the future.

INSIGHTS

Synergia Insights is our weekly print and digital publication. Authored by functional and geostrategic experts, we provide unbiased analyses and assessments of both national and international affairs that affect our lives.

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