4th Generation Warfare, Emerging Contours of 5th Generation Warfare and Its Political – Military Dimensions

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Abstract

Title : 4th Generation Warfare, Emerging Contours of 5th Generation Warfare and Its Political – Military Dimensions

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United States' military scholars William Lind with Colonel Keith Nightengale and few others introduced the concept of Generations of Modern Warfare in 1989. Till date, five generations of warfare have been identified and propagated by military thinkers, historians and academicians throughout the world. The latest generation coined and discussed by the military thinkers is the 5th Generation warfare (5GW) though few have even gone further to explore tenants of yet another type of warfare i e "Hybrid Warfare".

The scholars and military thinkers believe that "while the 4th generation is still in practice, the 5th generation has shown its manifestation" and is continuously evolving itself. The tactics of the 4th generation warfare (4GW), according to William S. Lind, is a war between a country and non-state actors. The shape can vary, ranging from the movement of terrorists, drug cartels, the mafia gang, transnational crime syndicate, rebels, etc. The 5th Generation Warfare requires a different perspective than the other generations and forms of warfare. No commonly accepted definition exists for 5GW. Some see 5GW as a decentralized form of warfare being a long term and complex warfare. On the other hand few suggest that it is a military strategy that is product of new technologies like nanotechnology, coupled with an indirect political approach. These

two kinds of threats have multi-faceted dimensions and the security arrangements against them will have to undergo immense changes.

Comprehensive national strategy is required to be formulated while taking into account all elements of national power. Modern armies of the world would be required to adopt all encompassing approach by incorporating changes in military strategy both at tactical and operational level to counter both 4GW and 5GW.

Preface

1. Socio-political changes and development of modern technologies have been influencing changes in all spheres of our life including the war fighting techniques. Development of society in socio-economic fields also induced changes in military thinking and development of warfare though different generations. The Peace of Westphalia in 1648, established state's monopoly on war while previously, many different entities like families, tribes, religions, cities, business enterprises had fought wars not just armies and navies.

2. The period from The Peace of Westphalia till 1680 is considered to be the 1st generation warfare. It was characterized by deployment of forces in line or column, forming mass armed forces. Second Generation Warfare is characterized by technological improvements, which led to the increase in the fire power and the development of communications. 1st World War is considered to be the classical expression of the Second-Generation Warfare which consisted mostly on use of attrition. Third Generation Warfare also called Blitzkrieg, was characterized by the tremendous enhancement of firepower and employment of maneuver as main element of war fighting.

3. Fourth Generation Warfare evolved after the wars in Vietnam and Afghanistan during 70s and 80s of nineteenth century. The main focus of this evolution was mainly on the way in which one could exploit the weaknesses in the political, economic and social environment. Colin Gray in his book "Another Bloody Century: Future Warfare" says that "the character of warfare in a period is shaped, even driven, much more by the political, social and strategic contexts than it is by changes integral

to military science". 4GW is characterized by blurring the lines between war and politics, soldiers and civilians, conflict and peace, battlefield and safety. It is engaged in decentralized manner without any defined battlefields rather it is simultaneously conducted in population centers, rural areas and virtual networks. Main objective is to convince the enemy's leadership that their strategic objectives are either unachievable or too costly for the perceived benefit.

4. Fifth Generation Warfare is the secret deliberative manipulation of actors, networks, states or any earlier generational warfare forces to achieve a goal or set of goals across a combination of socioeconomic and political domains while attempting to avoid or minimize the retaliatory offensive or defensive actions/ reactions including powered actors, networks, institutions and / or states. 5^{th} Generation war might include a form of warfare that manipulates: this war is perception based warfare focused on the context of conflict. It is fought through manipulating perceptions and altering the context by which the world is perceived. Since 5GW is the manipulation of observational context in order to make the enemy do our will, an act of force is not required to manipulate observational context, and therefore force is not required to wage 5^{th} generation warfare. It involves changing perception of adversary in our favour by changing his observations and transform them into our favour. The strategic goal of 5GW is to fight the war with the adversary "not knowing who it is fighting". 5GW attacks the intellectual strength of insurgent adversaries, by literally denying them an enemy against which to fight.

5. As a result developing multi polar world, many regional powers might emerge and world as a consequence might turn out to be a more chaotic place with many more wars. Fighting wars through proxies

armed with better weapons and tactics coupled with traditional wars is thus considered possible. Future armies will thus have to be ready to fight both traditional and non-traditional wars within a theatre at one time. This might call for a better adaptive army conversant in both forms of the war with almost equal prowess. Use of soft power as well as coercion will always remain a rider clause. Use of means other than hardcore military power will gradually increase and may take a reasonable portion of National Power. Similarly, response at national level has to be whole encompassing, thought through while ensuring optimum utilization of all elements of National Power.

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Contents

		Page
Abstract		**i**
Preface		**iii**
Acknowledgement		**vii**
Contents		**viii**
List of Tables		**xi**
List of Figures		**xii**
Chapter 1	**Introduction**	**1**
	Background and Significance of the Problem	1
	Objectives of the Research	4
	Scope of the Research	5
	Methodology	5
	Limitations and/or Delimitations	7
	Research Results for Utilisation	7
	Definitions	8
Chapter 2	**Understanding 4th and 5th Generation Warfare**	**11**
	Introduction	11
	Differences from Other Contemporary Forms of Warfare.	11
	Drivers of 4th Generation Warfare from Other Formas ofn Warfare.	18
	5th Generation Warfare	23

Contents (cont.)

		Page
	Features of 5th Generation Warfare.	24
	Convince, Confuse, Chaos and Conflict Concept	25
	Beyond War on Terror- Into 5th Generation of War and Conflict	25
	S Curve Development of Concept	27
	Conclusion	32
Chapter 3	**Critical Examination of 4th and 5th Generation Warfare Concept**	**33**
	Introduction	33
	Receding 4th Generation Warfare	33
	Irregular Warfare is not only the Choice of Weak but also the Strong.	38
	Understanding Limitations of the Concept in Light of Contemporary Conflicts.	39
	Emergence of 5th Generation of Warfare	44
	Conclusion	47
Chapter 4	**Evolving Character of Future Wars And It's Politico – Military Dimensions**	**50**
	Introduction	50
	Understanding Human Nature.	51
	Why States and Non States Go to War	52
	Global Shifts Impacting on the Conduct of Warfare	53
	Establishing Motivations for Future Wars	54

Contents (cont.)

	Page
How the Future Wars will be Fought?	56
Understanding Insurgencies	58
Compound Wars	69
Transition to 5th Generation Warfare.	71
Hybrid War Surfaces and Gains Recognition.	72
Emerging Global Threats.	76
War in the Context of South East Asia (ASEAN)	78
Intra-State Conflicts.	78
Non-Traditional Threats.	81
ASEAN Security Challenges.	81
Challenges for The Future	82
Traditional and Non-Traditional Warfare in ASEAN Context.	83
Geo-Strategic Significance of Thailand.	86
Results of Survey.	88
Conclusion	89
Chapter 5 Conclusion and Recommendations	**93**
Introduction	93
Conclusion	115
Bibliography	**117**
Appendix (if any)	**122**
Annex A - Survey Questionnaire	123
Annex B - Results of Survey Questionnaire	126
Biography	**131**

List of Figures

Figure No.		Page
1-1	Evolution of different generation of warfare	4
1-2	Conceptual framework	6
2-1	S Curve of Technical Development	28
2-2	Overlapping Generations of Warfare	28
2-3	Generational typology of War and Conflict	29
2-4	Comparison of Kinetic and Non-Kinetic Warfare	32
4-1	Map of South East Asia	78

List of Tables

Table No.		Page
2-1	Differences of 4GW from other forms of warfare	13
3-1	Comparison of 4th and 5th Generation Warfare	47

Chapter 1

Introduction

"From Alfred Nobel's prediction that dynamite was such a radical change that it would lead to the end of war, to similar claims about the machine gun, the naval torpedo, the bomber, and the nuclear bomb, predictions of revolutionary change in warfare have been common place and wrong".

Mackubin Thomas Owens

Background and Significance of Problem

1. The development in the military is generally a continuous evolutionary process. The modern era has undergone three watersheds in which change has been noticed qualitatively. Consequently, modern military development can be divided into four distinct generations. Peace of Westphalia in 1648 marked the beginning of generations of warfare, which established state's monopoly on war. Previously, many different segments used to fight wars based on families, tribes, religions, cities, business enterprises and used diverse means, not limited to armies and navies.

2. The first generation of war (1648 – 1860) thus grew not just from the invention of gunpowderbut also from the political, economic, and social structures that developed as Europe transitioned from a feudal system to a system of nation-states ruled bymonarchs. The transition from the 'chivalry' of feudal knights to the armies of Napoleon required centuries. This time was required not only to developreliable firearms but, more important, to develop the political system, the wealth-generating

national economies, the social structures, and thetechnologies capable of sustaining the mass armies of the Napoleonic era.

3. Like the first generation of war, the second generation of war (1860 – 1915) did not grow just from improvements in weaponry. It, too, required changes across the spectrum of human activity. Although the political structure of the nation-state was essentially in place at the end of the Napoleonic Wars, the state's power to tax and enforce taxes increased dramatically during the hundred years between Waterloo and the Battle of the Marne. A great deal of this increase in wealth can be attributed to the rapid industrialization of Western Europe and North America. Second-generation war required the wealth generated by an industrial society, transportation means, good communications in the shape of telegraph system and the sheer volume of weapons and ammunition as industrial output that only such a society can produce. Another challenge was to develop logistically effective general staffs to launch these mass armies against the nation's enemies. Finally, second-generation war was not possible without complete participation of the nations.

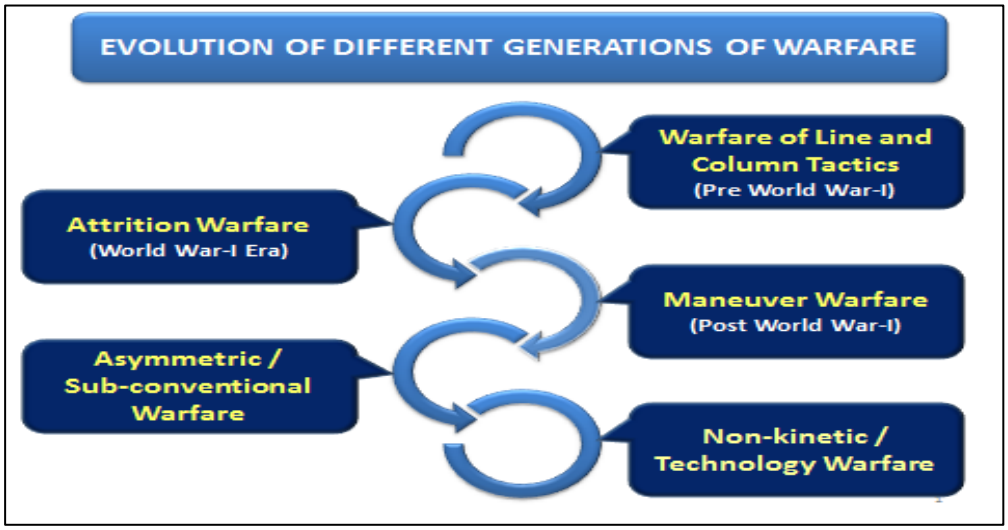
4. Third generation warfare or manoeuvre warfare really started in 1915 and came to maturity in 1940. The political and social atmospheres of the opposing sides were critical to the difference in development. While people in France and Britain blamed their government and armed forces for losses in First World War, in Germany armed forces were respected despite losses. German losses were seen more as a result of civilian rather than military incompetence. In this environment, Hitler was able to develop German Armed forces based on lessons of First World War while allies never got serious about it. Mission type orders were instituted and

manoeuvre warfare was applied to focus on destruction of the enemy's command and control and logistics as the fastest way to destroy his will.

5. The term of Fourth-generation warfare (4GW) was first coined in 1989 and as argued by its proponents uses all the shifts from a mechanical to an information/electronic society, the blurring of lines between war and politics, peace and conflict, battlefield and safety and combatants and non-combatants while assuming that the state is now more accountable to international system and is thus losing its monopoly on violence and thus ability to conduct war. Fifth-generation warfare (5GW) as its proponents propose will result from the continued shift of political and social loyalties to causes rather than nations. It will be marked by the increasing power of smaller and smaller entities and the explosion of new technologies. 5GW according to its proponents will be the war of information era and will use the strengths of global integration through internet and unrestricted access across nation states both in digital and physical worlds.

6. World's geopolitical order is transiting from uni-polar to multi-polar world. Direct conflicts with conventional/ nuclear weapons have become costlier on economy and human cost and therefore, unacceptable. Therefore, art of warfare is also continuously evolving from direct to indirect means and from kinetic to non kinetic means, utilizing modern technological advancements. It is therefore, important for political governments and armed forces to remain cognizant of evolving character of war and prepare themselves accordingly.

Figure 1-1 : Evolution of different generations of warfare



Objectives of Research

To carryout appraisal of 4GW, emerging contours of 5GW and its political – military dimensions with special emphasis (Pakistan and Thailand context) on following:-

1. To study the evolving character of future wars under complete spectrum of emerging contours with special reference to South and Southeast Asia.

2. To suggest strategic choices at political/ national level to deal with the emerging character of war.

3. To recommend the way forward as to how the military is required to be prepared/ trained to deal/ fight/ win future wars under evolving contours of future wars.

Scope of Research

The study is limited to the context of South and South East Asia in the context of 4GW and emerging contours of 5GW with special emphasis on Pakistan and its relevance to Thailand. The data collected include traditional warfare in retrospect, 4GW and evolving nature and spectrum of 5GW in South and South East Asian Context.

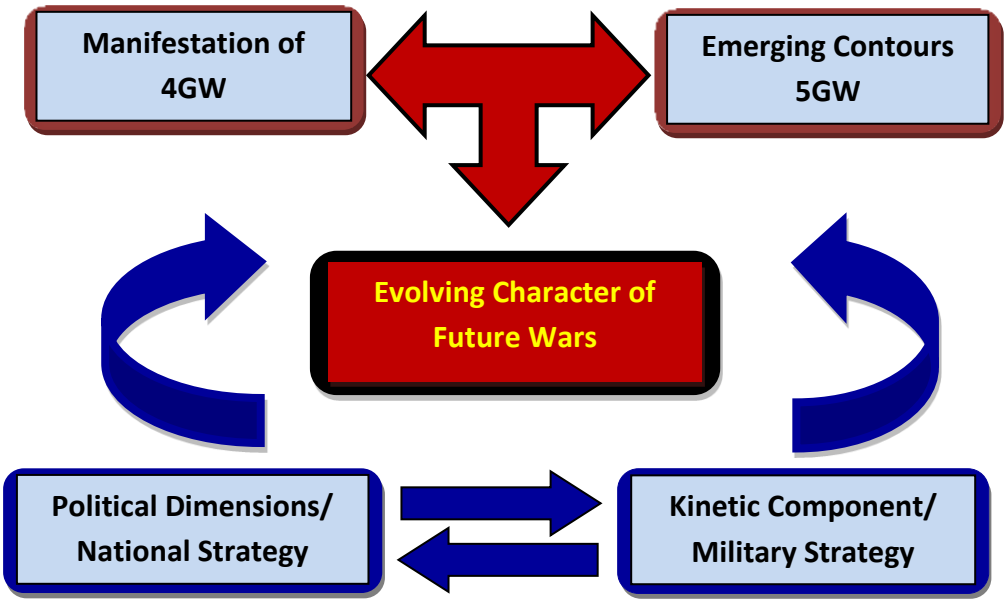
Methodology

1. Methods of Data Collection. Methods of data collection include previous or related work done on the subject, consultation with mentors, open source internet. A qualitative and comparative evaluation and analysis of the data was carried out to establish facts through logical confirmation.

2. Research Design. The mixed research design is used. However, it is primarily qualitative in nature by carrying out qualitative / systematic literature review of the earlier related work done on the subject. During course of my research I had the opportunity to use quantitative techniques in the form of survey, incorporated in the research to double check certain facts and queries. Thailand was taken as population. Staff and students of NDC 62 were selected as sample since it had representation of all segments of Thai society. Questionnaire was sent to sample (about 350 individuals) and only 17 responded despite repeated requests. Survey Questionnaire is attached as Annex A and results are attached as Annex B. A critical analysis of 4GW and 5GW was carried out and effort was made to forecast as to “How future wars will manifest under 4GW and emerging trends of 5GW and how politics and military will have to transform themselves to win these types of complex wars”.

3. Conceptual Framework

Figure 1-2 : Conceptual framework



4th Generation warfare is reaching its maturity while few of its strands are still developing. At the same time 5th generation of warfare is also being manifested in various forms across the globe and tint of change in future wars is visible. During this period of evolution, 4th and 5th generation of warfare may be employed simultaneously or in tandem which is seen as evolving character of war (central block of conceptual framework). To fight evolving character of future wars political governments and armed forces are required to formulate war winning strategy in close coordination and harmony amongst themselves.

Limitations and/ or Delimitations

1. Limitations

1.1 The finding of South Asian perspective might differ from that of South East Asian perspective and even within the regional context, few findings may not be generalized to the larger population.

1.2 Due to difference in political/ governance system and methods of application of military component in different countries in the region some findings and recommendations may not be applicable across the spectrum.

2. Delimitations. Following are few de-limitations: -

2.1 The research will be limited to South and South East Asian states with special emphasis on Pakistan and its relevance to Thailand.

2.2 The focus of research is limited to the population of South and South East Asia due to inherent geo strategic interests of Pakistan and Thailand being part of these regions. The population of other regions will not be studied being out of context.

Research Results for Utilization

1. The research will enable Pakistan and Thailand to crystallize contours of response and formulate comprehensive strategy to meet the challenges of complete spectrum of future wars in the global context in general and regional context in particular.

2. A qualitative and systematic data with logic based manifestations will be put forth to readers to answer their questions in a convincing and appealing way, duly supported with rationale, facts and

cases in point coupled with vision into the future manifestation of 4GW and emerging contours of 5GW threat.

Definitions

Paradoxical Trinity.	means	In Prussian theorist Carl von Clausewitz's seminal military treatise, On War, he introduced the "paradoxical trinity." The trinity is a useful tool to conceptualize the chaos of war and has been described as the tension between three fundamental elements of war : the government, the people, and the army.
Strategic Communications	means	A systematic series of sustained and coherent activities, conducted across strategic, operational and tactical levels, that enables understanding of target audiences, identifies effective conduits and develops and promotes ideas and opinions through those conduits to promote and sustain particular types of behaviour.
Foreshadowing.	means	When you want to let people know about an event that is yet to occur, you can use foreshadowing. Foreshadowing is used as a literary device to tease readers about plot turns that will occur later in the story. A fortune teller might use for eshadowing, warning that a short life line is a sign of some

		impending disaster. As military terminology it is used to describe any future development or event or prediction about manifestation of war.
High Frequency Active Auroral Research Program (HAARP).		
	means	It proposes tampering of ionosphere & geophysical domain for purposeful military and civilian application. Visible signs of its manifestation exist in terms of weather and geo-physical manipulations. HAARP is a scientific endeavor aimed at studying the properties and behavior of the ionosphere, with particular emphasis on being able to understand and use it to enhance communications and surveillance systems for both civilian and defense purposes.
Synthetic Biology.	means	Synthetic Biology is a field of science that involves redesigning the organisms for useful inspirational purposes by engineering them are to have new abilities. Synthetic Biology researchers and companies around the World are harnessing the power of nature morte to solve problems in medicine, manufacturing and agriculture.

Nizam, La Tanzim.	means	This is an unconventional/ loosely defined Arabic term (system, not organization) perhaps used by Al Qaida or Daesh to say that different fighting entities are just required to link by a system of conceptual understanding and formal hierarchal organization is not required for synergy of actions.

Chapter 2

Understanding 4th and 5th Generation Warfare

"The peacetime soldier's principle task is to prepare effectively for the next war. In order to do so, he must anticipate what the next war will be like".

William S. Lind

Introduction.

Generations of warfare have developed over a long period of time since Westphalia. Each generation has very distinct feature, attributes and war fighting concept which differentiates one from the other. This chapter will explain differences of other forms of warfare from 4th and 5th generation warfare. 4th generation warfare commencing from 1989 till recent past/ even continuous to current era has different attributes, goals and overall spectrum of violence. On the other hand 5th generation warfare has totally different attributes, goals and spectrum of violence. t is important to differentiate 4th and 5th generation warfare from other forms of warfare at the outset because many concepts may be overlapping and interlinked.

Differences from Other Contemporary Forms of Warfare.

Before understanding 4th and 5th generation warfare concept we need to see how world looks at other forms of warfare theoretically:-

1. Irregular Warfare. It is a warfare in which one or more combatants are irregular group rather than regular forces. Guerrilla warfare

is a form of irregular warfare, and so is asymmetric warfare. Irregular warfare favours indirect and asymmetric warfare approaches, though it may employ the full range of military and other capabilities, in order to erode an adversary's power, influence, and will. It is inherently a protracted struggle that will test the resolve of a state and its strategic partners. Concepts associated with irregular warfare are older than the term itself. Afghan civil war is as an example of irregular warfare.

2. Low Intensity Conflict. Low Intensity Conflict (LIC) is the use of military forces applied selectively and with restraint to enforce compliance with the policies or objectives of the political body controlling the military force. The term can be used to describe conflicts where at least one or both of the opposing parties operate along such lines. Low-Intensity Operations is a military term for the deployment and use of troops and/or assets in situations other than war. Generally these operations are against non-state actors and are given terms like counter-insurgency, anti-subversion, and peacekeeping. Sri Lankan war against Tamil Tigers' is an example of this type of war.

3. People's War. Also called **Protracted People's War** is a military-political strategy first developed by the Chinese Marxist-Leninist revolutionary and political leader Mao Zedong (1893-1976). The basic concept behind People's War is to maintain the support of the population and draw the enemy deep into the interior where the population will bleed them dry through a mix of Mobile Warfare and Guerrilla warfare. The term is used by Maoists for their strategy of long-term armed revolutionary struggle. The strategy of people's war was used heavily by the Viet Cong in the Vietnam War. However protracted war should not be confused with

the "foco" theory employed by Che Guevara and Fidel Castro in the Cuban Revolution of 1959.

4. Non Kinetic Warfare. Kinetic actions are those taken through physical, material actions like bombs, bullets, rockets and other munitions. Non kinetic actions are logical, electromagnetic or behavioral such as a computer network attack on an enemy system or psychological operation aimed at enemy troops. While non-kinetic actions have a physical component, the effects they impose are mainly indirect – functional, systemic, psychological or behavioral.

5. Similarities in Different Forms of Warfare

5.1 All different forms of warfare as explained above aim at employment of indirect means.

5.2 These forms of warfare are protracted in nature.

5.3 Targeting enemy's will is the main purpose.

5.4 Major differences from other forms of warfare:-

Table 2-1: Difference of 4 GW from other forms of warfare

Form of Warfare / Aim	Approach	Context	Aim	Means	Trinity	Use of Techno logy
4 GW	Indirect	Weak vs strong	Will of Enemy	Kinetic and Non Kinetic	Non Applica ble	High
Irregular Warfare	-do-	Weak vs strong and strong vs strong	Will of Enemy	Kinetic and Non Kinetic	Applica ble	Medium

Table 2-1: Difference of 4 GW from other forms of warfare (cont.)

Form of Warfare / Aim	Approach	Context	Aim	Means	Trinity	Use of Techno logy
Low Intensity Conflict	-do-	Weak vs strong and strong vs strong	Will of Enemy	Primarily Kinetic, sustenance through Non Kinetic	Applica ble	Low
People's War	-do-	Weak vs strong	Will of Enemy	War of ideas, Primarily Non Kinetic, Selective Kinetic	Applica ble	Low
Non Kinetic Warfare	-do-	Weak vs strong and strong vs strong	Will of Enemy	Non Kinetic	Non Applica ble	High

6. Fourth Generation Warfare

6.1 Background. Origins of 4GW theory can be traced back to John Boyd who is often remembered only for the famous OODA loop, in which a decisive advantage accrues to the side who can accomplish the cycle of observation, orientation, decision and action in the shortest time. This is partially correct, but understanding 4GW requires a more

complete understanding of Boyd's legacy in strategic theory, for 4GW papers harbour several interrelated key notions found in Boyd's paper 'A Discourse on Winning and Losing'[1]:

6.1.1 The notion of war as a dynamic process of action-reaction.

6.1.2 An emphasis on other factors than military technology for explaining success and failure, in particular the intangible – mental and moral – dimensions of fighting organizations.

6.1.3 The metaphor of the opponent as a Complex Adaptive System, which highlights the element of adaptability as a key factor for success or failure in warfare.

6.1.4 The dynamics of interaction and isolation; war is a 'game' of evolution.

6.1.5 The image of a swarm-like organization of agile, netted but relatively autonomously operating units, acting in 'synch' through a command and control set up based on implicit communication.

6.1.6 The core attributes of maneuver and moral conflict, concepts that concisely capture these themes and stand in contrast to the attritionist, force-on-force approach to warfare.

6.2 Definition. "The term argues that war is being changed from a mechanical to an information/electronic society, the blurring of lines between war and politics, peace and conflict, battlefield and safety and combatants and non-combatants while assuming that the state is now more accountable to international system and is thus losing its monopoly on violence and thus ability to conduct war". William Lind and Colonel

[1]Coloenl. Dr. Frans Osinga On Boyd, Bin Laden,and Fourth Generation Warfare as String Theory.

Thomas Hammes are the primary proponents of 4GW and theory was first time given in 1989. The environment at the time when this theory was given first was that USSR had withdrawn from Afghanistan, fall of Berlin wall and collapse of USSR was evident and by implication USA was emerging as the sole super power. A lot of confusion already ensued in the academic circles to define new wars like the one USA lost in Vietnam. In this backdrop proponent of theory first defined warfare into three neat and distinct generations throughout modern history as a result of social and political changes to justify emergence of a new generation of warfare. They also overstressed on the new generation by asserting that this last generation builds on first three but clearly differs in its intent, motivations, and approach. The four elements that proponents believe carry over into 4GW from the earlier generations are[2]: -

6.2.1 Mission orders that enable small groups of combatants to operate within the commander's intent, yet retain a necessary level of flexibility. Local flexibility directed by general guidance is essential to 4GW, which is mostly fought in a dispersed manner throughout the whole of the enemy's society.

6.2.2 A decreasing dependence on centralized logistics that facilitates the more dispersed conflict and higher tempo. 4GW warriors must be able to fend for themselves in whatever environment they operate.

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[2]William Lind, Col. Keith Nightengale, Capt. John Schmitt, Col. Joseph Sutton, LtCol. Gary Wilson, "The Changing Face of War: Into the Fourth Generation," *Marine Corps Gazette* (October 1989): 22, Hammes Thomas, The Sling and The Stone, On war in the 21st Century, Manas Publications, New Dehli, 2006.

6.2.3 More emphasis on maneuver over firepower that negates the traditional requirement of massing of soldiers and weapons. Instead, 4GW relies on employing “small, highly maneuverable, agile forces” that can blend into their environment and avoid being targeted.

6.2.4 Collapsing the enemy internally rather than destroying him physically requires that 4GW leaders have a keen ability to identify and target their enemy’s centers of gravity.

6.3 As a consequence of the elements as mentioned above, by implication enemy’s population and even the culture itself becomes the target thus blurring the line between war and politics, conflict and peace, soldier and civilian, and battlefield violence and safe zones. One more addition was made by declaring this war as non-Trinitarian thus focusing on the argument that nation states are no longer relevant as they are losing their monopoly on violence. Hence in the place of nation states a broad variety of nongovernmental entities will be fighting wars for their own purposes thus eroding sovereignty. Globalization, particularly advanced technology was dubbed as the main tool of new wars and considering that idea was floated in 1989 while present wave of globalization was still in its infancy; idea seems far-fetched and ill-placed. In the end, 4GW’s goal has been defined as to exploit an adversary’s weaknesses and undermine its strengths in order “to convince the enemy’s political decision-makers that their strategic goals are either unachievable or too costly for the perceived benefit.”

Drivers of 4th Generation Warfare from Other Formas ofn Warfare.

Fourth-generation wars are lengthy-measured in decades rather than months or years[3]". As per Colonel Hammes, although questionable, the rise of 4GW is both a product and a driver of the following: -

1. The loss of the nation-state's monopoly on violence.

2. The rise of cultural, ethnic and religious conflict.

3. Globalization (via technological integration).

1. Development in 4th Generation Warfare. Another significant advancement is found in what Marine Colonel Thomas X. Hammes calls major developments in 4th generation warfare[4], they are: -

1.1 Strategic Shift. Rise of mass Media has allowed it to become new weapon of the weak and insurgent campaigns are shifting away from military campaigns supported by information operations to strategic communications (defined as, **a systematic series of sustained and coherent activities, conducted across strategic, operational and tactical levels, that enables understanding of target audiences, identifies effective conduits and develops and promotes ideas and opinions through those conduits to promote and sustain particular**

[3] Thomas X. Hammes, The Sling and the Stone: On War in the 21st Century (St. Paul, MN: Zenith Press, 2004), 2.

[4] Thomas X. Hammes, "Fourth Generation Warfare Evolves, Fifth Emerges." Military Review (May-June 2007): 15 - 16

types of behaviour[5]) campaigns supported by guerrilla and terrorist operations. The key concept in this definition is that 4GW opponents will attempt to directly attack the minds of enemy decision makers as the only medium that can change a person's mind is information. Use of social media during current wave of unrest in Arab countries which galvanized the dissident networks and use of media by Al Qaeda and ISIS to spread their message are examples from recent past.

1.2 Organizational Shift. The emergence of civil war as a part of insurgency is based on the major organizational shift that has occurred. Civil wars were already in place before this concept arrived. The proponents further contend that rise of USA as sole super power has forced an organizational shift on its enemies and allies alike. While the world is witnessing continuous, worldwide shift of insurgencies from hierarchical to networked organizations and coalitions of the willing. The rise of networked coalitions is in line with the fact that both the societies in conflict and the dominant business organizations and global financial institutions are adapting and dispersing into networks to survive in the face of powerful monopolies.

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[5] John Williams and Kevin Marsh, Strategic Communication (book) page 41. Availabe at https://www.books.google.co.th/books?id=ZARMDwAAQBAJ&pg=PA41&lpg=PA41&dq=a+systematic+series+of+sustained+and+coherent+activities&source=bl&ots=67OLFbKxvU&sig=ACfU3U2LGAcetLwahAAiBjZC958znklmMA&hl=en&sa=X&ved=2ahUKEwjCx4-8hY3qAhVjlEsFHRuMCNwQ6AEwAnoECAYQAQ#v=onepage&q=a%20systematic%20series%20of%20sustained%20and%20coherent%20activities&f=false

1.3 Shift in Type of Participants.A change in who is fighting and why is essential to understand that, even within a single country, highly diverse armed groups that make up a modern insurgency have widely differing motivations. Studying the motivation of a group gives us a strong indication of how that group will fight and what limits, if any, it will impose on its use of force.

1.4 Operational Shift. Physical or kinetic operations no longer accrue the benefits as in earlier generations of warfare but it is now non kinetic actions which provide more dividends. Centre of gravity has shifted from the most mobile elements to popular will. Time and space now favour the counter insurgent and insurgent is not defeated till the time he has lost but counter insurgent loses till the time he has not won. All of this is challengeable as history suggests many other alternatives.

1.5 Tactics of 4th Generation Warfare. The4th generation war, according to William S. Lind, is a war between a country and non-state actors. The shape can vary, ranging from the movement of terrorists, drug cartels, the mafia gang, transnational crime syndicate, rebels, etc. who do the 'struggle' against the forces of a country, including its people while also maintaining that the 4GW tactics are not necessarily new. They are similar to standard guerrilla and terrorist tactics, but carried out with modern technology at the operational and strategic level. The 4th generation war is fought on the tactical level via rear area operations. 4GW warriors do not confront a nation-state's military but rather its society through psychological operations, use of terror and ad-hoc innovation in order use the strength of enemy against himself.

1.6 Pattern of Operations. Operations in rear areas differ from operations in forward areas, but there exists no defined battlefield in 4GW. Many groups in nations may conduct war and these wars will be fought for many reasons, some beyond the Clausewitzian explanation of war as an extension of politics by other means so these wars are not caused by confrontation of nation-state's military but they are caused by internal society disputes.

2. Psychological Operations[6]. These operations are planned to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning with a view of ultimately altering the behavior of foreign governments, organizations, groups, and individuals. In 4GW opponents will attempt to directly attack the minds of enemy decision makers. Since the only medium that can change a person's mind is information, therefore, information is the key element of any 4GW strategy. Logic bombs and computer viruses, including latent viruses, may be used to disrupt civilian as well as military operations.

3. Ad-hoc Innovation. This is using the enemy's strengths against itself. The tendency is to destroy the enemy internally rather than to destroy the enemy physically. This can be achieved, for example by pressing the base of political support, financial and material opposed to no longer continue their efforts to support the opposing force, or even hit the base to stop the war. This can be done by an attack on enemy's culture.

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[6]http://www.en.wikipedia.org/wiki/Psychological_Operations_United_States

4. Difference in Application. Fourth Generation Warfare's targets are not just soldiers, but also non-combatants, religious ideas, legal frameworks, media outlets, international agencies and agreements, economic activities, political power, and the minds of the people. Accordingly, targets are selected not just for physical destruction, but more for their mental and moral impact on an adversary.

6. Summarizing 4th Generation War. Many analysts have written about 4th GW and their approaches can be summarised as:-

6.1 Warfare has evolved through four generations : first generation, use of massed manpower, second generation, use of firepower, third generation aimed at manoeuvre, and now fourth generation of warfare which can be called an evolved form of insurgency that employs all available networks, political, economic, social and military to convince an opponent's decision makers that their strategic goals are either unachievable or too costly.

6.2 The notion of 4GW first appeared in the late 1980s as a vague sort of 'out of the box' thinking, and it entertained every popular conjecture about future warfare.

6.3 However, instead of examining the way organizations like Hamas or Hezbollah (or now Al Qaeda and ISIS) actually behave, it misleadingly pushed the storm-trooper ideal as the terrorist of tomorrow. Instead of looking at the probability that such terrorists would improvise with respect to the weapons they used—box cutters, aircraft, and improvised explosive devices—it posited high-tech 'wonder' weapons.

6.4 The theory went through a second incarnation when the notion of non trinitarian war came into vogue, but it failed to examine that notion critically. The theory also is founded on myths about the so-called Westphalian system and the theory of blitzkrieg.

6.5 The theory of 4GW reinvented itself once again after September 11, 2001 (9/11), when its proponents claimed that Al Qaeda was waging a 4GW against the United States. Rather than thinking critically about future warfare, the theory's proponents became more concerned with demonstrating that they had predicted the future.

6.6 What we are really seeing in the war on terror, and the campaign in Iraq/ Afghanistan and elsewhere, is that increased 'dispersion and democratization of technology, information, and finance' brought about by globalization has given terrorist groups greater mobility and access worldwide. At this point, globalization seems to aid the non-state actor more than the state, but states still play a central role in the support or defeat of terrorist groups or insurgencies. A fact which fourth generation theory so easily misses.

5th Generation Warfare

1. Definition.[7] The secret deliberative manipulation of actors, networks, states or any earlier generational warfare forces to achieve a goal or set of goals across a combination of socioeconomic and political domains while attempting to avoid or minimize the retaliatory offensive

[7] Eurasia Review, "5th Generation Warfare-OpEd by Imran Shahani" 4 February 2018. Accessed on 3 January 2020. Available at https://www.eurasiareview.com/.

or defensive actions/ reactions including powered actors, networks, institutions and / or states.

2. 5th Generation war might include a form of warfare that manipulates : this war is perception based warfare focused on the context of conflict. It is fought through manipulating perceptions and altering the context by which the world is perceived. Since 5GW is the manipulation of observational context in order to make the enemy do our will, an act of force is not required to manipulate observational context, and therefore force is not required to wage 5th generation warfare. It involves changing perception of adversary in our favour by changing his observations and transform them into our favour. The strategic gaol of 5GW is to fight the war with the adversary "not knowing who it is fighting". 5GW attacks the intellectual strength of insurgent adversaries, by literally denying them an enemy against which to fight.

Features of 5th Generation Warfare.

Some salient features are as follows:-

1. Violence is so dispersed that the losing side may never realize that it has been conquered.

2. The very secrecy of 5GW makes it hardest generation of war to study/ fight. Most successful 5GW are those that are never indentified.

3. 5GW attacks occur below the threshold of observation.

4. It focuses on open source warfare, systems disruption, and virtual states as a new form of political organization.

5. Actors are single individuals who perform their roles in a grand strategy without realizing their roles.

Convince, Confuse, Chaos and Conflict Concept[8].

5th generation war follows a sequential order to be launched to affect the national psyche. Target population is subjected to divisions on multiple tiers like economy, culture, religion, social norms and customs. The nation is subjected to change their mindset to accede to the interests of the state launching 5GW. It is launched unannounced and unrestricted. Launched in a unique way never known before. Who so ever, what so ever, where so ever and when so ever, is a target and engaged. Targets include children, young, old or women using all mediums including employment of pseudo operations/ sleeper cells.

Beyond War on Terror- Into 5th Generation of War and Conflict[9].

5th Generation of war has arrived and irreversibly changing the character and nature of human conflict. It requires crafting of strategies that look beyond military preparedness for past wars and embrace the perspective of national preparedness for the spectrum of future conflicts. Essential elements of war include:-

1. New domain of conflict.
2. Changing nature of adversaries.
3. Changing nature of objectives.
4. Changing nature of force.

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[8] Dr. Munawar Sabir. "5th Generation War and Pakistan" (Lecture, 6 February 2019) available at https://www.youtu.be/ N7nUXKc JCq4. accessed on 29 January 2020.

[9] Donald J. Reed, Studies in Conflict and Terrorism (Journal, volume 31, 2008), 29 October 2007, available online 14 August 2008

1. Major Approaches. The Strategist has highlighted following four approaches of 5th Generation warfare[10]:-

1.1 Networks

1.2 Combat Cloud

1.3 Multi Domain Battle. 5 Operational domains include land, sea, air, space and cyber.

1.4 Fusion Warfare

2. The proponents of 5GW assume that US in particular and other states world over in general develop robust capabilities to deal with 4th GW conflict, insurgents or terrorists ,will disperse to establish smaller networks supported by states or at their own for ideological reasons, loyalties of people will hence shift from nation states to causes. 5th GW is also called '**nets and jets war**' wherein networks are able to transport their deadly cargoes world over, due to liberalized visa regimes etc thus putting nations and societies at peril. Many argue that we are on the brink of the appearance of the Fifth Generation Warfare and cite recent anthrax attacks in US and Chemical and Biological attacks on Tokyo sub way as example. The central question is that while states still remain weak in many parts of the world in even dealing with low intensity conflicts, it seems that only very few countries are contemplating a 5th GW conflict while rest all are combating either 2nd or 3rd generation of warfare. Unlike the other generations of warfare, one cannot precisely determine the way, transition is being manifested to this new generation, however, there are certain signs, which need consideration: -

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[10] ASPI (Australian Strategic Policy Institute) Journal "The Strategist" available online.

2.1 The technological advance represented by tremendous improvements in nano and bio technologies.

2.2 The possibility of processing a large number of data in cyberspace.

2.3 The use of information to strengthen and increase the abilities of the force.

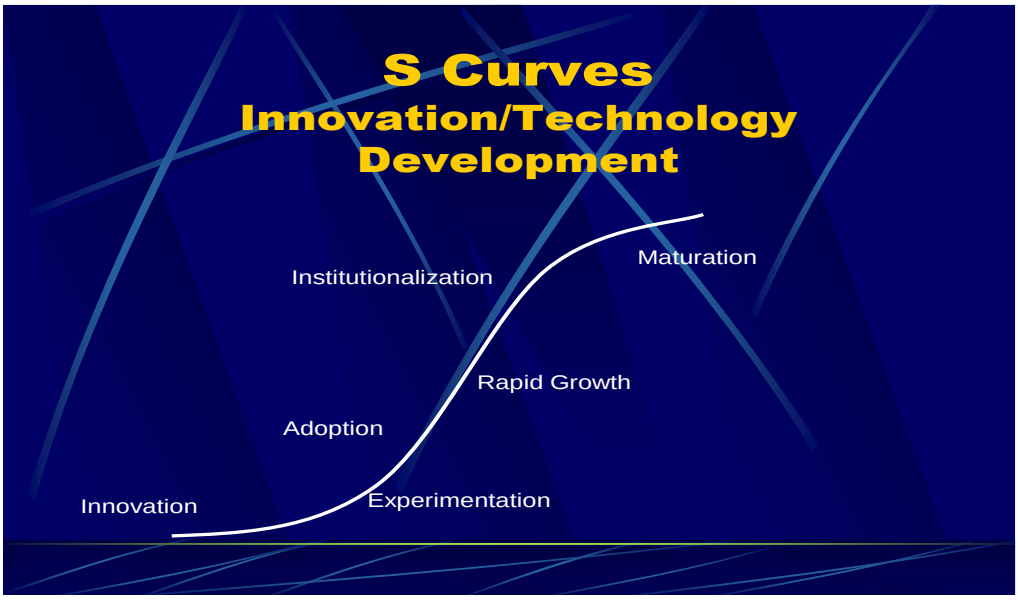
2.4 The media has become an independent, persuasive body that is more powerful than ever at international level.

S Curve Development of Concept[11].

T.X Hammes has given a S Curve development of concept of 5th generation of war. He has explained how innovation, adoption and institutionalization with experimentation, rapid growth and maturation are linked together to develop 5th generation warfare concept.

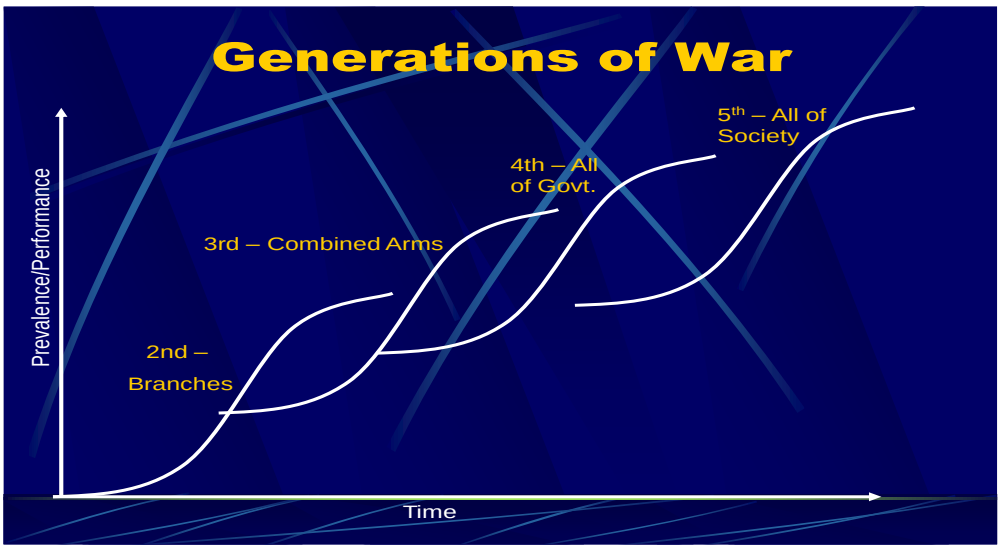
[11]https://www.slideserve.com/nhi/fourth-generation-war-evolves-fifth-emerges accessed on 6th Jan 2020

Figure 2-1: S Curve of Technical Development



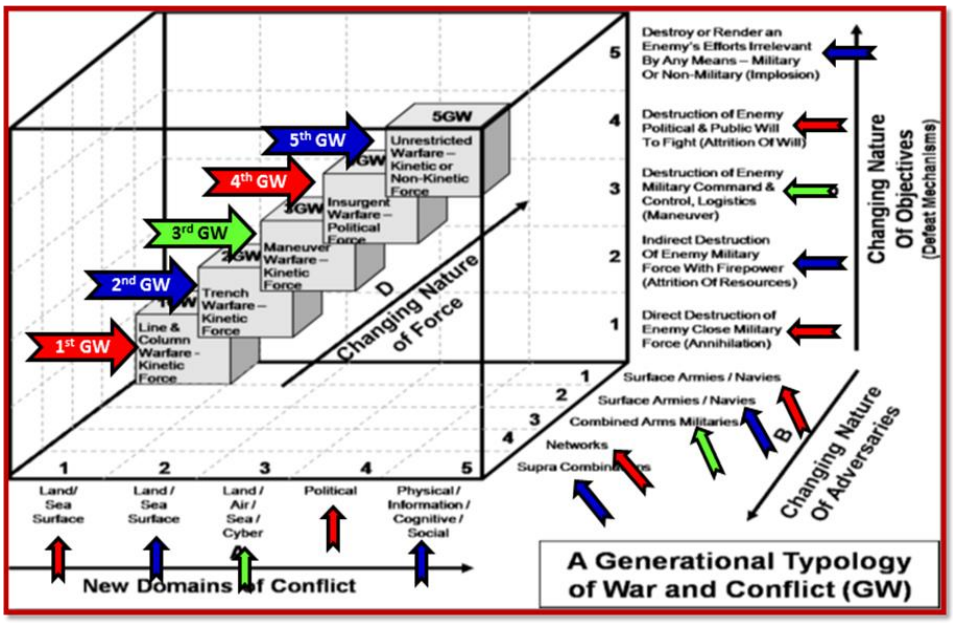
1. Overlapping Contours of Generations of War. Generations of development of warfare are overlapping in nature. When existing concept is being manifested new concept is developing in infancy. It is not always possible to draw clear lines between termination and beginning of new generation.

Figure 2-2 : Overlapping Generations of Warfare



2. A Generational Typology of War and Conflict

Figure 2-3 : Generational typology of War and Conflict



Source : Typologies of Terrorism and Political Violence Authored by: Sarah V. Marsden, Alex P. Schmid , The Routledge Handbook of Terrorism Research Print publication date: February 2011 Online publication date: February 2011

3. 5th Generation of War Incubating Now? While the 4th generation of war is being manifested in different parts of the World, 5th generation of war is incubating. It may take years to get it mature and come into full swing with all its might. Following aspects require special consideration:-

3.1 Political – Pressure on nation state.

3.2 Economic – Smaller Entities.

3.3 Social – Loyalty to cause not nation.

3.4 Technology - Bio tech, Nano-tech, Always on Net.

4. Foreshadowing. Few events give a foresight of manifestation of 5GW while use of new technologies also helps us in forecasting the likely hood of this type of war.

4.1 Attacks

4.1.1 Capitol Hill – anthrax attack - no information was available forehand.

4.1.2 London, Madrid – bombs – both had no connection among themselves but technique used was almost same.

4.2 Increasing "Cause" Attacks. Causes have become more important than the nation or country. A common cause can attach together individuals of geographically apart different nations.

4.2.1 Earth Liberation Front

4.2.2 Animal Liberation Front

4.3 Several Areas. Areas of operation have been diversified. Availability and use of cyber, nano and bio technologies have revolutionized the concept of new war.

4.4 Biological Advances. Biological advances have also helped the development of new concept of war fighting. Following need consideration:-

4.4.1 Synthetic Biology. Synthetic Biology is a field of science that involves redesigning the organisms for useful inspirational purposes by engineering them to have new abilities. Synthetic Biology researchers and companies around the World are harnessing the power of nature to solve problems in medicine, manufacturing and agriculture.

4.4.2 Australians and Mouse Pox[12]. Australian scientists have accidentally created a virus that kills mice by crippling their immune systems, and warn that the technique may threaten to produce deadlier forms of human viruses and new kinds of biological weapons. The scientists were trying to make the mice infertile, but unintentionally created a killer.

4.5 Carlson's Curve[13]. The Carlson Curve is a word to describe the DNA sequencing rate or the cost per base sequence based on time characteristics. It's a biotechnology equivalent to Moore's Law. Robert Carlson predicted that the DNA sequencing technology of doubling time will be as fast as Moore's Law. (Moore's Law refers to Moore's perception that the number of transistors on a microchip doubles every two years, though the cost of computers is halved. Moore's Law states that we can expect the speed and capability of our computers to increase every couple of years, and we will pay less for them).

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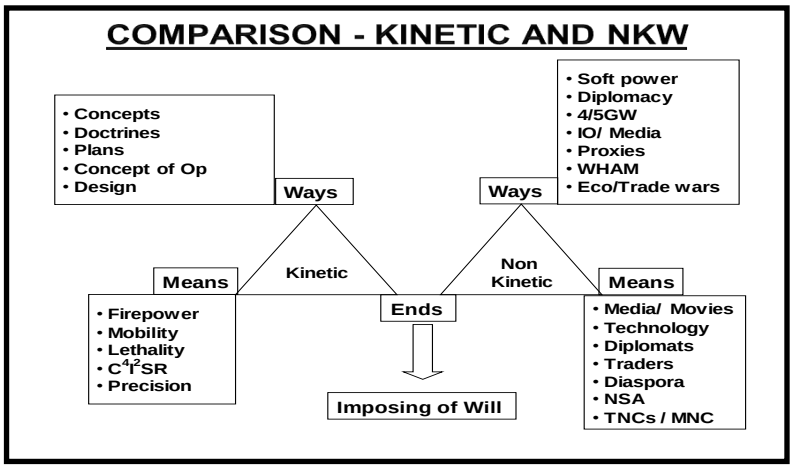
[12] David P. Fidler and Lawrence O. Gostin, Bio Security in the Global Age (book), avalilbe at https://books.google.co.th/books?id=7Oob3I7ZOQMC&pg=PT56&dq=Australians+and+Mouse+Pox&hl=en&sa=X&ved=0ahUKEwit8JiTjI3qAhXGF3IKHS1hCvsQ6AEIJzAA#v=onepage&q=Australians%20and%20Mouse%20Pox&f=false

[13]Daniel Franklin, Mega Technology, Availbel at https://books.google.co.th/books?id=zdzSDAAAQBAJ&pg=PT54&dq=Carlson%E2%80%99s+Curve&hl=en&sa=X&ved=0ahUKEwjv6KjyjY3qAhVBfH0KHXiUB_kQ6AEINzAC#v=onepage&q=Carlson%E2%80%99s%20Curve&f=false

5. Comparison of Kinetic and Non-Kinetic Components

Figure 2-4 : Comparison of Kinetic and Non-Kinetic Warfare



Conclusion.

4th Generation warfare has seen its full swing in one form and place or the other in past 3 decades. Its practice and theory has been witnessed by many in the world. Events of recent past quoted in above paragraphs are suggesting emergence of new war fighting environment. The convergence of these things proves that the changes predicted in the content of the war are not simple, and naming the Fifth Generation Warfare "**Information Warfare"** would mean an oversimplification, this representing only one of the aspects. The Fifth Generation Warfare does not anticipate clear armed forces or ideas. However, it will be what Major Shannon Beebe,[14] called "a vortex of violence", destruction full of surprises, motivated more by frustration than by coherence of plans.

[14]Major Shannon Beebe, US Army, War Is Boring. "Human Security" Strategy in Africa, 30 October 2008, available at http://www. warisboring. com/.../personal-security-strategy-in-africa/

Chapter 3

Critical Examination of 4th and 5th Generation Warfare Concept

"There always has been inter communal strife. It is a global phenomenon today, but then it always has been. We should not exaggerate its incidence."

Colin S. Gray

Introduction.

In this chapter we will critically examine the theoretical aspects related to both 4GW and 5GW. Changes in the political systems in the countries as well as on international level as a whole affected the war fighting concepts. 4GW having seen its peak in the recent past, seems to be receding due to multiple factors covered in the succeeding paragraphs. Similarly, stains of 5GW are emerging and recording its signatures in different part of the world including South Asia. 5GW is still in infancy but likely to grow exponentially due to its inherent capabilities.

Receding 4th Generation Warfare

1. Changes in Social and Political Systems. Abasic assumption made by the proponents of fourth generation warfare concerns collapse of nation states thus leading to reduced monopoly of states over violence.

1.1 Changes in generations of warfare was not result of a sudden transformation as each developed over the conflicts that preceded it.

1.2 Each new generation required developments across the spectrum of society. Technology has contributed to the change significantly.

1.3 Politically, there have been extensive changes since the end of World War II and number of states has increased from 51 in 1945 to 195 now with theoretically same importance in international system.

1.4 Rise in the number of stateless actors to include both transnational and sub-national elements that influence the international scene is another change which is eroding state sovereignty.

1.5 As the inter-state wars receded due to their global unacceptability and economic costs, states and non-state actors resorted to low intensity conflicts and proxy wars to further their political aims.

1.6 4GW theorists' also visualised contemporary terrorist groups as self-sufficient since conflicts will be waged outside the nation-state framework. However, as we have already seen in Afghanistan, Sri Lanka and Syria that is hardly the case. A number of states are clearly supporting terrorist activities while others are fighting them, states thus remain important.

1.7 In nutshell, the "end of nation state" approach is too deterministic giving an impression that it is an inescapable process.

2. Overblown Theory. On first reading of 4GW literature one gains an apocalyptic perspective, and a sense of doom for conventional forces, the nation state if not Western civilization. What the authors have in common across their individual papers is a suggestion of a world in perpetual war and a drawn out conflict with Al Qaeda, Daesh and similar extremist ideologists. It paints a picture in which western states are under asymmetric attack and constant threat of terror attacks and media manipulation while conducting bloody drawn-out counter-insurgency

operations such as ongoing in Iraq and Afghanistan. But the threat of terrorism, a threat to which 4GW often refers, is overblown. 4GW warriors are credited with universal and permanent superiority over more conventional opponents; thus overestimating their military and political strength, and paying insufficient attentions for problems of converting battlefield accomplishments into political success. Indeed, conventional military power is still successful, precisely because it deters certain nation-states and forces potential opponents into adopting modes of warfare that pose a relatively low level of risk. Interstate wars, however infrequent they may occur, are much more important, having a significantly greater impact on the balance of power. Indeed, we must contextualize the threat in the wider international system and not become victim of the 'threat of the weak' phenomenon.

3. Has the War Changed or New War is More of a Myth?

Since the Second World War, western armed forces have been most successful against opponents whose weapons, methods of organization and ways of thinking closely resembled their own. Post Second World War conflicts such as Arab – Israel Wars and Iraq Wars exemplified western militaries' excellence at defeating those adversaries who were organized on the lines of western armies. At the same time USA and USSR both lost in Vietnam and Afghanistan to guerrillas. As western hopes of cashing in on the peace dividend were dashed in Lebanon, Somalia, Rwanda, and the Balkans, academics and military professionals alike sought to explain how the world's most powerful militaries failed to defeat ragtag militias armed with the most basic of weapons. Many observers concluded that the nature of war had changed and that western armed forces had yet to make the necessary adaptations to the new

paradigm. William Lind and Thomas Hammes developed another popular form of new wars thinking and contended that the world is currently experiencing “fourth generation warfare” (4GW). Fourth generation warfare’s division of war into distinct historical categories is equally problematic, negating the fact that contemporary war is in fact a synthesis of forms. To a large extent these criticisms reflect 4GW thinkers’ tendency to mistake war’s outwardly visible variations for fundamental changes to its nature. This error has led proponents to perceive fundamental distinctions between “generations” where there are none. While war certainly has evolved and will continue to do so, these changes concern contextual factors rather than fundamental ones: the parties waging war, the objectives they fight for, and the weapons they use[1].

4. Use of History. The critiques of 4GW challenge the 4GW theorists’ uses of history. Analysts claim 4GW theorists have relied on false assumptions and faulty logic. They assert that 4GW theory is flatly incorrect and steers military thinkers in the wrong direction[2].

4.1 Firstly, peace of Westphalia did not establish a state system at all as its primary purpose was to settle the disputes between states and break Holy Roman Empire into 300 principalities which cannot qualify as states by any stretch of imagination and could hardly be called states at all. While the princes were allowed to declare war and make

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[1]Lawrence Freedman, “War Evolves into the Fourth Generation : A Comment on Thomas X. Hammes,”in Terriff, Karp, and Karp, 85; Michael EVans, “Elegant IrreleVance Revisited: A Critique of Fourth GenerationWarfare,” in Terriff, Karp, and Karp, 68-69, 71-72.

[2]Antulio J. Echevarria II, “Deconstructing the Theory of Fourth-Generation Warfare,” in Terriff, Karp,and Karp, 59.

alliances with outside powers they were not allowed to fight against the Emperor, Empire and the Public Peace. While all of this was happening, cities and coalition of cities, religious leagues and noblemen to say nothing of robbers continued to fight[3].

4.2 Secondly, it is obvious that the 4GW theorists continue to modify their theory over time, depending on the insurgents' changing tactics and use of technologies. To be valuable, theories must endure the winds of ephemeral change[4]. They cannot be written in a catch-all predictive manner and then altered as more specific circumstances arise.

4.3 Thirdly, proponents of 4GW establish a false comparison by which they conclude that most of the wars of the modern age, which they claim were characterized by firepower or manoeuvre, were narrowly focused on military power and unlike the super insurgencies of the information age, rarely involved the integration of political, economic, and social power. Yet, even a cursory review of the Napoleonic and World Wars I and II reveals that this is not true. The major wars of the 20th century also show that political, social, and economic capabilities were, in many cases, employed to the maximum extent possible[5].

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[3]Martin Van Creveld, The Transformation of War, p 192.

[4]ibid., 7.

[5]Roger Chickering and Stig Förster, eds., Great War, Total War: Combat andMobilization on the Western Front, 1914-1918, New York: Cambridge, 2000; RogerChickering, Stig Förster, and Bernd Greiner, eds., A World at Total War: GlobalConflict and the Politics of Destruction, 1937-1947, New York: Cambridge, 2005.These works are

Irregular Warfare is not only the Choice of Weak but also the Strong.

Fourth Generation Warfare theorists have also failed to note that historically most wars have usually turned into irregular warfare after the invader has defeated an adversary's regular force. In the latter half of the 19th century, the British officer, Charles Callwell, took a more systematic view of what he called "small wars"; among other things, he offered the important observation that most wars, in fact, typically devolved into irregular conflicts once an invader defeated the defender's regular forces.[6] T. E. Lawrence's exploits as a British intelligence officer in Arabia at the beginning of the 20th century highlighted, among other things, the significance of the political component of irregular warfare; guerrilla warfare was, in his view, only one-third military and two-thirds political.[7] Thus, the essential elements of irregular conflicts were identified long before Mao adopted them for the Chinese civil war. The tactics of insurgency did, after all, help the American colonies win independence from the British crown. It played an important role in the histories of many Latin American states, and in Western Europe and the Soviet Union during World War II, as well as enabling the emergence of the state of Israel in the late 1940s. Far from being merely a weapon of the weak

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part of a series that recently has problematized both the conceptand reality of total war.

[6]Charles Callwell, Small Wars: Their Principles and Practice, 3d Ed., London:Harrison and Sons, 1906.

[7]T. E. (Thomas Edward) Lawrence, Seven Pillars of Wisdom: A Triumph, London: M. Pike, 1926.

against the strong, insurgency has also been used by the strong against the strong, as it was during the Cold War when the United States and the Soviet Union sought to undermine each other's influence abroad, but to do so covertly.

Understanding Limitations of the Concept in Light of Contemporary Conflicts.

Since 4GW is essentially a sub conventional theory and as Pakistan recently had and is still having more than its fair share of insurgencies and terrorism; its validity can also be judged here. Swat and FATA (erstwhile Federally Administered Tribal Areas of Pakistan) will remain centre of attention as this is where we witnessed 4GW in action mainly as a consequence to US invasion of Afghanistan in 2001 and still Pakistan is facing 5th Generation Warfare.

1. Understanding of Clausewitzian Trinity. Proponents of 4GW called it non-Trinitarian by viewing the trinity too simplistically as an interaction among the people, the military and the government while ignoring the trinity of basic hostility (drives the desire for conflict), chance and uncertainty (makes war unpredictable and resistant to prescriptive solutions), and the purpose (element of subordination or rationality). Liberation of Tamil Tigers Elam (LTTE) was Trinitarian and was more difficult to tackle, whereas present problem is more of a law and order situation which has been accentuated by poor governance.

2. Use of Transnational Bases. The theory's proponents also speculated that the super-terrorists of the future might not have a "traditional" national base or identity, but rather a "non-national or transnational one, such as an ideology or a religion." However, from an

historical standpoint, this condition has been the norm rather than the exception. Indeed, it characterizes many, if not most of the sub conventional conflicts in Pakistan and Afghanistan where religion was and is still being used to hide the actual agenda. Although, we may disagree with the final end state these groups desire or long for.

3. Attacking the Will of the Enemy. 4GW proponents also assumed that attacking the will of the enemy will remain the main objective of the changing character of war. Throughout history, every writer from Sun Tzu to Clausewitz and besides them terrorists, guerrillas and similar actors all aimed at eroding an opponent's will to fight rather than destroying his means. We can see that during Second World War German and Japanese populations remained loyal to the end despite horrendous losses. It was only seeing this that their physical means of resistance were destroyed in order to force them to comply. During any war often both sides underestimate each other's will and keep launching one last attack to break the enemy and in the process one side stretches itself too far. Attacks in urban areas of Pakistan by TTP and Afghanistan by Al Qaeda and all other host of affiliates of Al Qaeda were aimed at attacking the will of the people and still debates resonate in the media where government and armed forces are asked to negotiate and reconcile with these groups. Attacks inside Pakistan in the past were also aimed at attacking the will and the only difference now is that through access to media and modern communication means these non-state actors enjoy enhanced access to their adversary's political will. The same can also be said, of course, for states.

4. Integration Rather than Implosion Remains the Objective. Looking at the insurgency life cycle which revolves around infection, contagion, intervention and rejection, it becomes clear that the insurgent basically follows two approaches i.e. coercion and persuasion. States still remain important as all terrorist organizations aim to create a state small or large. They first attempt at subverting an existing state and when it is established, this might be the most orderly and peaceful piece of land even in worst of the areas as we had seen in Afghanistan post 1996 after Taliban were able to bring almost complete country under their rule, integration rather than implosion hence remains the key. According to Gen Sir Rupert Smith, in his book, The Utility of Force "the dangers and costs of coercing the people" have already been discussed, and if, as history keeps showing, they are used, then the coercive measures must be maintained, or the spirit of freedom and independence will break out". Hamas and Hezbollah are even more interesting examples as they are now part of the very societies they wish to control. Rather than collapsing these societies from within, these groups have established political, social, and religious ties with the people, thereby becoming "activists for their constituents". Instead, theirs is the classic insurgent goal of trying to change the political will of the people and thus discredit their opponent.

5. Over Emphasising the Use of Technology. 4GW's proponents envisioned terrorists using technologies such as directed energy weapons and robotics, rather than cell phones and internet that terrorists actually use today. Taliban in Afghanistan and Pakistani groups inside Pakistan fought with most basic of the weapons with very little technology. Vietcongs in Vietnam and Afghans in 70s and 80s fought with even more primitive weapons but were still able to dissuade the designs of much

larger and smarter 2nd and 3rd generation armies. The fact remains that it has been proven oft number of times that common habit of referring to technology in terms of its capabilities when applied in the context of war, does more harm than good as technology aims to unite and thus present fewer issues by way of standardization but war as it is conducted amongst humans is inherently flexible and thus non-linear.

6. Overplaying Decline of State. Benbow and others such as Colin Gray believe that the 4GW proponents exaggerate the decline of the state and minimize its continuing centrality in warfare[8]. In fact, Gray finds the assumption that the power of the state is waning as the main vulnerability of the 4GW concept[9]. Although some governments are losing in the balance of power between the state and non-state actors, the "state remains central to the international system, both in supporting terrorist groups and insurgents and also in countering them"[10].

7. Old Wine in a New Bottle. Benbow then emphasizes another criticism of 4GW: the widely held belief that the concept does not identify anything truly new[11]. He reaffirms that unconventional warfare is the only form of conflict that works against strong and established

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[8]Tim Benbow, "Talking 'Bout Our Generation? Assessing the Concept of 'Fourth Generation Warfare'", (March 2008), 154.

[9]Colin Gray, Another Bloody Century: Future Warfare (London: Weidenfield and Nicolson, 2005), 145.

[10]Antulio J. Echevarria II, Fourth Generation War and Other Myths, (Carlisle Barracks, PA: U.S. Army War College, Strategic Studies Institute, November 2005), 5-6.

[11]Tim Benbow, "Talking 'Bout Our Generation? Assessing the Concept of 'Fourth Generation Warfare'", (March 2008), 163

powers. Insurgents, terrorists, and other asymmetrical fighters have always employed the best technology and methods available – at least the good ones have – and the world-wide networked one we are currently facing has learned quite well from the past[12].

8. Socio-Political Change Described as Warfare. In his work "Elegant Irrelevance : Fourth Generation Warfare," Kenneth McKenzie levels substantial criticism against 4GW, but believes its greatest fault is its assertion, the socio-political change is warfare[13]. The 4GW theorists counter by stating that the inclusion of political, cultural, social, and economic elements in conflicts has significantly changed the character of warfare. Because of these added dimensions of war, they predict a wider spectrum of conflict with an extensive range of opponents and activities, making future warfare more broad and dynamic than ever. According to Hammes, globalization and other current environmental forces have distressingly exacerbated the potential influence of asymmetric and non-state actors[14].

9. Success of Theory? There are several other valuable criticisms of 4GW that reveal some of its strengths, but also cast some doubts on the concept[15]. Tim Benbow's article "Talking about Our Generation?

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[12]Colonel Steven C. Williamson, From Fourth Generation Warfare to Hybrid War (United States Army, USAWC Class of 2009), 12.

[13]Kenneth F. McKenzie, Jr., "Elegant IrreleVance: Fourth Generation Warfare." Parameters (Autumn 1993).

[14]Tim Benbow, "Talking 'Bout Our Generation? Assessing the Concept of 'Fourth Generation Warfare'", (March 2008), 163.

[15]Tim Benbow, "Talking 'Bout Our Generation? Assessing the Concept of 'Fourth Generation Warfare' (March 2008), 152.

Assessing the Concept of 'Fourth Generation Warfare'" in the March 2008 issue of Comparative Strategy outlines many of the charges against 4GW. The first is that the 4GW theorists overstate the success of their theoretical form of warfare. Benbow cites many cases in which "so-called 4GW techniques were not successful"[16]. Historically, such adversaries have confounded Western nations, leaving them unable to adapt. However, he concludes that 4GW warriors can be confronted and overcome with a calculated policy and strategy[17]. Interpreting every social, economic, and political dispute as a vestige or act of war is misleading and perhaps dangerous, particularly if it triggers a military response[18].

Emergence of 5th Generation of Warfare

1. Has Fifth Generation Warfare Already Manifested? Despite the fact that framework of the Fourth Generation of Modern War is not very old, first appearing in print in 1989, some observers are now talking about a Fifth Generation. Some see the Fifth Generation as a product of new technologies, such as bio and nano technologies. Others define it as the state's struggle to maintain its monopoly on war and social organization in the face of Fourth Generation challengers. One reason for the confusion may be a misapprehension of what "generation" means. In the context of the Four Generations of Modern War, "generation" is shorthand for a dialectically qualitative shift. In the words of William S.

[16]ibid., 153.

[17] ibid.

[18] Lawrence Freedman, "War Evolves into the Fourth Generation : A Comment on Thomas X. Hammes." Contemporary Studies Policy (August 2005), 259.

Lind, there were only three generations in the field of warfare since the modern era began with the Peace of Westphalia; the Fourth marks the end and emergence of 5th generation.

2. The Loss of the State's Monopoly. The loss of the state's monopoly, not only on war but also on social organization and first loyalties, alters everything. One simple test for whether or not something constitutes a generational shift is that, absent a vast disparity in size, an army from a previous generation cannot beat a force from the new generation. The Second Generation French Army of 1940 could not defeat the Third Generation Wehrmacht, even though the French had more and better tanks than the Germans. Following the false notion that war's outcome is usually determined by superiority in equipment could be deadly as Martin van Creveld's book Technology and War makes a strong case that technology is seldom the determining factor. While it is true that tools can augment concepts, the core concepts do not change and arguably dictate the development and implementation of said tools.

3. Transition to 5GW Seems Probable in Future. Even though most developed countries are still not able to effectively deter the terrorists to the extent that they are forced into smaller networks linked to their ideologue, this transition seems probable in future. Availability of nano and bio technologies to the terrorists also supports validation of 5th GW as Anthrax attack in USA and sporadic incidents elsewhere. The threat looms large and if terrorists are able to develop these technologies, prophecies of doom might come true. Though, technology alone cannot be the harbinger of a new generation of warfare but it has support from more enduring idea of war fighting. Access to more lethal technologies thus

might see irregular warfare transiting to a new height and transforming into a new generation of warfare.

4. Transition to Next Generation. Current events suggest that there are a number of ongoing major developments in warfare: a strategic shift, an organizational shift, and a shift in type of participants.

4.1 Strategic Shift. Strategically, insurgent campaigns have shifted from military campaigns supported by information operations to strategic communications campaigns supported by guerrilla and terrorist operations.

4.2 Organizational Shift. The emergence of civil war as a part of insurgency is based on the major organizational shift that has occurred since Mao formulated his concept. It reflects the continuous, worldwide shift from hierarchical to networked organizations. While the Chinese and Vietnamese insurgencies were hierarchies that reflected both the social organizations of those societies and the dominant business and military organizations of the time, recent insurgencies have been networked coalitions of the willing.

4.3 Shift in Participants. Even within a single country, the highly diverse armed groups that make up a modern insurgency have widely differing motivations. These motivations can be reactionary, opportunistic and ideological as well.

5. Comparison between 4th and 5th Generation Warfare

Table 3-1 : Comparison of 4th and 5th Generation Warfare

Details	4th Generation	5th Generation
Approach	Indirect/ direct	Indirect
Context	Weak vs strong and strong vs strong	Strong vs strong
Aim	Will of Enemy	Psychological subjugation
Means	Kinetic/non kinetic	Non Kinetic
Use of Techno logy	Yes	Very High
Domain	Mostlty physical	Psychological
Secrecy	Less secret	Very secret
Main Target	Dicision makers	Complete population

Conclusion.

Changes in generations of warfare are overlapping as each developed over the conflicts that preceded it and as a result of changes in society and not technology alone. Nation states and societies are under duress but there is no evidence that they are giving up the space in favour of a supranational global state or non-state actors. It is true that sovereignty is being challenged but how it will turn out is still unclear. Fourth generation looks at insurgencies as warfare as it happened for the first

time in the history whereas they have been happening since recorded history. It is to be understood that terror is not sustainable politically in the long term as there are many variables which have not been adequately understood. Technology has opened new vistas, these technological advances and technology is backed up with new ideas to fight wars and thus relegate 2nd and 3rd generation armies to the dustbin of history. Clausewitzian trinity still remains applicable as any violence without a political cause is simple criminality. The more lethal mistake is in treating all on going sub conventional conflicts as fundamental extremism or only terrorism thus resulting into a vortex of senseless violence bordering on madness. Future conflicts like in the past will focus on transnational bases and will aim at breaking the will of the enemy, technology by way of control over Information operations will enhance access to Enemy's will. Use of coercion is and will lose its space as societies generate their responses to counter extremist ideologies, integration will hence remain an important objective of future insurgents. Fifth generation seems better conceptually but again it's over reliance on technology as the main driver instead of social and political changes misses the point that warfare evolves as a result of social and political changes. As insurgencies evolve and new tools are made available they are bound to be used by insurgents, as well as states. So their use by adversaries is likely to be increased overtime and conflicts may become less lethal in physical domain but more and more lethal in psychological domain. Every state is cognizant of other states' devastation of conventional and nuclear weapons (for nuclear capable states). Hence, they instead of conventional warfare would use 5GW to secure their political interests. Conventional war by all means will destroy or affect the entire world but 5GW will save the world from

complete destruction and hence, will encourage the states to use 5GW. The USA is increasingly using innovative technologies as a cyber warfare to accumulate worthwhile data of the world. It is crystal clear, the more a state is advanced in research technology the better they will steal a march on the other vulnerable states of the world and thus creating qualitative edge to indulge/ launch 5GW. Attacks in cyber domain can disable official websites and networks, disrupt or disable essential services, steal or alter classified data and cripple financial systems & electricity grids, among other possibilities. 5GW is a kinetic application tool of Smart Power which, while remaining under full blown military / kinetic applications, works to convince enemy's political decision makers that their strategic goals are either unachievable or too costly for the perceived benefits. HAARP Theory proposes tampering of ionosphere & geo-physical domain for purposeful military and civilian application. Visible signs of its manifestation exist in terms of weather and geophysical manipulations. Mind Control Sciences Theory revolves around making a deliberate attempt to manage public's perception on a subject through sensitization. Although in its early stages of development, it is a potent threat for the future. Extremely Low Frequency (ELF) Weapons use radio waves as a weapon to create incapacity and disruption without resorting to destruction. 'Directed Energy' weapons are the newest in the range of destructive weapons but with tremendous potential and range of utility. Applications in this domain are presently experimental in nature but fast reaching operational status.

Chapter 4

Evolving Character of Future Wars And It's Politico – Military Dimensions

"Clausewitz portrayed the nature of war in terms of three tendencies, or forces: basic hostility or violence concerns the people, which if unchecked would make war spiral out of control; chance and uncertainty concerns the commander and his army, which defy prescriptive doctrines and make war unpredictable; and the attempt to use war to achieve a rational purpose (rationality) concerns the government, to direct it towards an end"[1].

Introduction.

While war certainly has evolved and will continue to do so its nature i.e. violence has remained unaffected. But the changes in character of warfare in general and 4GW in particular have also been more contextual rather than fundamental, i.e. the parties waging war, the objectives they fight for and the weapons they use. Developing better understanding about evolving character of war will thus require better insight into the human nature, reasons for future conflicts and options available with future warriors might it be states, state sponsored non state

[1]Antulio J. Echevarria II, Fourth Generation War and Other Myths (Carlisle Barracks, PA: U.S. Army War College, Strategic Studies Institute, November 2005)

actors or independent non-state actors in pursuit of their political interests. This chapter will provide details about future wars, wars in ASEAN and likely future environment in ASEAN.

Understanding Human Nature.

A better understanding of human nature is also necessary to find gaps in the existing theories. Goal of humans according to social scientists is to Survive, survive on own terms, or improve their capacity for independent action. The competition for limited resources to satisfy these desires may force one to: diminish adversary's capacity for independent action, or deny him the opportunity to survive on his own terms, or make it impossible for him to survive at all. Thus by implication Life is conflict, survival, and conquest. In examining these many points of view one is feels the notion that:-

1. It is advantageous to possess a variety of responses that can be applied rapidly to gain sustenance, avoid danger, and diminish adversary's capacity for independent action.

2. The simpler organisms—those that make-up man as well as man working with other men in a higher level context—must cooperate or, better yet, harmonize their activities in their endeavors to survive as an organic synthesis.

3. To shape and adapt to change one cannot be passive; instead one must take the initiative.

4. Put more simply and directly: the above comments leave one with the impression that variety/ rapidity/ harmony/ initiative (and their interaction) seem to be key qualities that permit one to shape and adapt to an ever-changing environment.

Why States and Non States Go to War[2]?

In order to put the discussion in the right perspective, it is important to understand that why nations and societies go to war. According to Martin van Creveld, states and non-states go to war for following reasons:-

1. States. Fear, honour and interests; policy (Politik) : cost/ benefit calculations and failure of diplomacy.

2. Non-States (and Sometimes States)

2.1 Grievances, objectives, glory of individuals/status in tribe.

2.2 Obtaining the spoils of war: booty, slaves, territory, women, which override and complicate any pursuit of tribal/community "policy".

2.3 Obtaining prisoners for religious or culinary reasons.

2.4 Doctrinal differences.

2.5 Other "will of God" reasons.

2.6 Justice: avenge perceived wrongs; community honor (e.g., Trojan War).

2.7 Assist an ally (WW I and to some extent WWII).

3. Everybody. Existence, either as a group (insurgency) or as a state.

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[2]The Reasons for Wars – an Updated Survey, Matthew O. Jackson and Massimo Morelli, Revised: December 2009.

Global Shifts Impacting on the Conduct of Warfare

1. Rise of New Wars as a Result of Global Shifts. New and significant intellectual constructs generally surface when complex threats arise and when fundamental changes or shifts become apparent. These theories are essential in helping to interpret and deal with a new reality that seems to deny older theories. Over the past two decades, many prominent scholars have evaluated the changing strategic environment's significance for future conflict. Some have engaged in the 4GW dialogue, many have not for reasons already discussed. However, all have contributed to the understanding of the new global context, showing how non state actors whether or not supported by states intend to fight in the future when wars between states are becoming irrelevant in the new global environment[3].

2**. Probability of Conventional Wars**. Conventional wars as known to be state on state wars had most profound impact on societies and off late especially after emergence of uni-polar world their probability has decreased in countries and societies which are more integrated with global systems i.e. much of the globe less sub Saharan and central Africa as a result of factors like complex interdependence, non-affordability of economic costs of a war, advent of nuclear weapons and argument that force has not produced the results necessary to succeed in current or

[3]Colin S. Gray, "How Has War Changed Since the End of the Cold War?" Parameters, 35 (Spring 2005),19.

future conflicts. General Rupert Smith in **The Utility of Force**[4]adds that conventional force-on-force war no longer exists. But since expression of interests' remains important to states and societies especially when stakes are high, people, particularly selected segments of the population, are becoming the battlefield and the objective of the conflict and hence states and non-states are increasingly engaging in proxies. It is also considered that as uni-polar world gives in to a multi-polar world, interstate wars could return. States as a result might seem to be giving up to a supra national state at this point in history, but will still play a central role in the support or defeat of terrorist groups or insurgencies and will certainly regain their place in multi-polar world.

Establishing Motivations for Future Wars

1. Political Reasons. Mary Kaldor, author of **New and Old Wars**, assigns many 4GW attributes to her "New Wars"[5]. She sees future wars as highly focused on the political element, waged in the context of the disintegration of states and the spread of globalization. Violence employed by networks of state and non-state actors is frequently directed against civilians with the intent to undermine the current order and construct new sectarian identities. The new political communities emerge

[4]The premise that winning popular support has become of central importance in contemporary warfare iswell-argued in Rupert Smith, The Utility of Force: The Art of War in the Modern World (London: Penguin Books,2006).

[5]Kaldor, "Elaborating the 'New War' Thesis," 220; Van Creveld, 155.

along divisive lines through the creation of fear and hate, thereby continuing the cycle of conflict. New wars will have much in common with the wars in the pre-modern period of Europe[6].

2. Economic Reasons. Another useful work on future war includes Karen Ballentine and Heiko Nitzschke's **Beyond Greed and Grievance**, which focuses on the importance of economic agendas in warfare[7]. They discuss how grievances – real or perceived – can lead to powerful economic motives and agendas. The basic point here to note is that it has always been about the economy first and foremost and it is screened by narratives based on culture, religion and social ideologies to be ultimately followed by desire for political power, hence all future wars might initially be for economic riches but will ultimately be fought for political power. The face might change but basics will remain the same. The spread of globalization has amplified economic differences by increasing awareness in developing countries.

Combination of Political, Social and Strategic Contexts. In **Another Bloody Century: Future Warfare**, Colin Gray[8] warns us that "the character of warfare in a period is shaped, even driven, much more by the political, social, and strategic contexts than it is by changes integral to military science." Because of the anticipated further blurring of warfare categories, he asserts that war cannot be separated from these other

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[6]ibid

[7]Beyond Greed and GrieVance:Policy Lessons from Studiesin the Political Economyof Armed Conflict by Karen Ballentine and Heiko Nitzschke.

[8]Colin S. Gray, Another Bloody Century : FutureWarfare (London: Weidenfeld and Nicolson, 2006).

contexts. What he is saying is that defence establishments therefore must stop attempting to develop military solutions to the challenges they are likely to encounter as mostly they feel comfortable in application of military technologies they have mastered for use against a conventional enemy rather expand their horizon by seeing the futility of military means in any future war being fought in political and social contexts. Danger, exertion, uncertainty and chance remain permanent characteristics of war, but clever adversaries will evade the strengths of transforming military systems. Since the U.S. is still the world's lone super power, there is a natural tendency for nations and other groups to challenge its strength as this is a political power game which is being fought since recorded history. However, because the modern states especially U.S. retains such a large imbalance of military power; potential rivals will avoid any actions that might lead to direct hostilities. In the short term, this ensures that adversaries will engage the present global order and its custodians asymmetrically or through proxies. But "when great-power rivals feel able to challenge global hegemony, "interstate war will return."

How the Future Wars will be Fought?

1. Future Warriors. Predicting some of the capabilities of future warriors, Richard Shultz and Andrea Dew in ***Insurgents, Terrorists and Militias***[9], believe that these armed adversaries will be very flexible, adaptable and able to perform diversified operations. In fact future warriors are likely to be super-empowered individuals able to fight

[9]Insurgents, Terrorists, and Militias: The Warriors of Contemporary Combat Richard H. Shultz and Andrea J. Dew published in June 2006.

independently in very small groups, a refined form of today's not very well integrated insurgents who tend to present larger targets thus increasing their vulnerabilities manifold. These super – empowered individuals will not only understand the tactical aspects of fighting very well but will also have complete understanding of the strategic and operational contexts as was seen in Mumbai Attacks wherein these non-state actors brought two nuclear powers to a virtual showdown and in the process gained valuable time to protect their vital assets by relocating them against an impending offensive by Pakistan Army in Swat and South Waziristan Agency. Another characteristic of future warriors will be their understanding of social contexts as we see in the case of Hamas, Hezbollah and many banned organizations in Pakistan who are vying to win over the population by running schools, welfare centres, hospitals, charities and even day care centres with the ultimate aim of projecting their political aims. Ability to use violence where deemed necessary also adds strength to their causes. This morphing into societies presents a challenge to Nation states who might not be able to stop it from spreading for the fear of public backlash.

2. Ability to Conduct Unrestricted Warfare. Qiao Liang and Wang Xiangsui in **Unrestricted Warfare**[10]assert that future warfare will

[10] Qiao Liang and Wang Xiangsui, Unrestricted Warfare, Beijing, China : People's Liberation Army Literature and ArtsPublishing House, February 1999. Other particularly valuable publications are Michael EVans, "From Kadesh to Kandahar:Military Theory and the Future of War," Naval War College Review, Summer 2003; Frank Hoffman, Hybrid Wars, Arlington, VA: Potomac Institute for Policy Studies, 2007; Australian Army, Complex Warfighting, Army Headquarters, Canberra

not be limited to the military realm. Instead, adversaries will employ unlimited measures – military, economic, informational alike. They will attack from all directions – from outside a nation, from within a nation and its people, through air, space and cyberspace. A multidimensional coordination by the military, government, corporations and private entities will conduct synchronized operations to completely destroy the enemy or they will use their collective power to assume control of a particular strategic entity or process. Operations will hence occur across the entire spectrum of conflict, leading to a form of hybrid war where adversaries attempt to simultaneously employ traditional, disruptive, catastrophic and/or irregular capabilities to attain their objectives and adversaries using a full range of capabilities, including all political, economic, informational and military means available. In doing so, both sides will not be bound by limits on the use of violence as these groups will wage war increasingly among indigenous populations rather than around them and outcomes will be measured in terms of the effects on the populations.

Understanding Insurgencies

1. Difference between Terrorism and Insurgency. Since intra state wars are on the rise and conventional wars are declining in importance, it is important to understand difference between terrorism and insurgency to develop matching responses. The distinction between terrorism and insurgency is not merely theoretical, as the appropriate

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ACT 2003; and U.S. Joint Forces Command, Joint Operating Environment : Trends and Challenges for the Future Joint Operating Force through 2030, Norfolk, VA, 2007.

responses to the two phenomena are very different. Neither academic nor government experts can agree on a suitable definition for terrorism. The US Department of Defence's (DOD) definition focuses on the type of violence employed (unlawful) towards specified ends (political, religious or ideological)[11]. Examples are 1970s groups such as the Baader-Meinhof Group, the Italian Red Brigades and the Japanese Red Army with little apparent link to any mass movement or insurgency. Definitions of insurgency have similar difficulties. US DOD defines the term as "an organized movement aimed at the overthrow of a constituted government through use of subversion and armed conflict[12]." Examples are Nelson Mandela and Xanana Gusmao who are accepted by mainstream society. We see insurgents as using violence within an integrated politico-military strategy, rather than as psychopaths. Politically, in many cases today, the counter-insurgent represents revolutionary change, while the insurgent fights to preserve the status quo of ungoverned spaces or to repel an occupier – a political relationship opposite to that envisaged in classical counter-insurgency. Pakistan's campaign in Waziristan since 2003 exemplifies this.

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[11]"Terrorism - the calculated use of unlawful violence or threat of unlawful violence toinculcate fear; intended to coerce or to intimidate governments or societies in the pursuit ofgoals that are generally political, religious, or ideological." Department of Defense, Dictionary ofMilitary and Associated Terms, Joint Publication 1-02 (Washington, D.C.: Department ofDefense, 12 April 2001), 428.

[12]Department of Defense, Dictionary of Military and Associated Terms, 207.

2. Terrorist and Insurgent Structures. Thus, insurgencies combine violence with political programs while terrorists may pursue political, even revolutionary goals, but their violence replaces rather than complements a political program. Insurgencies normally field fighting forces larger than those of terrorist organizations. Terrorist operate in smaller and isolated teams not organized into a formal military chain of command. Insurgent forces are often more overt in nature as well, especially in the sanctuaries or zones, which they dominate. Terrorist organizations, which tend towards extreme secrecy and compartmented cells to facilitate security, seldom replicate an insurgency's political structure.

3. Use of Terror. One characteristic that does not serve to distinguish terrorism from insurgency is the use of terror tactics. Terrorists and insurgents may employ exactly the same methods, and utilize force or the threat thereof to coerce their target audiences and further the organizational agenda. Both groups may threaten, injure, or kill civilians or government employees by using an array of similar means[13]. However, the terror insurgents employ is more tactical in nature, since it is only one

[13]The distinction between terror and terrorism is a common theme in the writings of Dr.Thomas A. Marks, perhaps the foremost authority on Maoist insurgency. See for example his exposition on the use of terror by the Philippine insurgents of the New People's Army in ThomasA. Marks, Maoist Insurgency since Vietnam (London: Frank Cass, 1996), 151-173.

of several violent tools such groups wield[14]. This underscores the point - a variety of agents, including states, insurgents, or even criminals as well as terrorists may employ the same techniques of terror.

4. Difference in Application. Terrorists, in an age of transnational cooperation and access to weapons of mass destruction, have the means to unleash catastrophic attacks on modern societies that dwarf even the terrible blows of 9/11. Terrorists are physically and psychologically removed from broad popular support. Insurgents represent both apolitical and a military challenge. They combine an ideologically motivated leadership with an unsatisfied citizenry (the so-called 'grievance guerrillas') into a challenge to existing governments. Only a war of ideas can confront and defeat ideologies. Al-Qaeda represents not terrorism, but an insurgency featuring a Salafist theology which appeals to significant portions of Muslim believers and which sanctifies terror.

5. Insurgent Strategic Approaches.Current doctrine identifies four basic strategic approaches: conspiratorial, military focus, protracted popular war and urban warfare.

5.1 The conspiratorial strategy seeks to remove the ruling authorities through a limited but swift use of force and favours quick decisive action and external support is generally not a major consideration.

5.2 Another strategy that relies heavily on a small armed group with little external support is the military focus strategy, or guerrilla "Foco," developed by Fidel Castro and Che Guevara in the

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[14] Lawrence Freedman, "Terrorism and Strategy," in Terrorism and International Order, Lawrence Freedman, Christophere Hill, Adam Roberts, R.J. Vincent, Paul Wilkinson and PhilipWindsor (London: Routledge and Kegan Paul Ltd., 1986), 58.

1960's. This strategy relies on a small guerrilla focus, or Foco, to take up arms and become the nucleus of a popular army. Needless to say, a weak government seems to be a necessity for the success of the Foco strategy. It is debatable if Castro would have had as much success had he not faced the profoundly divided and weak Batista government. Che Guevara's spectacular failure in Bolivia only illustrates that any reasonably strong government would take resolute steps to eradicate any insurgency that threatens their political system.

5.3 The third primary insurgency strategy is the strategy of protracted popular war and is conceptually the most elaborate and perhaps the most widely copied strategy. Although this strategy has existed for thousands of years, Mao is considered the primary architect of this strategy for his successful Chinese Communist victory. Mao offered insurgents around the world a cohesive, systematic blueprint for their own struggles against colonial occupiers or oppressive indigenous regimes. Insurgencies utilizing this strategy must gain and maintain extensive popular support to have any chance for ultimate victory.

5.4 Urban approach is relatively new and uses the principles of all three strategies outlined earlier to win over urban centres.

6. Insurgent Strategies. Two basic insurgent strategies: mass mobilization (best illustrated by Mao Tse-Tung's people's war construct) and armed action (featuring either rural based Foco or urban warfare oriented styles). Al-Qaeda exhibits an interesting blend of both insurgent strategies. Primarily Bin Laden's movement employs the urban warfare version of the armed action strategy. Certainly most of the group's activities have been military rather than political in nature. The insurgent challenges the status quo; the counterinsurgent seeks to reinforce the state

and so defeat the internal challenge. This applies to some modern insurgencies — Southern Thailand, Sri Lanka and Colombia are examples. But in other cases, insurgency today follows state failure, and is not directed at taking over a functioning body politic, but at dismembering or scavenging its carcass, or contesting an "ungoverned space". Chechnya, Somalia and East Timor are examples of this. In other cases (like Afghanistan) the insurgent movement pre-dates the government. The trans-national character of modern insurgency is also new. Classical-era insurgents copied each other (for example, the Algerian FLN copied the Viet Minh, and EOKA copied the Jewish Irgun Zvai Leumi). But each movement operated in its own country, emulation typically happened after the event, and direct cooperation between movements was rare. Thus classical theory typically regards insurgency as something that occurs within one country or district, between an internal non-state actor and a single government. This is reflected in official definitions of insurgency. By contrast, in the field today we see real-time cooperation and cross-pollination between insurgents in many countries. Ayman al-Zawahiri has referred to a four-stage strategy in Iraq, involving expulsion of U.S. forces, creation of an Islamic Emirate in Sunni areas, its extension to neighbouring countries and then attacks on Israel. This goes far beyond classical single-state insurgent goals. AQ operatives pass messages between Pakistan, Afghanistan, Iran and Iraq. Improvised explosive devices (IEDs) that first appear in Chechnya proliferate to Iraq and Afghanistan. Iranian IED technology appears in Iraq and Afghani extremists operate in Pakistan. Insurgents in Iraq mount operations in response to events in Lebanon, and conduct attacks in Jordan. Southeast

Asian insurgents apply methods developed in the Middle East, which circulate via the internet or on CD-ROM.

7. Mass Mobilization. It is best exemplified by the people's war waged by Mao Tse-Tung's Chinese communist party (CCP). People's war emphasizes politics over military considerations. Accordingly, Mao's strategy is designed to build strength in a gradual fashion rather than seize power in a lightning strike. Key operational elements of that strategy include the mass line, the united front, political warfare, covert infrastructure, protracted war and international support. The mass line is a feedback mechanism that translates the people's complaints into elements of the party's pronounced policy. The united front is a broad assemblage of social movements, political parties, and trade organizations that also oppose the existing government. The insurgency makes common cause with these organizations when convenient and looks to infiltrate and subvert as many as possible in a bid to broaden its own base and power. Political warfare – the concerted use of soft power (such as propaganda, public diplomacy and subversion of the enemy's political or media elements) – is used to enhance the party's own political position while undermining that of the enemy. Infrastructure is the covert "shadow government" that is built and employed to gradually wrest control of the population from the existing government. This infrastructure is also the primary link between revolutionary leaders and their followers – it is the mechanism by which control of the human terrain is forged. Protracted war, perhaps the most well-known of Mao's devices, makes a virtue of military weakness by starting with local guerrilla forces and then developing them into larger, more capable mobile formations and ultimately regular units that engage the enemy in conventional combat. International support

is the final pillar in the Maoist strategic construct. It stresses the importance of external diplomatic, military and economic assistance for the insurgency and/or hindrance of the target government.

8. Armed Action. The armed action option subordinates political to military considerations. Mobilization of the population and patient development of covert infrastructure do not play critical roles in this strategy. Instead the operational link between grievance-inspired followers and ideology-driven leaders is the campaign of violence itself in this style of insurgency. Subcategories of this approach include rural-based foco insurgencies and urban warfare insurgencies. The former is best illustrated by the Cuban revolution. Foco insurgencies are marked by a relatively small military force that commences guerrilla operations and recruits additional membership via the success of its military strikes. These strikes create new and exacerbate existing grievances of the people. Foco strategies have not been particularly successful outside of Cuba; they lack the staying power that mass mobilization provides and have no reserve manpower available to tap following catastrophic military setbacks. The urban warfare variation of the armed action strategy features raids, bombings, assassinations and sabotage against political and economic targets in the target country's leading cities. The goal is to create chaos and discredit the government in the eyes of its people. The population's loss of confidence in the government's ability to provide the first mandate of its charter – security for its citizens – may lead the citizenry to side with the insurgents. This strategy is clearly at work in contemporary Iraq. Otherwise this style has proven as barren as its foco counterpart because effective police and security forces have been able to either mitigate or destroy urban insurgents. Swat, South Waziristan Agency, Bajaur,

Mohmand and Khyber Agencies of Pakistan and Southern Thailand represent examples of armed action from our environment.

9. Al Qaeda's Model of Insurgency. Finally, Al Qaeda's model of insurgency is much more complex as it has never been replicated in the history and for this reason it is important to understand its model. Transnational appeal coupled with intelligent use of every known insurgent strategy in the history makes it unique, while ability to swarm existing state structures by creating and mobilizing local affiliates makes it extremely lethal. Al Qaeda's model instead of relying only on rural or urban insurgency employs both of them at one time. First of all, Al Qaeda establishes its operating bases in a failed state and then attacks a failing state. Population, government and armed forces are then simultaneously attacked in the target state to break their trinity with the aim of demoralizing LEAs, discrediting government and winning over people initially through coercion and later through integration. At the same time, all those states which can assist target state in recovering itself are also attacked in order to keep them out of the conflict and isolate the target state. Attacking Pakistan with its bases in ungoverned spaces on Pak – Afghan border is the case in point. The tactic also explains moving of Al Qaeda to Sahel and Maghrib besides establishing bases in Yemen and Iraq. Within a state it aims at exposing the core by attacking the LEAs (law enforcement agencies) and government in peripheries and thus forcing a state to collapse under pressure. Ayman al-Zawahiri has referred to a four-stage strategy in Iraq, involving expulsion of US forces, creation of an Islamic Emirate in Sunni areas, its extension to neighbouring countries

and then attacks on Israel[15]. Al Qaeda mostly works through regional organization and in fact appears to function more like a tribal group, organized crime syndicate or extended family, than like a military organization[16].

10. Differences in Classical, Present and Future Insurgencies. Today's insurgencies differ significantly from those of the 1960s. Few differences are as follows:-

10.1 Historically, insurgencies would be limited to a certain area, however with technology and globalization all future insurgencies will have transnational character like Al Qaeda.

10.2 Increased fusion as a result of technology will allow national and transnational actors to swarm a state from within besides isolating it from international support.

10.3 A number of insurgent groups with entirely different motives can co-exist in a space to fight against a counter insurgent through what can be called marriage of convenience. Counter-insurgent must control the overall environment rather than defeat a specific enemy.

10.4 Insurgents may or may not be seeking to overthrow the state, may have no coherent strategy or may pursue a faith-based approach difficult to counter with traditional methods.

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[15] English Translation of Ayman Al Zwahiri's letter to Abu Musab al-Zarqawi', The Weekly Standard,12 October 2005, http://www. weeklystandard.com/Content/Public/Articles/000/000/006/203gpuul.asp.

[16] Research on Al Qaeda operational patterns tends to support this view. See DavidRonfeldt, 'Al Qaeda and its Affiliates: A Global Tribe Waging Segmental Warfare?', inFirst Monday 10/3 (March 2005), at5http://firstmonday.org/issues/issue10_3/ronfeldt/index.html4.

10.5 The actions of individuals and the propaganda effect of a single narrative may far outweigh practical progress as was observed time and again in SWA and Swat thus making job of counter-insurgent even more difficult.

10.6 Increased interference by global powers in developing countries to deny safe havens and resultant actions might portray armed forces as initiators of the conflict by the population. Insurgent thus might gain initially more traction in societies by portraying themselves as victim instead of monster.

10.7 In the classic insurgencies, insurgent was dependant on population for his economic support and would generally levy taxes or collect money etc. The present and future insurgents are likely to be wealthier through donations and foreign support and may even support the population thus changing the economic relationship between insurgent and population.

10.8 Insurgent tactics and weapons like IEDs, remote control bombs and sniping etc will target security forces and also the population closer to them more effectively. Population may hence become vary of presence of security forces in their neighbourhood and on their roads thus invalidating efficacy of some classical tactics like patrolling.

Compound Wars[17]

Compound Wars as Norm of History? 4GW can be observed evolving into either Compound or Hybrid Wars. In fact, "historians have noted that many if not most wars are characterized by both regular and irregular operations"[18]. When a significant degree of strategic coordination between separate regular and irregular forces in conflicts occurs, they can be considered "compound wars." Compound wars are those major wars that had significant regular and irregular components fighting simultaneously under unified direction. The complementary effects of compound warfare are generated by its ability to exploit the advantages of each kind of force and increase the nature of the threat posed by each kind of force. The irregular force attacks weak areas, compelling a conventional opponent to disperse his security forces. The conventional force generally induces the adversary to concentrate for defence or to achieve critical mass for decisive offensive operations. One can see this in the 1971 India – Pakistan war in now Bangladesh in which Pakistan Army was forced to disperse through unconventional attacks by Mukti Bahini on softer targets and thus when India attacked through its conventional forces, Pakistan Army could not achieve required concentration in right time and right place while Indians were able to generate critical mass for offensive operations, the outcome was thus only matter of time. In his book *Triumph Forsaken*, Mark

[17] Thomas Huber, Compound Wars: The FatalKnot (Fort Leavenworth, KS: Command and GeneralStaff College, 1996).

[18] Ibid.

Moyer[19] explains the Vietnam War as a compound war. The North Vietnamese very effectively employed a combination of irregular forces of Vietcong and conventional forces of North Vietnamese Army to achieve their desired end state. The ambiguity between conventional and unconventional approaches vexed military planners for several years. Even long afterward, Americans debated what kind of war they actually fought and lost[20].

But as you will note that in compound wars normally unconventional and conventional forces rarely attacked a single objective and were lacking in fusion. This weakness thus allowed defender to take on both forces one at a time thus increasing chances of his success or resulting into prolonging the war with adverse effects on both opposite conventional and unconventional forces. Both Colin Gray and Max Boot argue that there is going to be a further blurring of warfare categories. This blending of capabilities is being hailed as **Hybrid or Sub Conventional Warfare[21].**

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[19] "Hybrid vs. Compound War: The Janus Choice of Modern War: Defining Today'sMultifaceted Conflict." Armed Forces Journal, October 2009.

[20]Harold G. Moore and Joseph L. Galloway, We Were Soldiers Once . and Young: Ia Drang—TheBattle That Changed the War in Vietnam (New York:Random House, 1992).

[21] Hoffman, Frank. Hybrid Wars, Arlington, VA: Potomac Institutefor Policy Studies, 2007.

Transition to 5th Generation Warfare.

So the natural question is, will insurgencies be content with compound wars or will transit to something more lethal? To me, after insurgencies have built themselves on the compound wars model then depending on the availability of advanced technology they can either transit to 5th GW provided they can control cyber space and bio and nano technologies and integrate them with new war fighting ideas or failing above can still remain in 4GW and hence more complex hybrid wars. But with advancements in the technical aspects like cyberspace, bio and nano technologies future seems to be for 5GW. As discussed earlier about curbs on air travel as a result of growing realization of attacks through jets, sea mode of travel might gain prominence for movement of deadly cargoes by the terrorists. Creation and operationalization of proliferation security initiative (PSI) seems to have been a step to check unregulated sea movement. The options of future terrorists while so limited present him with a new opportunity to wage **'Open Source Warfare'** in which networks of peers rather than the hierarchies are relied upon. Multiple, smaller attacks against disruptive leverage points then remain a rational choice and already we can witness this in attacks on pipelines across Balochistan (Pakistan); attacks on Saudi Oil Fields and attacks on oil carrying ships in Pursian Gulf which caused losses worth millions. Use of cyber space to foment dissent might also not last long as states develop capacities to control and then deal with virtual spaces to their advantage. Even possession of bio and nano technologies which although seems improbable to these terror groups in mass scales might not fundamentally change character of war and this new threat might be thus seen as advanced form of Hybrid war.

Hybrid War Surfaces and Gains Recognition.

In explaining the concepts supporting the 2006 Quadrennial Defence Review (QDR) and subsequent National Defence Strategy (NDS), Nathan Freier claims that we have undoubtedly learned that the strategic environment is more complex and dangerous than expected: "We are apparently more vulnerable to purposeful irregular challengers than previously anticipated." Even though threats the nation states face will likely be irregular in nature, but the nation states cannot lose sight of the increasing catastrophic, disruptive and even conventional threats. Four categories of threats are visualised against Nation state with ability to transmit these lessons to insurgent organisations worldwide with more ease: irregular, traditional, catastrophic and disruptive. Important characteristics of Hybrid Wars will be as under:-

1. Operational Fusion. As difficult as compound wars have been, the operational fusion of conventional and irregular capabilities in hybrid conflicts may be even more complicated. Compound wars offered synergy and combinations at the strategic level, but not the complexity, fusion, and simultaneity we anticipate at the operational and even tactical levels in wars where one or both sides is blending and fusing the full range of methods and modes of conflict into the battle space. Irregular forces in cases of compound wars operated largely as a distraction or economy of force measure in a separate theatre or adjacent operating area including the rear echelon. Because it is based on operationally separate forces owing to weaknesses in command and control systems required for complete synergy, the compound concept did not capture the merger or blurring modes of war identified in past case studies such as Hezbollah in the second Lebanon war of 2006 or future projections.

2. Blurring Methods or Modes of Warfare. Traditional onflict will still pose the most dangerous form of human conflict, especially in scale. The most distinctive change in the character of modern war is the blurred or blended nature of combat. These hybrid wars blend the lethality of state conflict with the fanatical and protracted fervour of irregular warfare. In such conflicts, future adversaries (states, state-sponsored groups, or self-funded actors) will exploit access to modern military capabilities, including encrypted command systems, man-portable air-to-surface missiles and other modern lethal systems, as well as promote protracted insurgencies that employ ambushes, improvised explosive devices (IEDs) and coercive assassinations. Afghan resistance to Soviets in 80s to some extent qualifies for hybrid war definition however, lack of technological means to conduct coordinated actions across entire spectrum align it more closely with gureilla warfare.

3. Not Limited to Non – State Actors. Hybrid challenges are not limited to non-state actors. States can shift their conventional units to irregular formations and adopt new tactics as Iraq's Fedayeen did in 2003. We may find it increasingly perplexing to characterize states as essentially traditional forces, or non-state actors as inherently irregular as in the case of Srilanka where LTTE was both irregular and regular and in case of India where Maoists, Naxalites and many Eastern militias are both regular and irregular at same time.

4. Rationality of the Irrational. While all humans are essentially rational in their own right but might be seen by their opponents as being irrational. This phenomenon gets further accentuated wherein in future wars cause might be unknown or seem to be non-consequential by the counter insurgent whereas the effects might outweigh the rational cost

benefit analysis and effects. This rationality of the irrational has the potential of upward escalation if counter insurgent decides to increase the stakes. Cause and effect in this kind of war thus might not be rational.

5. Hybrid Wars as a Result of Convergence? Frank G. Hoffman, a research fellow at the Marine Corps' Centre for Emerging Threats and Opportunities, offers a clear explanation of hybrid warfare and its challenges[22]. His concept builds upon the ideas included in "New Wars," "Wars Amongst the People," Fourth Generation Warfare, and "Unrestricted Warfare." In describing hybrid warfare, most of the analysts use the term convergence and define it as the merging of the physical and psychological, of the combatant and non-combatant, of violence and nation-building, of the kinetic and informational approach. Most significant convergence, however, is identified within the modes of war. Hybrid conflicts are thus foreseen during which states and non-state actors simultaneously exploit all modes – conventional, irregular, terrorist, disruptive, or criminal – to destabilize an existing order. The increasing frequency and lethality of this blended warfare poses significant challenges to the global political order in which weak and failing nation states might lose their monopoly over violence thus giving re-birth to a sort of colonialism of 18th century.

6. Hybrid Wars in Recent History. Hezbollah in the 2006 Lebanon War exemplifies the prototype hybrid force. In its fight against the Israeli Defence Force (IDF), Nasrallah's forces proved to be highly disciplined, professionally trained, and able to operate in distributed cells throughout all types of terrain. Hezbollah combined a perilous "blend of

[22] Hoffman, Frank. Hybrid Wars, Arlington, VA: Potomac Institutefor Policy Studies, 2007.

the lethality of the state with the fanatical and protracted fervour of irregular warriors."[23] They clearly demonstrated non-state actors' ability to study and probe the weaknesses of a Western style military, and then devise appropriate counter measures. Many authors have concluded that this conflict is not an anomaly, but a harbinger of future wars as future adversaries will do anything possible to evade advantages enjoyed by 2nd and 3rd Generation militaries and pursue alternative approaches.

7. Cross-pollination of IDF – Hezbollah Conflict. The lessons learned from IDF (Israeli Defence Force) – Hezbollah conflict are already cross-pollinating with other states and non-state actors. With or without state sponsorship, the lethality and capability of organized groups are increasing, while the incentives for states to exploit non traditional modes of war are on the rise[24]. Irregular tactics and protracted forms of conflict instead of being tactics of the weak, will also be used by states and they may come to be seen as tactics of the smart and nimble.[25]The second Lebanon conflict as seen above was inherently heterogeneous and that attempts to focus on purely conventional solutions were futile thus giving prominence to hybrid wars[26].

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[23] ibid

[24] ibid

[25] ibid

[26] Russell W. Glenn, All Glory Is Fleeting: Insightsfrom the Second Lebanon War (Santa Monica, CA:RAND, 2008), 73.

Emerging Global Threats.

It will now be reasonable to look at emerging global trends to decide on the reasons and context in which future wars will be fought:-

1. It is expected that over the ensuing decades, particular global trends will merge with existing local and regional tensions in pursuit of political and ideological goals and will thus increase conflicts around the world[27].

2. Advancement of Globalization and Technology, working in tandem have inadvertently provided the means to export terror and extremism around the world[28].

3. In addition to radicalism[29], looming population trends portend a growing instability in several less-developed countries as their urban population will likely double in size in next few decades[30].

4. Safe havens in nation-states when states are unable or unwilling to exercise control within their borders will provide sanctuaries to criminal and terrorist groups to operate more effectively[31].

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[27] U.S. Department of the Army, The Army Strategy (Washington, DC: U.S. Department of the Army, August 22, 2008).

[28] U.S. Joint Forces Command, The Joint Operating Environment : Challenges and Implications for the Future Joint Force (Norfolk, VA: U.S. Joint Forces Command, November 2008).

[29] U.S. Department of the Army, The Army Strategy.

[30] U.S. Joint Forces Command, The Joint Operating Environment : Challenges and Implications for the Future Joint Force.

[31] U.S. Department of the Army, The Army Strategy.

5. Competition for resources – water, energy, commodities and food coupled with climate change and natural disasters – is also fuelling the potential for conflict migrations[32].

6. Proliferation or increased access to all forms of WMD increases the potential for catastrophic attacks, thus resulting into sanctioning pre-emptive or even preventive military operations[33].

7. Violent extremist groups and their ideology also present a global challenge as these groups and religious radicals gain their strength from the urbanized and deprived regions of the world[34].

8. Weak and failing states also threaten global security battlefield[35]. Their close proximity to each other might increase threats manifold interests[36].

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[32] U.S. National Intelligence Council. Global Trends 2025: A Transformed World (Washington, DC: U.S. National Intelligence Council, November 2008), 51-52.

[33] U.S. Department of the Army, The Army Strategy.

[34]Objective Force Task Force, The Army in 2020 (Washington, DC: U.S. Department of the Army, November 2003).

[35] U.S. Joint Forces Command, The Joint Operating Environment : Challenges and Implications for the Future Joint Force.

[36] Colonel Steven C. Williamson, From Fourth Generation Warfare to Hybrid War (United States Army, USAWC Class of 2009).

War in the Context of South East Asia (ASEAN)

Figure 4-1: Map of South East Asia

Intra-State Conflicts.

inter-state conflict and terrorism and trans-national threat continuoue to be political and security challenges for ASEAN. Since its formulation in 1967, ASEAN has been familiar with security related issues in its region. During the heat of Cold War, ASEAN was to cope with traditional threat such as inter-state conflicts. Even today, some ASEAN countries have border dispute with their ASEAN partners, both land and maritime border dispute. For example, **Indonesia-Malaysia maritime border dispute** and **Thailand-Cambodia land border dispute**. Such dispute is anomaly regarding ASEAN resolve to create ASEAN Political and Security Community referred to Bali Concord II. The dispute has been brought those countries in the brink of open war, but fortunately they can restrain their self before crisis goes worse. Another dispute that involving ASEAN countries is **South China Sea**, which also involving **China and Taiwan**. Overlap maritime dispute in

the South China Sea has been made skirmish between ASEAN country and China in recent year. **Philippine and Vietnam** are the most claimants who dare to stand their claim against assertive Chinese claim. ASEAN has always been encouraging and promoting peace solution through dialogue forum on overlapping in the South China Sea[37], but has not succeeded yet. Since 1993, ASEAN has supported Indonesia effort to hold regular workshop on South China Sea which is categorized as second track dialogue involving all claimant countries. In 2002, ASEAN and China signed on Declaration on Conduct (DoC) on the South China Sea in order to prevent crisis there.[38] Last but not least, ASEAN since a few years ago has proposed the draft of Code of Conduct (CoC) to China for discussion before an agreement on that. South China Sea issue is challenging issue for ASEAN and whole region, one because it's also involving extra regional power interest. United States through the then Secretary of State Hillary Clinton has stated that "United States has a national interest in freedom of navigation, open access to Asia's maritime commons and respect for international law in the South China Sea".[39] Japan also paid concern and attention on the development on South China Sea, since its related to China rise from Japan's interest. Although

[37]James Hardy, "Analysis: ASEAN finds voice over South China Sea dispute", Jane's Defence Weekly online, 15 August 2014

[38]http://asean.org/?static_post=declaration-on-the-conduct-of-parties-in-the-south-china-sea-2, accessed on 2 February 2018

[39]Mark Landler, "Offering to Aids talks, U.S challenges China on disputed Island", http://www.nytimes.com/2010/07/24/world/asia/24diplo.html, accessed on 2 February 2018

Permanent Court of Arbitration in its ruling in the case Philippines v China (PCA case number 2013-19) on 12 July 2016 that "there was no legal basis for China to claim historic rights to resources within the sea areas falling within the 'nine-dash line",[40] China abruptly reject that ruling. China's assertiveness on the South China Sea has been a stumbling block for ASEAN to find a solution which referred to international law such as UNCLOS 1982. Since 2011, China unilaterally has been building artificial islands on the South China Sea through reclamation on some features.[41] According to satellite images, China has set up military facility there like airstrip[42] and installing air defense radar.[43] ASEAN leaders expressed their concern at reclamation activities in the disputed Spratly Islands,[44] but on China's deaf ears.

[40] Permanent Court of Arbitration, Press Release: The South China Sea Arbitration (The Republic of the Philippines v The People's Republic of China), page 1-2.

[41] James Hardy, "China building artificial island in South China Sea", Jane's Defence Weekly online, 16 May 2014

[42] James Hardy, "China building airstrip-capable island on Fiery Cross Reef", Jane's Defence Weekly online, 21 November 2014

[43] Gabriel Dominguez, "Beijing building new shelters, radar facilities on South China Sea islands, says research group", Jane's Defence Weekly online, 30 June 2017

[44] Dzirhan Mahadzir, "ASEAN leaders express 'concern' over South China Sea island building", Jane's Defence Weekly, 29 April 2015

Non-Traditional Threats.

Other than traditional threat, it's a matter of fact that ASEAN also have to cope with non-traditional security threat. In general, the Non-Traditional Threats in South East Asia can be classified as below: -

1. Terrorism.
2. Environmental degradation including climate security.
3. Economic crisis and poverty.
4. Diseases and pandemics.
5. Energy, water and food resources.
6. Natural disaster.

Trans – National Crimes

1. Move of illicit goods such as drug trafficking, stolen properties, weapon trafficking and smuggling.
2. Provision of illicit services such as commercial sex and human trafficking.
3. Infiltration of commercial business and government such as fraud, racketeering, money laundering and corruption.
4. Piracy.
5. Kidnap for ransom.

ASEAN Security Challenges.

Following are the ASEAN Security challenges:-

1. Old and new insurgencies - southern Philippines, southern Thailand and Myanmar.
2. Prolonged political issues in member states.

3. Border disputes and tensions - Thai-Cambodia border, South China Sea conflict.

4. Power shift and great power rivalry; China-US, China-India and China-Japan.

5. Transnational/ non-traditional security threats – terrorism, transboundary haze, maritime piracy, pandemics (COVID-19), transnational crime, drug trafficking, people smuggling, natural disasters).

Challenges for The Future

1. Rise of China and Russia, a multipolar world.

2. Increasing burden due to increasing number and scope of issues.

3. Membership and partnerships in regional and international organisations.

4. Sovereignty and non-interference in an age of globalization and transnational challenges.

Key Questions for The Future

1. Can ASEAN’s centrality in Asian regional architecture be assured for next 20 years?

2. ASEAN 2030 : “Wise counsel of Asia or marginalized relic of the past”?

Traditional and Non-Traditional Warfare in ASEAN Context.

Being[45]situated at the heart of Southeast Asia, Thailand knows its strategic value very well. Without it, ASEAN would have not the kind of bargaining power with the Dialogue Partners the grouping has enjoyed. At present, ASEAN is under huge pressure from major powers wanting to spread their influence at the expense of others. Therefore, the grouping must assert itself and take up a leadership role to prevent confrontation among them. **ASEAN is now caught between two security frameworks—one is American-centric and the other is Chinese-centric**. Of course, the US has long been associated with security in the region after World War II. The American military presence has guaranteed peace and stability for over half a century. In the case of China, its rise was fast and quite extensive. Beijing moves quickly in all avenues especially when other powers are facing domestic hurdles both in terms of politics and economics. China has thus seized the opportunity to offer the region all sorts of economic links and cooperation. China has a clear strategic view of the region in the future. Beijing hopes it can assert its influence and be recognized by the US as a power in the region. At the moment, China has been able to put money where its mouth is. The overwhelming support of the AIIB was unprecedented. It serves as a testimony of how China can win big in the global stage with sensible ideas. However, as a key

[45] Positioning the ASEAN Community in an Emerging Asia : Thai Perspectives by Kavi Chongkittavorn ,Termsak Chalermpalanupap ,Suthad Setboonsarng and Apichai Sunchindah: Compiled by the Department of ASEAN Affairs, Ministry of Foreign Affairs of the Kingdom of Thailand

member of ASEAN, Thailand feels that ASEAN has to take the lead and balance its relations with both the US and China. ASEAN is the only acceptable balancing wheel for the two major powers. As such, Thailand's paper titled "ASEAN's Centrality and Strategic Approach to the Future of Regional Architecture" was well received because it came at the right time. The paper recommends that ASEAN needs to maintain internal centrality with better thinking and decision before engaging with the outside world. ASEAN that can timely make a collective decision on key global issues would serve as a reminder of the leadership role of ASEAN. The grouping will use the recommendations in the Thai paper as part of ongoing efforts to strengthen ASEAN centrality in all ASEAN fora. Indeed, the ideas of the paper, as incorporated in ASEAN's Revised Work Plan on Maintaining and Enhancing ASEAN Centrality, have been endorsed by the ASEAN Foreign Ministers in 2015. The only way for ASEAN to cope with the intensification of US-China rivalry is to promote ASEAN centrality. **The security outlook of the Asia-Pacific region in the coming years is heading into uncharted waters as the US is determined to promote and sustain its global leadership**. Today, the US is not only up against Russia, the all-time adversary, but also a rising China, the all-weather player. This emerging strategic chess game provides both challenges and opportunities for ASEAN to reflect deeply on its strengths and weaknesses in engaging major powers. At the global level, the US will continue to advance a rules-based international order that promotes peace and security through strong alliances and partnerships, forge diverse coalitions, and take the lead in UN-related and other multilateral organizations. The latest US strategic thinking is directly in response to China's assertive economic and security policies under

President Xi Jinping, which have suddenly shaken existing regional and international orders. The establishment of the 57-member AIIB, with unusually strong backing from the West, is indicative of the current state of China vis-à-vis US economic influence throughout the world. It is a work in progress. It remains to be seen how the ongoing US-China competition, euphorically known as the new type of major powers' relations, will play out in the security and strategic realms in the future. **Make no mistake, the Asia-Pacific region would be the laboratory of their fierce contestation**. Diplomatically speaking, the US Government has often reiterated its support for China's peaceful rise and also encouraged the country to become a partner in development and the broader global community. But at the same time, Washington also came out with strong rhetoric against Beijing, especially on its claims in the South China Sea of being "inconsistent with international laws." With major powers upping their ante toward each other, it is a good opportunity for ASEAN to maintain its centrality to ascertain that these deep-rooted threat perceptions would not at any time break into open conflicts or harm the grouping's community building. For ASEAN, the stake is high as it exists as an ASEAN Community in the post-2015 period. Any rupture between US-China relations would impact its community-building process and economic integration. From the ASEAN perspectives, from now on their mutual mistrust would be further deepened as the pattern of confrontation and collaboration continues and diversifies but without opting for open conflicts. Their cooperation at the regional and international levels would be high on rhetoric but limited on actions due to their different approaches and value systems. At this point, with stronger US-China rivalry, ASEAN is moving quickly to consolidate its consultative process

and structure as well as forge a common regional security agenda at the highest level. The ASEAN senior officials have agreed that it is now the time to sharpen its role and focus on strategic matters at the EAS. In previous engagements, ASEAN Leaders were left very much to themselves to speak on issues of their concern. The lack of coordination and consultation among ASEAN Member States on key regional issues has weakened ASEAN centrality—with or without common voices. So far, several recommendations have been made to improve ASEAN centrality in the EAS including the setting up of a Sherpa system to coordinate views and set agenda among ASEAN Leaders and their Dialogue Partners. A longer session focusing on exchange of views among Leaders is being considered in addition to an informal retreat. Officially, they meet for three hours average and break out for bilateral summits. The EAS Chair will have a stronger mandate to speak for ASEAN as a whole. The ongoing efforts to review the EAS and promote ASEAN centrality show that the grouping is more active and creative. It is clear—only ASEAN centrality that is stronger and strictly non-partisan can have far-reaching mitigating impacts on superpowers' rivalries. ASEAN can stay united and ahead of the curve or be pushed down into the alley as pawns in the power struggle for influence and supremacy.

Geo-Strategic Significance of Thailand.

In order to effectively take up the role of bridge-builder, Thailand must urgently reexamine its traditional diplomatic practices of "**blending with the wind**"[46]and "**strategic ambiguity**". For over a

[46]Positioning the ASEAN Community in an Emerging Asia : Thai Perspectives by Kavi Chongkittavorn ,Termsak Chalermpalanupap

century, Thailand, then known as **Siam**, used these combined strategies to stay independent and escape colonization and subjugation by Western powers. Today, the country continues to deploy the very same strategies as if the international environment remains static. However, what proved to be successful in the past might not be suitable for the current circumstance. Being a bridge-builder, it is essential for Thailand to be clear about its positions and policies regarding transnational issues. In two cases—the South China Sea disputes and what some have called the Rohingyas crisis—Thailand's positions are clear and well understood without the exercise of deliberated ambiguities. Thailand hopes that through the conclusion of a Code of Conduct for the South China Sea, ASEAN and China would be able to work together for mutual benefits in joint development projects. Later on, when both sides reach the comfort level to tackle sensitive issues such as sovereignty, ASEAN as a whole must render its full support to engage the disputing parties in resolving their differences peacefully. Thailand views the Rohingya displaced persons as a regional challenge, requiring regional cooperation in searching for a solution—without blaming one single country. Other ASEAN colleagues perceive it quite differently—as a domestic problem with regional implications. The naming and shaming promptly caused recalcitrance from Myanmar and other key players. As the only country in the region without the experience of being colonized, Thailand has the propensity to stay in the middle ground by taking into consideration interests of all

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,Suthad Setboonsarng and Apichai Sunchindah: Compiled by the Department of ASEAN Affairs, Ministry of Foreign Affairs of the Kingdom of Thailand

stakeholders. In response to the new strategic environment, Thailand should adopt clear positions on priority challenges that the country and ASEAN colleagues have identified under their various blueprints and various ASEAN-led security fora. Given its unique geographical location, Thailand naturally can serve as the hub of ASEAN connectivity, linking South Asia and Northeast Asia as well as continental and maritime Southeast Asia. Thailand cannot remain vague and non-committal on key transnational issues as a timely response and policy coordination would better serve the country's and ASEAN's interest.

Results of Survey.

Survey was conducted to evaluate the existing awareness level amongst the population of Thailand. Participants and staff of NDC 62 was selected as sample. Though the respodents for the questionnaire were very less (out of 350 only 17 responded) yet it gives a reasonable outlook of complete population. Survey indicates that only about 1/3 people of sample are familiare with 5^{th} generation warfare concept. Majority of sample agree that future wars will be different and 5^{th} generation warfare is the incubating generation and Thailand needs to prepare for the future wars. Quesionnaire is attached as Annex A and response is attached as Annex B. However, main findings of the survey were as under:-

1. 65% of respondents were from Army/ Navy/ Airforce, 6% froom Police and 35% civilians while no one from government officials responded.

2. 82% respondents agree that the future wars would be different from current ones.

3. 53% Agree that 4th generation warfare will continue to stay for next 10 years or more along with development of 5th generation.

4. 35% respondents are fully aware of emergence of 5th generation warfare.

5. 35% Agree that 5th generation war is already being employed against Thailand to some extent (in view of recent Anti Government events).

6. 77% Respondents are of the opinion that Thailand needs to re-evaluate its strategy to fight future wars.

7. 71% respondents think that Thai Armed forces are required to re-structure to fight the evolving character of war.

8. 82.4% think that China-US contestation in Asia-Pacific affects geopolitical environment in ASEAN.

9. 71% think that 5th Generation Warfare a challenge for ASEAN countries.

10. Only 29.4% think that the ASEAN Countries are prepared to fight new type of war whereas, 53% think that they are only prepared to some extent.

11. 35% think that existing interstate border disputes, local insurgencies and trans-border crimes in ASEAN encourage chances of employment of 5th generation warfare.

Conclusion.

Conflict remains part of the human nature and tug of war will continue over control of scarce resources which are now mainly located in global South whose population and expectations are increasing. On the other hand resources of global North are decreasing requiring it to acquire

more resources to maintain present global order. Broadening of the conflict between global South and global North hence might be witnessed. So far disagreements between nation states remain largely peaceful thus decreasing probability of conventional state on state wars as they can still be negotiated at some forum. But these disagreements can turn into active conflicts in a multipolar world if developed countries continue to shrink living space of developing countries. Resultant frustration thus might take the shape of a 'clash of civilizations'. In a World, which abhors conventional state on state conflicts, proxies will remain rational choice for expression of political interests. Legalizing proxies as expression of genuine political interests by IGOs and coalition of the willing thus might be observed with serious sovereignty and legitimacy crisis for weaker nation states. Future wars are likely to be primarily intra states war with regional and global implications and will be fought for more complex reasons like political, social and strategic contexts with economic undertones thus forcing re-thinking employment strategies of militaries in political conflicts. As the technological gap increases between west and rest of the world and conflicts persist, future warriors might it be states, partially supported non state actors or self financed individual non state actors are transforming into loosely knit small groups of individuals not following any rigid hierarchial organisations. Future insurgencies will be conducted by super empowered individuals who will be quick to adapt, besides being able to very quickly learn and relearn. These individuals will also have a better understanding of social, strategic and operational contexts. Access to technology by insurgent groups will result into improving integration and operational fusion while still being geographically distant, synchronization and synergy in terrorist actions for achieving strategic effects around the

globe thus might be expected. Future warriors owing to their transnational character and base will be able to blend the lethality of the state with the fanatical and protracted fervour of irregular warriors. Open source warriors represent the most dangerous trend and their financing by rival oppurtunistic states might make them even more lethal thus increasing dificulties of developing countries manifold. Control over WMD technologies will remain a cherished dream for future warriors. Future warriors will thus aim at changing the loyalties of states using all means including converting populations through strategic communications. Narratives will thus become more important than weapons. Nation state system is now under more duress as states exert control over their those territories which were earlier governed through mutual consensus. Resistance to societies against a change which is more forced than consensual thus might increase friction between states and societies which when exploited by insurgents has the capability to breakdown the states. A more prudent approach in order to preserve nation state systems thus should become a priority. Domination of technological and informational terrain by governments and armies will remain important for winning any future war. More reliance on technology thereby will also increase vulnerabilities of the states. Owing to the lethality and high cost of conventional forces more reliance is likely to be made on limited or indirect wars using international laws and institutions as tools to force the adversaries to concede to the demands/ interests. Attacks in cyber domain can disable official websites and networks, disrupt or disable essential services, steal or alter classified data and cripple financial systems & electricity grids, among other possibilities. 5GW is a kinetic application tool of Smart Power which, while remaining under full blown military/kinetic applications,

works to convince enemy's political decision makers that their strategic goals are either unachievable or too costly for the perceived benefits. HAARP Theory proposes tampering of ionosphere and geo-physical domain for purposeful military and civilian application. Visible signs of its manifestation exist in terms of weather and geophysical manipulations. Mind Control Sciences Theory revolves around making a deliberate attempt to manage public's perception on a subject through sensitization. Although in its early stages of development, it is a potent threat for the future. Extremely Low Frequency (ELF) Weapons use radio waves as a weapon to create incapacity and disruption without resorting to destruction. 'Directed Energy' weapons are the newest in the range of destructive weapons but with tremendous potential and range of utility. Applications in this domain are presently experimental in nature but fast reaching operational status.

Chapter 5
Conclusions and Recommendations

"So a military force has no constant formation, water has no constant shape: the ability to gain victory by changing and adapting according to the opponent is called genius".

Sun Tzu

Introduction.

Generations of warfare have been discussed in detail in previous chapters and critical examination of 4th and 5th generation of warfare has been done. We can reasonably argue that the warfare is evolving with 5th generation warfare already incubating. Future wars are going to be more lethal not in terms of casualties but in terms of their effects. This chapter will discuss conclusions for the future wars in the light of developing geostrategic environment, importance of new technologies and proffer recommendations at national and military level to deal with the emerging threat spectrum.

1. Summarised Conclusions

1.1 Nature of war essentially remains constant, while character of warfare is evolving towards more synergy thus resulting into more dispersion and lethality depending on objectives, availability of technology and nature of opponents.

1.2 While large scale traditional military conflicts between nation states owing to their destructive lethality remain largely improbable even then they cannot be totally ruled out.

1.3 While 4GW is an on-going phenomenon since the beginning of history, it remains significant today because of technological developments and wide access to knowledge in a globalized world thus increasing synergy.

1.4 War, whatever shape it might take will continue to remain extension of policy by other means thus will remain rational even when it might seem senseless violence. It will thus be important to differentiate criminality from a war.

1.5 Even though nation states seem to be in retreat but it is also visible that they have reconciled with the changing environment. We now today are living in an era of shared sovereignty in which all kinds of non-state actors whether violent or non-violent are asserting to share state's powers.

1.6 Increased awareness on part of nation states coupled with promulgation of laws and better implementation measures in tackling with fourth generation warriors might result in morphing of future warriors into societies like Hamas and Hezbollah besides reducing their liberty of action. The future warriors are also likely to adopt non-hierarchical network structures with no rigid organisation, working on the concept **NIZAM, LA TANZIM** (system, not organization). This phrase actually encapsulates character of future war. Failure of LTTE in Srilanka while overly depending on development of 2^{nd} / 3^{rd} generational structure is a lesson which will guide the path of future insurgent organizations.

1.7 As insurgents get better organized and develop into networked fighting machines with robust command and controls, access to nano and bio technologies might make them more lethal. Military forces who largely remain prepared to fight $2^{nd}$and 3^{rd} generation wars by

compulsion will have to thus transform into hi-tech, smart and lean organizations that are agile and more lethal.

1.8 Use of mass media and other means of soft power will have an enhanced space in the overall application of national power to achieve strategic goals.

1.9 Better fusion of all elements of national power in the nation's strategic plans and actions is the bare minimum requirement for fighting future wars.

2. Developing International Environment and Implications on Nation States.

In the light of waning US influence, economic problems of Euro zone and emerging centres of a multi-polar world, a world with G – zero needs to be foreseen. As a result, many regional powers might emerge and world as a consequence might turn out to be a more chaotic place with many more wars. Fighting wars through proxies armed with better weapons and tactics coupled with traditional wars is thus considered possible. Future armies will thus have to be ready to fight both traditional and non-traditional wars within a theatre at one time. This might call for a better adaptive army conversant in both forms of the war with almost equal prowess. Use of soft power as well as coercion will always remain a rider clause. Use of means other than hardcore military power will gradually increase and may take a reasonable portion of National Power.

3. Importance of New Technologies

3.1 If we combine the above general characteristics of fourth generation warfare with new technology, we see one possible outline of the new generation. For example, directed energy may permit small elements

to destroy targets they could not attack with conventional energy weapons. Technologically, it is possible that a very few soldiers could have the same battlefield effect as a current brigade.

3.2 The growth of robotics, remotely piloted vehicles, low probability of intercept communications, and artificial intelligence may offer a potential for radically altered tactics. In turn, growing dependence on such technology may open the door to new vulnerabilities, such as the vulnerability to computer viruses.

3.3 Small, highly mobile elements composed of very intelligent soldiers armed with high technology weapons may range over wide areas seeking critical targets. Targets may be more in the civilian than the military sector. Front-rear terms will be replaced with targeted-untargeted. This may in turn radically alter the way in which military services are organized and structured.

3.4 Future warriors if used by a state and supported with appropriate technology would have the ability to rapidly eliminate the ability of a nuclear-armed opponent to wage war conventionally through destruction or disruption of vital industrial capacities, political infrastructure and social fabric, thus potentially leading to escalation to nuclear weapons. This risk may deter fourth generation warfare among nuclear armed powers just as it deters major conventional warfare among them today.

4. Political Dimensions/ National Strategy

4.1 Clear Strategic Direction to Prevent and Fight the Future Wars. Effective governance with responsive state administration and management systems remains central in deterring the future conflicts through statecraft. Asserting writ of the state throughout its territories by

developing and then continuously enhancing writ of the state through capable and efficient LEAs will thus be of paramount importance, while also developing and maintaining a robust military capacity to defend territorial borders of the state in a conventional conflict. Needless to say a clear strategic direction manifested through strategic framework of Deterrence, Development and Dialogue should be followed as cornerstone policy to prevent the conflict in the first place and if at all such a conflict occurs, at strategic level, governments while fighting with elements within their societies should provide clear cut rules of engagement. Armed Forces when employed should be used for causing effect and not merely policing duties to enhance their deterrent value. While formulating counter strategy one must have clarity of terminal goals and objectives which will ultimately help in designing mission, requirement of force, material and medium. Some key goals to be set against vulnerabilities identified are:-

4.1.1 National cohesion.

4.1.2 Political stability.

4.1.3 Strong economy.

4.1.4 De-radicalisation of masses.

4.1.5 Ethno-religious harmony.

4.1.6 Ensuring provision of justice

4.2 Political Ownership of the Conflict. Political government has to take over of ownership of the conflicts as these conflicts cannot be managed without adopting a whole of the nation approach. Creating trinity of people, government and armed forces will remain critical in fighting future conflicts and is not possible without ownership of the political government as politicians are best placed to mobilize the nation

in the required direction. This has been Pakistan's most important lesson from wars in Swat and Waziristan.

4.3 Creating Enabling Environment for Developing Fully Empowered Societies. Under developed feudal – tribal societies with poor socio – economic conditions and weak state controls remain prone to future insurgent wars. Only the empowered societies which are educated can effectively challenge the narrative of future warriors (including 5GW) and thus might be able to meet future challenges. Empowerment by building processes through which a group or society is independent in taking their own decisions makes individuals in societies stake holders thus reducing the chances of their being part of subversive attempts. Education is the key and focus on human security remains critical in effectively dealing with future threats. Devolution of governmental powers to people no longer remains an option but has become a necessity to create empowered societies and by implications individuals.

4.4 Formulation of Counter Narrative(s). Insurgents/ terrorists formulate a narrative which appeals the general public and whole society feels associated with that narrative. Even for political government and military, it becomes very difficult to deny such narrative. Most recent example is Daesh's narrative for establishment of ISIL. Counter narrative at national level should be orchestrated and propagated to uproot evil intentions of insurgents/ terrorists. Without proper counter narrative neither military nor nation can have cohesive strategy to fight insurgencies and terrorists.

4.5 Revamping Legal Systems to Fight Future Wars. Terrorism seeks to use the enemy's strength against him. This "judo" concept of warfare began to manifest itself in the second generation, in

the campaign and battle of encirclement. The enemy's fortresses, such as Metz and Sedan, became fatal traps. It was pushed further in the third generation where, on the defensive, one side often tries to let the other penetrate so his own momentum makes him less able to turn and deal with a counterstroke. Terrorists use a free society's freedom and openness, its greatest strengths, against it. They can move freely within our society while actively working to subvert it. They use our basic human and democratic rights not only to penetrate but also to defend themselves. If we treat them within our laws, they gain many protections; if we simply shoot them down, the television news can easily make them appear to be the victims. Terrorists can effectively wage their form of warfare while being protected by the society they are attacking. If we are forced to set aside our own system of legal protections to deal with terrorists, the terrorists win another sort of victory. The only answer lies in the effective and vibrant constitutional reforms especially in laws of evidence and managing witness protection programmes etc besides enacting and implementing cybercrime laws and laws for effective management of media (landing rights and code of conduct etc.) in order to deal with these threats in a systematic manner. Stringent implementation of laws thus made also remains the key. Awareness on part of the government about the war they are fighting and developing necessary tools like allowing technological evidence to be used in courts for prosecution and enacting cyber and media laws which can strengthen their security apparatus thus will remain important.

4.6 Inter – Agency Cooperation. Extremism cannot be eliminated through local action against extremist pockets; the requirement is to address the root causes that lie unresolved involving denial of rights

to the people, deprivation, injustice, exploitation and poverty etc. The 'will' or 'attitudes' of the people virtually acts as rheostat for the control of insurgency and therefore, emerge as extremist's Centre of Gravity. It is this source of power from which they derive their freedom of action, physical strength and will to fight. Therefore if 'will' or 'attitudes' of the people is to be transformed then actions and reactions of the all elements of national power i.e. political system, judicial system and military system will have to be aimed at denying breeding grounds for these grievances through effective management, better integration and by adopting people centric policies. Winning hearts and minds of the people by developing and executing credible narratives will come later and will only be possible through a protracted campaign conducted through development and execution of credible narratives.

4.7 Reforms for Capacity Building of Law Enforcing Agencies (LEAs). In most of the developing countries LEAs lack requisite capability, capacity and integration to fight future wars owing to a host of reasons. Intelligence collection, collaboration, collation and then finally dissemination remains important but creating new organizations might even hinder rather than facilitate intelligence sharing thus making it important to understand and respect organizational biases. Police reforms should remain the starting point and be followed by civil armed forces and steps should be taken to improve their recruiting, measures are also needed for the de-politicization of police through laws and development of better hierarchical structures. Training and provision of modern equipment including capacity to fight cybercrimes also remains a key problem area which needs to be addressed at priority.

4.8 Preparing for a Lengthy War. The future wars are likely to be long drawn as it would take a long time to understand the weaknesses of narrative and financing pattern and then develop counter narrative to an insurgent theme besides taking steps to choke money supply. Moreover, population might not be able to make up their minds so quickly to see the contradictions in insurgent themes and actions and thus might keep supporting insurgents financially or morally. All of this might result into a prolonged unconventional conflict which might not have any easy or simple solutions. Resilience thus might have to be developed in the societies through media, academia and government to fight over extended period of time and unless it is done outcomes might be different then intended.

4.9 Information Control. Media policy, regulations, laws and and instrument of communication needs to ensure safeguarding of national interest while being independent and unbiased. Maximum efforts in information domain must be put in as the major chunk of such wars is media warfare.

4.10 Inter – State Cooperation. Future warriors are likely to exploit black holes in international law to operate beyond national boundaries and avoid stringent laws and effective LEAs thus bringing into light requirement of integrating efforts globally and in particular with neighbours and regional countries to deal with these threats. This is easier said than done and since it might not be possible mostly it can give rise to frictions with negative consequences between states. International organizations remain the best forum to tackle these issues but owing to their increased marginalization they might not be trusted by the member states. Unless a common solution acceptable to all states is agreed to,

future warriors are likely to have available required ungoverned or loosely governed spaces for conducting their activities.

4.11 Capacity Building to Fight 5GW and Open Source Warfare. Creating cyber and space commands at national and armed forces level to fight cybercrimes remains an essential requirement. While at the same time, exercising control over proliferation of bio and nano technologies and developing national capacity by integrating human and technical elements to protect vital services against hacking remains vital to fight 5GW. Creating awareness against Stuxnet like attacks in the industrial systems and defence installations also remains a priority. Promulgating intellectual property rights regime and legislating cybercrime laws should be undertaken without delay. Finally, legislating and then implementing laws against attack on vital assets like pipelines and grid stations and creating mechanisms to provide comprehensive security to them should also be pursued.

4.12 Research and Development for Meeting the Challenges of Disruptive Technologies. States are arming themselves with new technologies like HAARP, Mind Control Sciences, ELF (Extended Low Frequency and Directed Energy Weapons) nano, Bio and robotic. Attaining expertise by individuals or violent non-state actors / groups in these technologies will result in multifarious dangers. Therefore, on one hand, there is a need to control the proliferation of these technologies and on the other; research has to be done for a response. Initiation of research and development measures at early stage will pay dividends in decades ahead.

Kinetic Component/ Military Strategy

4.13 Changes in Military Culture. Terrorism also appears to represent a solution to a problem that has been generated by previous generational changes of war as we see them but not really addressed by any of them. It is the contradiction between the nature of the modern battlefield and the traditional military culture. That culture, embodied in ranks, saluting uniforms, drill, etc., is largely a product of first generation warfare. It is a culture of order. At the time it evolved it was consistent with the battlefield, which was itself dominated by order. The ideal army was a perfectly oiled machine, and that was what the military culture of order sought to produce. Now initiative is more important than obedience, hence military culture should aim at inculcating more initiative in the subordinates with the aim of holding every individual personally responsible for his actions while still being courteous and respectful in his dealings. A better human and a better professional is the need of the hour.

4.14 Ability to Adapt and Learn. The exploitation of modern information technology will also enhance the learning cycle of potential irregular enemies, improving their ability to transfer lessons learned and techniques from one theatre to another. This accelerated learning cycle has already been seen in Iraq and Afghanistan, as insurgents appeared to acquire and effectively employ tactical techniques or adapt novel detonation devices found on the Internet or observed from a different source. These opponents will remain elusive, operate in an extremely distributed manner, and reflect a high degree of opportunistic learning. Armies will have to adapt as well as adapting will remain key to success for armies. As David Kilcullen puts it in '*Accidental Guerrilla'*, "Unless we adapt to today's protean adversary and the merging modes of

human conflict, we are destined to maintain and upgrade our high-end, industrial age square pegs and be condemned for trying to force them into contemporary and increasingly complex round holes".

4.15 Adaptive Campaigning. There exist a series of diverse and interconnected threats and risks which have the potential to undermine both national and international stability. Weak governance, terrorism and organised crime are but three examples and each must be met by the application of individual or combined national instruments of power: diplomacy, military deployment and economics. The relative weight of effort each instrument must make varies according to circumstances; this means that the military instrument may often not constitute the main effort but act in a subsidiary, or supporting role to another instrument to deliver an enduring outcome. Meeting these complex challenges will require agility and innovation. The military contribution will clearly peak during any combat phase but the future size and capabilities of defence forces lends itself to much greater effort being paid to prevention. Emergent threats are at their most adaptable when they are small; this is when they are able to learn rapidly. Conversely this is also when they are at their most vulnerable. Since military forces will always be resource-limited, a central issue in future campaign planning will be the ability to orchestrate innovate and adapt effort across all arms of government to achieve effect at the right time. This is referred to as adaptive campaigning. To define and shape the Whole of Government approach envisaged in Adaptive Campaigning, the military commander must have continuous dialogue with his political and interagency counterparts. In all circumstances the strategic objectives of the campaign [reflected in the dominant narrative] will be able to be described in a list of agreed accepted

enduring conditions. The essential characteristic of an adaptive campaign is that its structure and behaviour should be able to evolve over time and in a way that tends to increase the probability of 'success' through adaptation to the changes in the system and to the environment in which it is embedded[1]. Military power should be strong, flexible enough to absorb and respond to developing trends in warfare. It is immaterial, whether threat is conventional or unconventional we have to respond. Rather it is suggested that 5GW threats are conventions of the day and more focus be placed on these. Following must be ensured in this regard:-

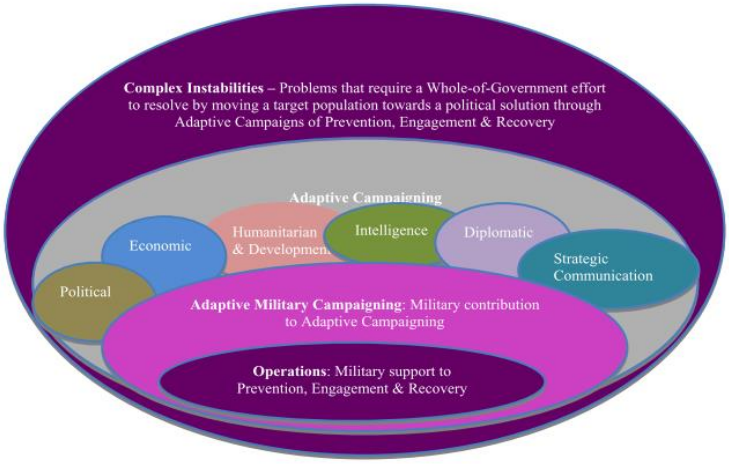
4.15.1 Modernisation of military equipment and intelligence means.

4.15.2 War-gaming and preparing for all possible scenarios.

4.15.3 Speeding up the process of Net Enabled and Net-Centric capabilities.

[1] Cdr S A Tatham, Strategic Communication: A primer. Paper published by AdVanced Research and Assessment Group, Defence Academy of the United Kingdom in December 2008.

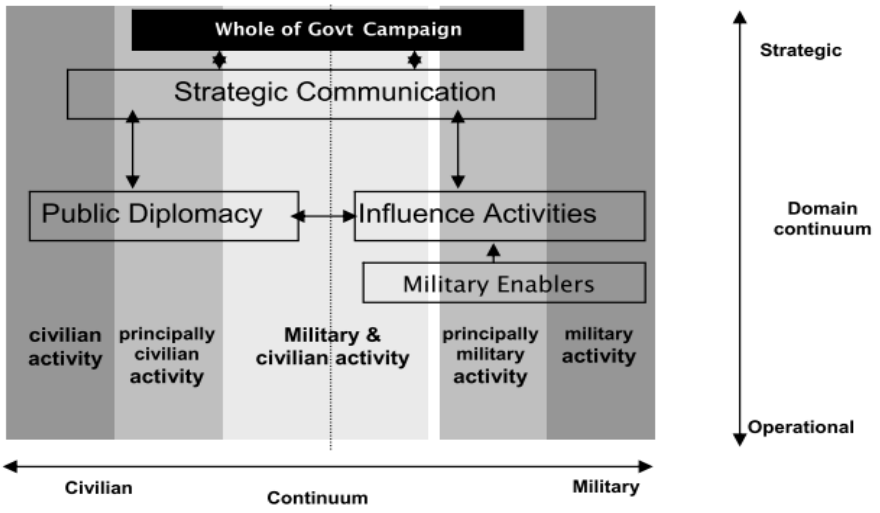
Figure 5-1: Adaptive campaigning



4.16 Strategic Communication Through Use of Mass Media. An emerging tool in the adaptive campaign process – and one that is increasingly being recognised across western governments is Strategic Communication. A comparatively new term, Strategic Communication (not Communications) has yet to receive a standardised cross-governmental definition. This definition emphasises Strategic Communication as a means of changing behaviour and suggests a challenge in both devising means to accomplish it and measures of its success. A helpful way to consider Strategic Communication is as being analogous to an orchestra. The orchestra's conductor is the government, the musical score is the Strategic Communication plan and the orchestra itself the various communities of practice and/or lines of operation. The music is the narrative. Depending on the effect you seek to achieve, different sections of the orchestra will be used at different times, or with different emphasis. Strategists often consider concepts in terms of 'ends, ways and means'. Strategic Communication is a 'way' to change behaviour – which is a

desired ‘end’. Strategic Communication employs multiple 'means' in that process. The means should be restricted only by the requirement to achieve the desired effect on the target audience. In the US, strategic communication is often regarded as being 80% actions and 20% words[2]. Strategic Communication is a cross governmental, strategic activity in which the military is but one participant. It should however be an intrinsic part of the overall campaign plan. It typically over-arches traditional civilian public diplomacy activities and traditional military effects[3].

Figure 5-2: Strategic communication



[2] The Trouble with Strategic Communication(s), Dennis Murphy, IOSphere, Winter 2008.

[3] Cdr S A Tatham, Strategic Communication: A primer. Paper published by AdVanced Research and Assessment Group, Defence Academy of the United Kingdom in December 2008.

4.17 Impact on Tactics and Operational Art

4.17.1 First generation warfare reflected tactics of the era of the smoothbore musket, the tactics of line and column. Operational art in the first generation did not exist as a concept although it was practiced by individual commanders, most prominently Napoleon.

4.17.2 Second generation warfare was a response to the rifled musket, breechloaders, barbed wire, the machinegun, and indirect fire. While ideas played a role in the development of second generation tactics (particularly the idea of lateral dispersion), technology was the principal driver of change. The second generation saw the formal recognition and adoption of the operational art, initially by the Prussian army.

4.1.7.3 Third generation warfare was also a response to the increase in battlefield firepower. However, the driving force was primarily ideas. While the basic concepts of third generation tactics were in place by the end of 1918, the addition of a new technological element ‘tanks’ brought about a major shift at the operational level in World War II. That shift was blitzkrieg. In the blitzkrieg, the basis of the operational art shifted from place (as in Liddell-Hart's indirect approach) to time. This shift was explicitly recognized in the work of retired Air Force Colonel John Boyd and his "OODA (observation- orientation- decision- action) theory."

Fourth Generation Operational Art

1. Reduced Emphasis on Operational Art. In fourth generation the first change being that a campaign framework may be largely provided to the operational commander for implementation. In this context, Operational Art is likely to be a little more circumscribed

than envisaged and might involve orchestration of tactical actions, through one or more lines of operation, to ultimately achieve the directed strategic accepted enduring conditions.

2. Blending of Tactical and Strategic Levels. The tactical and strategic levels will thus blend as the opponent's political infrastructure and civilian society become battlefield targets. In fourth generation warfare, spaces will remain important for the operational art and an operational commander will have to aim at denying critical spaces like population centres etc. to the fourth generation warriors. Pre-conflict stability operations and shaping of environment would thus be more important at operational and strategic levels. Identification and preventive deployments in order to create safe environment for all civilian agencies to work unhindered will thus be more important in pre-conflict phase.

3. Force Multipliers. vailability of actionable intelligence both through technical and non-technical means at right time is the best force multiplier. Availability of helicopters for quick transportation of troops to take action on intelligence is also a critical requirement. Similarly modern technical gadgets also play a vital role.

4. Mission Oriented Orders. As the battlefield becomes complex, second and third generation hierarchical armies trained in accepting orders from top with no or very less input from the young officers and NCOs who have to face the future warriors might not be successful. The focus now has to shift from outward i.e., on the situation, the enemy and the result the situation requires, to inward i.e. on process and method. Initiative is now more important than obedience (mistakes should be tolerated so long as they come from too much initiative rather than too little), and it all depends on self-discipline, not imposed discipline.

5. Force Protection. The contemporary and future battle space is characterised by a lack of identifiable fronts, flanks or rear areas, by the proliferation of highly lethal weapons, by the presence of a variety of combatant groups- each with their own capabilities - and the need for the armed forces to establish a persistent, pervasive and proportionate presence in population centres. At the same time, many of the enemies in that battle space will be seeking nothing more at the tactical level than to impose a steady trickle of casualties. The net result is to create a large and complex force protection problem. Mission Oriented Force Protection should now be sought to both conserve the force and contribute to the achievement of the mission.

6. Population Protection. In most cases, military operations will be conducted under few specific agreements with local government and population. At least initially, it is possible that the military will be required to fulfil some roles normally associated with law enforcement agencies. Failure to do this may create a security vacuum that could be exploited by a variety of interest groups that may or may not be parties to the conflict. Therefore, the need for Population Protection operations and the authority to conduct necessary actions needs to be anticipated in training and planning, and provided for in the implementing agreements. In essence, Population Protection is achieved through the conduct of synchronised actions in five categories, or sub-concepts as represented in the five sub-concepts that might comprise Population Protection are:

6.1 Security Actions. These actions seek to minimise fear and harm through the execution of immediate protective actions contributing to public safety and protection of property.

6.2 Population Control Actions. These actions seek to establish and maintain control over a population's residence, movement and identity, while remaining cognisant of a population's own perceptions of safety and protection needs.

6.3 Weapon and Hazardous Material Control Actions. These actions seek to identify, locate, secure and/or dispose of weapons and environmental hazards deemed to pose a threat to the population or the armed forces.

6.4 Policing Actions. These actions provide: policing capabilities appropriate to the environment, collection of criminal intelligence, evidence preservation, investigations, judicial support and detention management.

6.5 Disarmament, Disbandment and Reintegration. These actions seek to disarm and disband adversarial groups and unwanted elements of the pre-existing security apparatus identified as being suitable for reintegration into society. These actions, by their nature need to be closely coordinated with Policing and Security Actions within the Population Protection line of operation and are key to the long term stability of the system.

6.6 Information Operations by Using Mass Media. These refer to a collection of capabilities brought together and focused to contribute to three broad purposes essential to the success of Adaptive Campaigning. 'One of these is to win the psychological contest with real and potential enemies. Another is the need to keep the trust and confidence of home and allied publics while gaining the confidence and support of local publics. The third is winning the strategic, operational, cognitive and technical "Info Age Applications" contest. Information

Actions underpin every element of Adaptive Campaigning and are an essential prerequisite for success. Just as there is a Whole of Government approach to campaigning, there needs to be a Whole of Government approach to the development of Information Action objectives and themes. These may be conducted as follows:-

6.7 Influence. Influence actions fight the enemy with words, symbols and ideas. They have the primary purpose of influencing the perceptions, and hence the will, attitudes, and, ultimately, the behaviour of target audiences. As antagonist's messages will be principally directed at the uncommitted, disadvantaged minorities, political factions which may be persuaded, vulnerable elements of the opposing force and the media. Consequently, the armed forces must have the capabilities and capacity to strengthen the support of the loyal, gain support of the uncommitted and undermine an enemy's will to fight - the ability to accurately tell its story while being able to discredit the lies and propaganda of its enemies.

6.8 Countering Propaganda. Countering propaganda actions attack and erode the enemy's will to fight, diminish their understanding of the situation and their ability to make timely and effective decisions. Counter actions are aimed at deceiving, disabling or destroying enemy commanders; disrupting, degrading, denying or destroying the communication systems and thus the information enemy commanders rely upon; and destroying enemy commanders' faith and confidence in those systems and the information they contain. This aspect has much higher application in 5GW.

7. Countering Psychological Effects. A proper system of relief and rotation wherein troops are not exposed to extended periods for hazardous warfare also merits serious consideration of operational commanders. Force levels thus might have to be redrawn and troops educated on psychological aspects of fighting this war.

8. Importance of Combined Operations. In broad terms, future war seems likely to be widely dispersed and largely undefined; the distinction between war and peace will be blurred to the Vanishing point. It will be nonlinear, possibly to the point of having no definable battlefields or fronts. The distinction between "civilian" and "military" may disappear. Actions will overlap throughout all participants' depth, including their society as a cultural, not just a physical, entity. Success will depend heavily on effectiveness in combined operations as lines between responsibility and mission become very blurred. Again, all these elements are present in third generation warfare; fourth generation will merely accentuate them.

4.18 Restructuring of Units

4.18.1 Units will combine reconnaissance and strike functions. Remote, "smart" assets like UAVs / RPVs with pre-programmed artificial intelligence may play a key role.

4.18.2 Units will thus have to be highly mobile and agile and should be able to converge on targets while still being widely dispersed in no time.

4.18.3 Force protection will remain critical factor for successful execution of operations.

4.18.4 In areas where units are asked to take on 5th generation warriors, cultural councillors mainly the educated locals from the same area be employed to understand the mind-set of the locals.

4.18.5 Units should be so org so as to be able to fight, supervise humanitarian operations, run basic services like schools and dispensaries and reconstruct infrastructure destroyed by the fourth generation warriors all at the same time in order to create suitable environment for all agencies to fall back and take over their respective functions. Integration of all arms and services with each other and with all civilian agencies would thus be the order of the day. United Nations peace keeping missions provide a good model for fighting fourth generation threats.

4.19 Training of Leaders. Leaders will have to be masters of both the art of war and technology, a difficult combination as two different mindsets are involved. Success in hybrid wars also requires small unit leaders with decision making skills and tactical cunning to respond to the unknown and the equipment sets to react or adapt faster than tomorrow's foe. *Developing fully empowered young officers and NCOs who understand and could execute commander's will remains the key.* Primary challenges facing commanders at all levels will include target selection (which will be a political and cultural, not just a military decision), the ability to concentrate suddenly from very wide dispersion, and selection of subordinates who can manage the challenge of minimal or no supervision in a rapidly changing environment. A major challenge will be handling the tremendous potential information overload without losing sight of the operational and strategic objectives.

4.20 Winning the New Conflict in Moral Sphere. Victory in future battle field will be won in the moral sphere. The aim of future conflicts is to destroy the moral bonds that allow the organic whole of the society to exist in the shape of cohesion. This is done by reinforcing the following (according to Boyd):

4.20.1 **Menace**. Attacks that undermine or threaten basic human survival instincts.

4.20.2 **Mistrust**. Increases divisions between groups.

4.20.3 **Uncertainty**. Undermine economic activity by decreasing confidence in the future.

4.21 Notion of Victory in the Modern Warfare. What "wins" at the tactical and physical levels may lose at the operational, strategic, mental and moral levels. Martin Van Creveld argues that one reason the British have not lost in Northern Ireland is that the British Army has taken more casualties than it has inflicted. This is something the Second Generation American military has great trouble grasping, because it defines success in terms of comparative attrition rates. We must recognize that in modern warfare, armies are the weaker, not the stronger party, despite all of their firepower and technology.

Conclusion

One key to success in future wars may be "losing to win." Part of the reason the wars in Afghanistan and Iraq are not succeeding is that west dismissed the choice of people and initial invasion destroyed the state, creating a happy hunting ground for modern day empowered warriors. Fighting has to be aimed at creating peace and not conquering territories and for this very reason has to be civilized as was educated by

Islam and then it would be similar to older notions of civilized war and will not contribute to toppling fragile states. Finally, 5GW is an evolving, interesting yet imperfect concept. War's character essentially remains Trinitarian as viewing the problem of international terrorism from this angle may contribute significantly to a better understanding of asymmetric opponents, foregoing the unhelpful tendency to portray such groups as irrational fanatics and looking instead towards what factors drive people to such extremes. Even though war's character is evolving and new technologies are increasing the operational fusion of future warriors, developing nation states like us are finding it difficult to contain and fight these integrated groups. Global order is already transitioning from unipolarity to multi-polarity and possibility of conventional conflicts over control of resources cannot be altogether ruled out. As nation states are marginalized even further, more lethal hybrid wars with or without state support and possibly with the use of 5GW means like bio and nano technologies are foreseen. Future threats are complex and meanacing thus asking us to shun old mindsets and develop empowered social and political structures to deal with them more effectively.

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Maj Gen. Trirong Tongneuagao, Director of Army Training of the Royal Thai Army, in response to the Question asked by the writer during a talk at NDC on 4 March 2020. (reference not included in the text as Thailand specific context was rationalized by the supervisor).

Appendix (if any)

Annex A

Survey Questionnaire

1. Background. This survey is being conducted by **Col. Muhammad Shafique (Pakistan Army)** attending **NDC-62** Thailand. The survey is in connection with fulfilment of Individual Research Paper titled **"4th Generation Warfare, Emerging Contours of 5th Generation Warfare and its Political – Military Dimensions"**.

2. Aim. The survey is aimed at obtaining your valuable opinion about few key questions as outlined in the questionnaires that shall contribute to the quality of research paper.

3. Definitions

3.1 4th Generation Warfare.The term argues that war is being changed from a mechanical to an information/electronic society, the blurring of lines between war and politics, peace and conflict, battlefield and safety and combatants and non-combatants while assuming that the state is now more accountable to international system and is thus losing its monopoly on violence and thus ability to conduct war.

3.2 5th Generation Warfare. The secret deliberative manipulation of actors, networks, states or any earlier generational warfare forces to achieve a goal or set of goals across a combination of socioeconomic and political domains while attempting to avoid or minimize the retaliatory offensive or defensive actions/ reactions including powered actors, networks, institutions and / or states.

3.3 Assumptions/ Hypothesis

3.3.1 Due to changing geopolitical order and advancement in technology, the character or nature of future war is changing.

3.3.2 New policy/ strategy is required at national level to fight future wars.

3.3.3 Armed Forces are required to re-organized, equipped and trained to win future wars.

QUESTIONAIRE

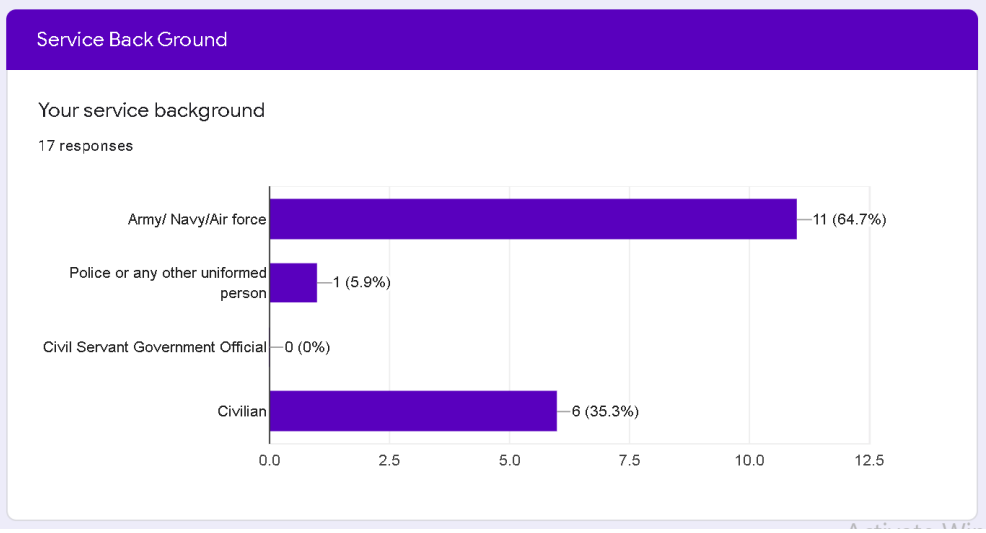
Armed Forces/ Police and other uniformed agnecy/ Govt servant/ Civilian (tick one)

Ser	Question	Yes	No	To Some extent
1.	Do you think that conditions/ environment of future wars will be different from present?			
2.	Will 4th generation warfare continue to stay for next 10 years or more along with development of 5th generation?			
3.	Are you fully aware of emergence of 5th generation warfare?			
4.	Do you think 5th generation war is already being employed against Thailand to some extent (in view of recent Anti Government events?			
5.	Is Thailand needs to re-evaluate its strategy to fight future wars?			
6.	Will Thai Armed forces be required to re-structure to fight the evolving character of war?			
7.	Do you think China-US contestation in Asia-Pacific affects geopolitical environment in ASEAN?			
8.	Is 5th Generation Warfare a challenge for ASEAN countries?			
9.	Are the ASEAN Countries prepared to fight new type of war?			
10.	Do existing interstate border disputes, local insurgencies and trans-border crimes in ASEAN encourage chances of employment of 5th generation warfare?			
11.	Any other / special comments.			

Annex - B

RESULTS OF SURVEY QUESTIONNAIRE

1. Service Background



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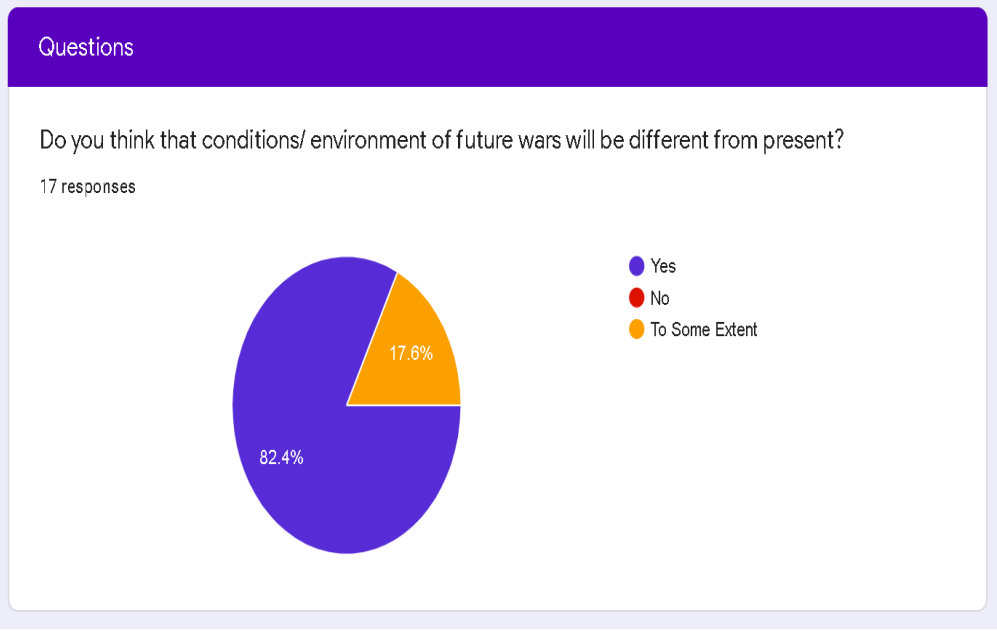

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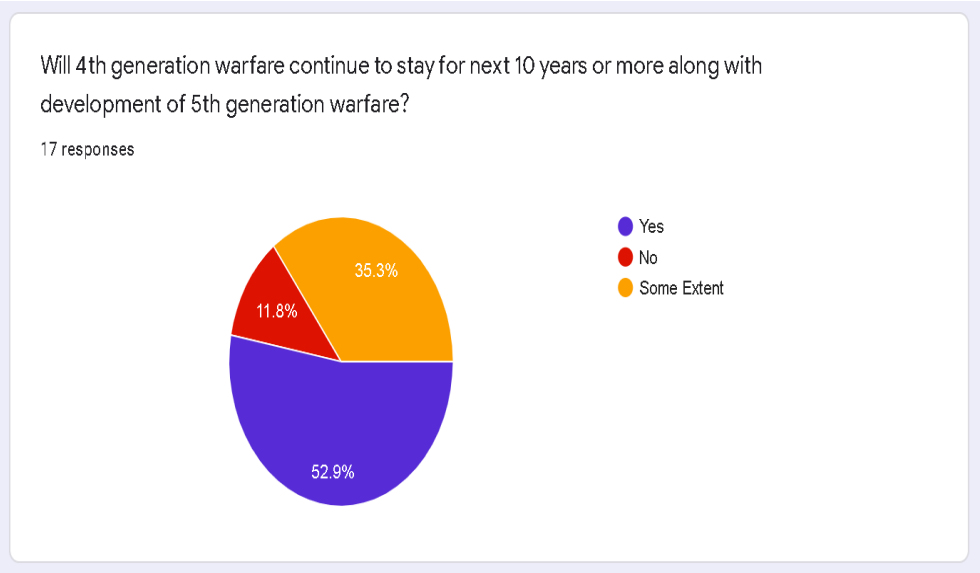

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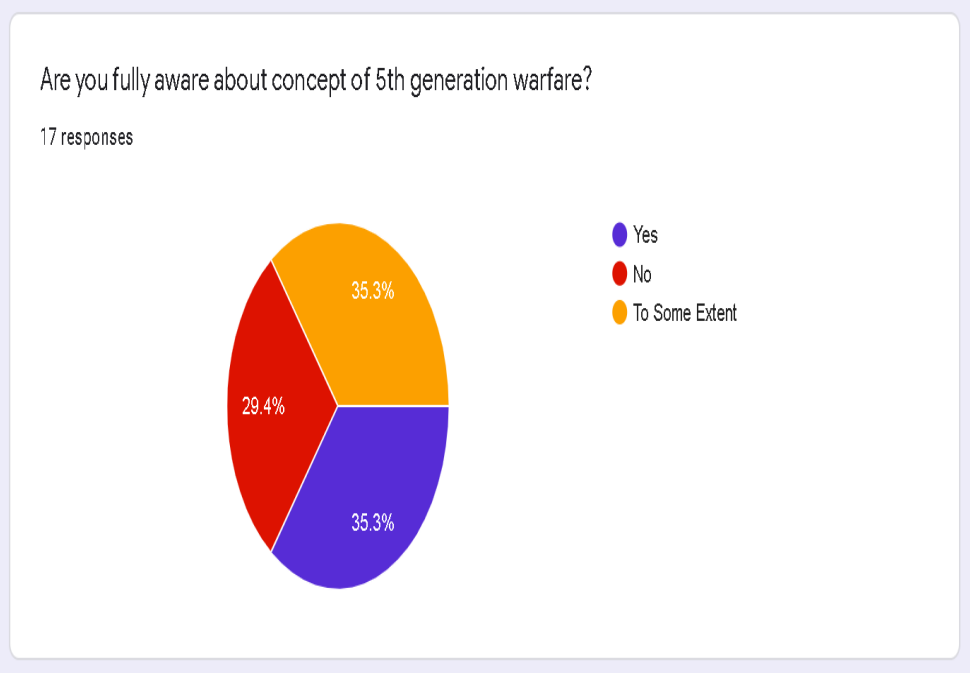

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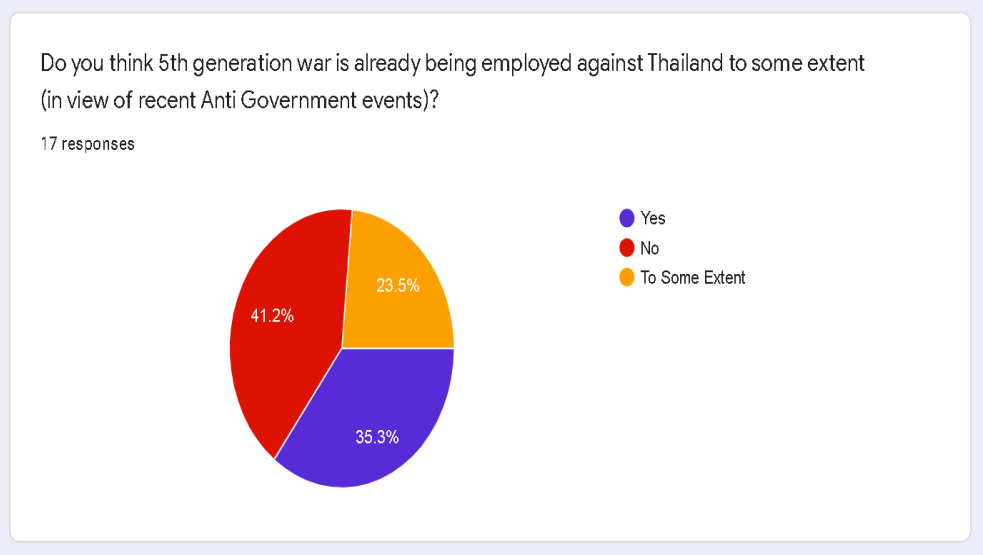

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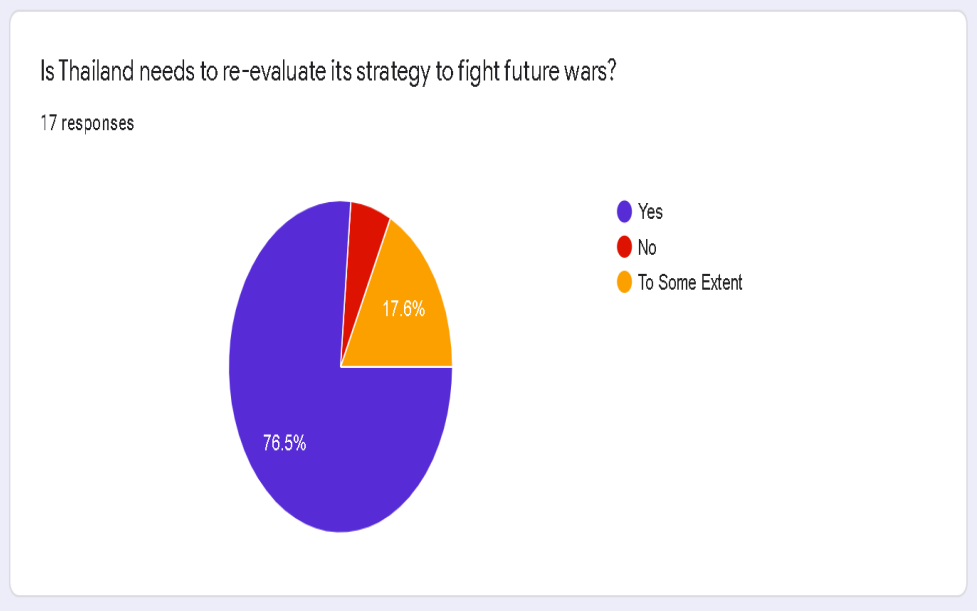
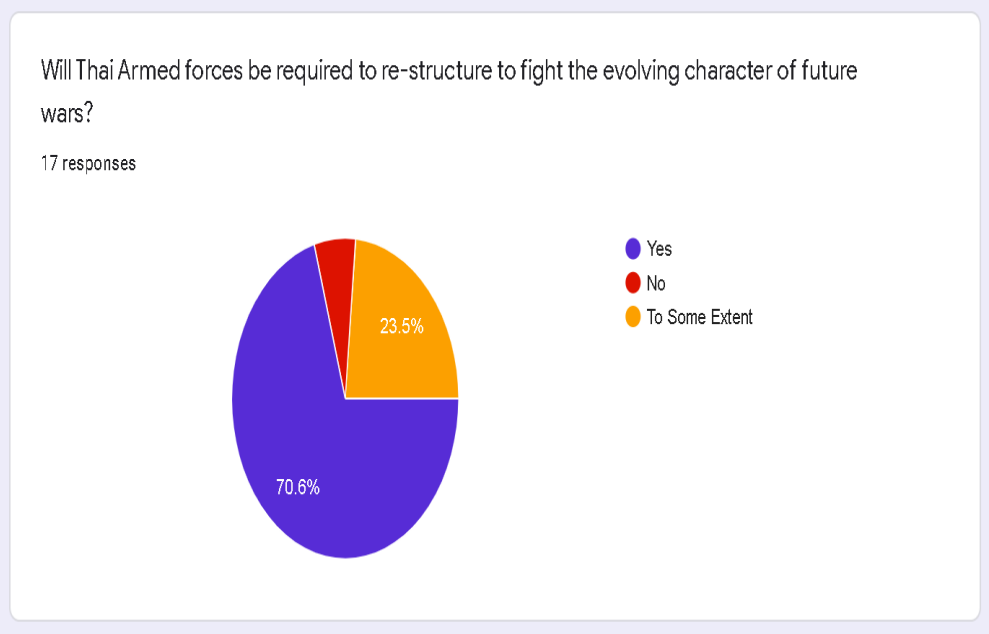
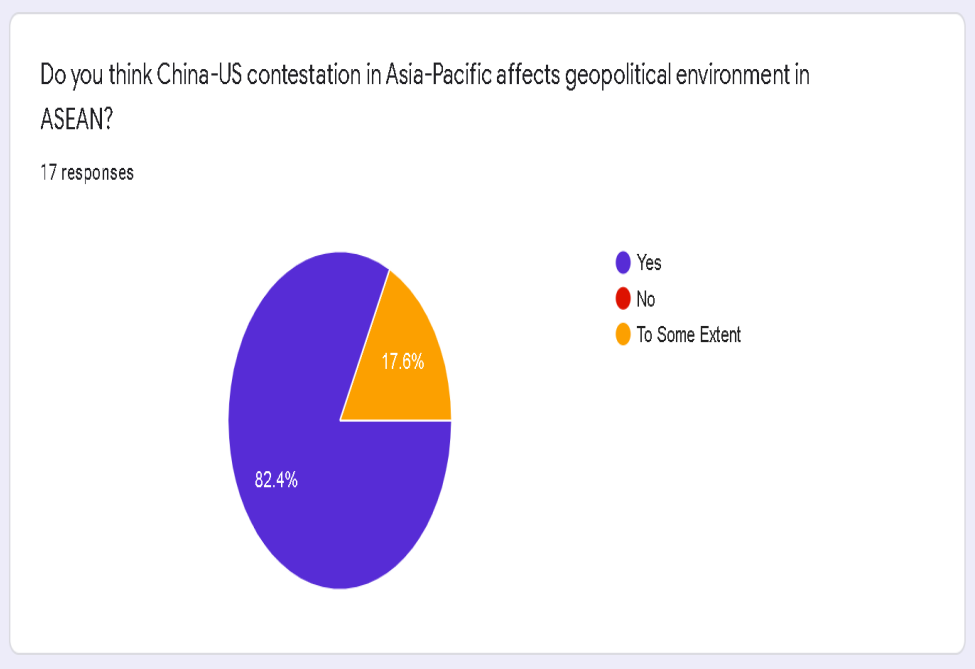


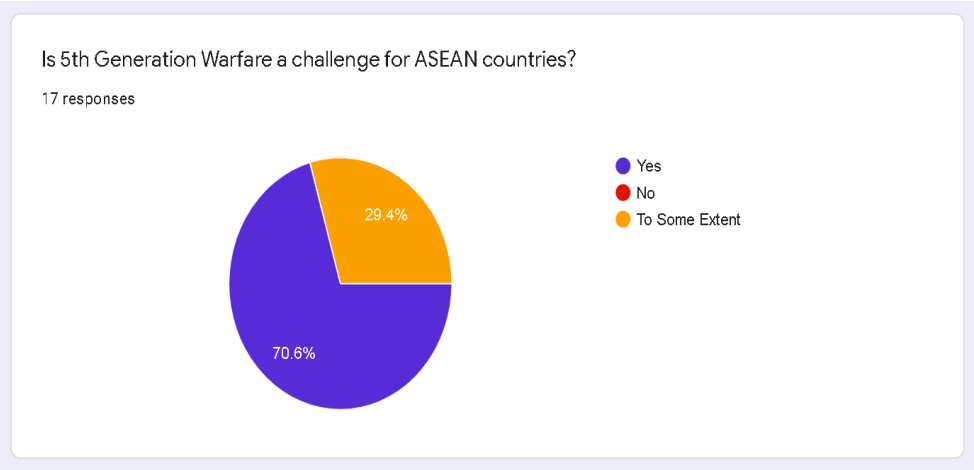
7. Question 6



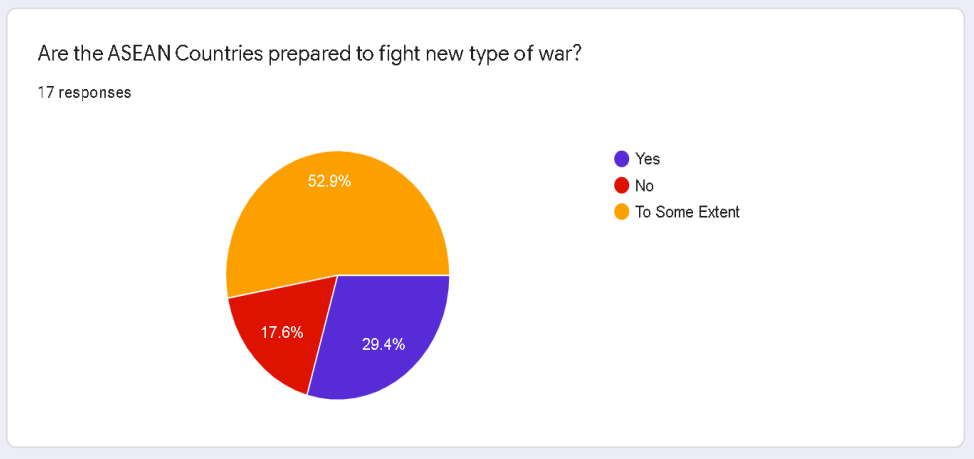
8. Question 7



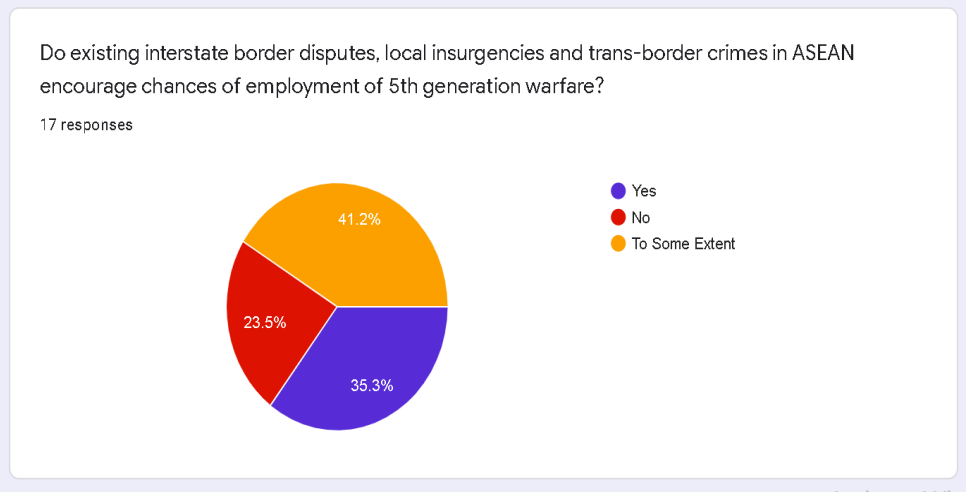
9. Question 8



10. Question 9



11. Question 10



Biography

Name **:** Colonel Muhammad Shafique

Date of Birth **:** 1 April 1976

Education Background

: Master of Science and Art of Warfare

: Master of International Affairs

: Master of Science (Master of Philosophy) Project Management (**MS Project Management**)

Military Courses : Command and Staff Course (Pakistan)

Military Experience

: Command, Staff and Operational experience

: Military Observer in MNUSCO, Congo (DRC)

: Exercise Blue Markhore – UK

: COIN-Battlefield Fire Exchanges in Support of Counter Insurgency- USA

: Counter Terrorism Operations in Pakistan

: Human Resource Management (HRM)

: Safety, Security and Protection Management Disaster Relief Management (HDR)

Current Position : General Staff Officer 1 (Assistant Military Secretary)

: General Headquarters Pakistan Army

SUMMARY

Field : Strategy

Title : 4th Generation Warfare, Emerging Contours of 5th Generation Warfare and Its Political–Military Dimensions

Name : Colonel Muhammad Shafique **Course** NDC **Class** 62
Position : General Staff Officer 1 (Assistant Military Secretary)

Background and Significance of Problem

While military development is generally a continuous evolutionary process, the modern era has witnessed three watersheds in which change has been dialectically qualitative. Consequently, modern military development comprises three distinct generations. The generations of warfare began with the Peace of Westphalia in 1648, which established state's monopoly on war while previously, many different entities had fought wars – families, tribes, religions, cities, business enterprises – using many different means, not just armies and navies.

Generations of Warfare. Warfare has developed not just from the invention of gunpowder but also from the political, economic, and social structures that developed in Europe. It evolved through four generations: first generation (1648 – 1860), use of massed manpower, second generation (1860 – 1915), use of firepower, third generation (started in 1915 and came to maturity in 1940) aimed at manoeuvre, and fourth generation of warfare (1989) which can be called as an evolved form of insurgency that employs all available networks, political, economic, social and military to convince an opponent's decision makers that their strategic goals are either unachievable or too costly. Fifth-

generation warfare (5GW) as its proponents propose will result from the continued shift of political and social loyalties to causes rather than nations.

Evolving character of war is likely to be more fluid, complex, intense and not limited to military engagements and requiring military operations only. But it will also involve political leadership and political ownership at national level will also be put to test. Evolving character of future wars is required to be forecasted in the realm of politico-military context so that comprehensive, coherent and detailed plans are put in place to meet the challenges of broad spectrum of threat.

Objectives of Research

To carryout appraisal of 4GW, emerging contours of 5GW and its political – military dimensions with special emphasis on following (Pakistan and Thailand context):-

1. To study the evolving character of future wars under complete spectrum of emerging contours with special reference to South and Southeast Asia.
2. To suggest strategic choices at political/ national level to deal with the emerging character of war.
3. To recommend the way forward as to how the military is required to be prepared/ trained to deal/ fight/ win future wars under evolving contours of future wars.

Scope of Research

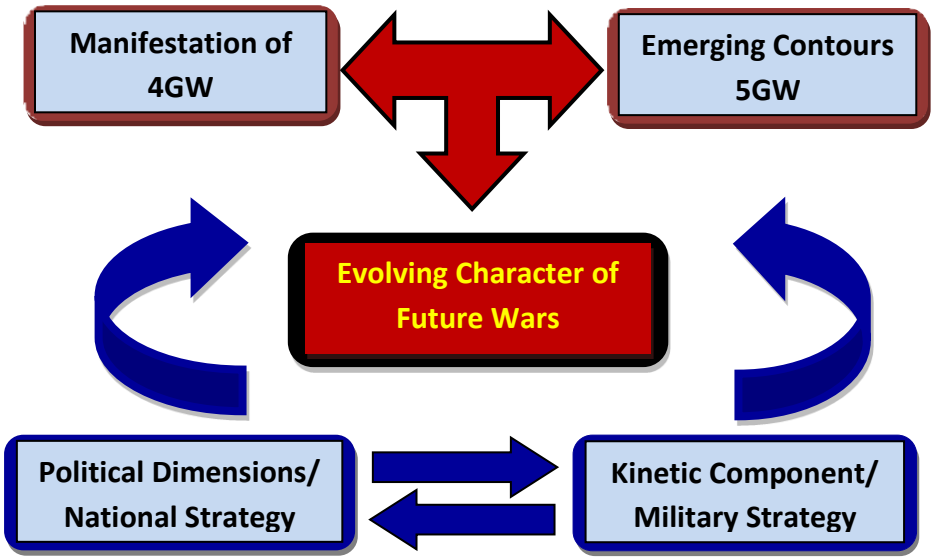
The study is limited to the context of South and South East Asia in the context of 4GW and emerging contours of 5GW with special emphasis on Pakistan and its relevance to Thailand.

Methodology

1. Methods of Data Collection. Methods of data collection include previous or related work done on the subject, consultation with mentors, open source internet. A qualitative and comparative evaluation and analysis of the data was carried out to establish facts through logical confirmation.

2. Research Design. The mixed research design primarily qualitative in nature has been used by carrying out systematic literature review of the earlier related work done on the subject. Thailand was taken as population for this survey. Staff and students of NDC 62 were selected as sample. Questionnaire was sent to sample (about 350 individuals) and only 17 responded.

3. Conceptual Framework



4. Understanding 4th and 5th Generation Warfare

Introduction. Each generation has very distinct feature, attributes and war fighting concept which differentiates one from the other. 4th and 5th generation warfare have different attributes, goals and overall spectrum of violence. It is important to understand basics of 4th and 5th generation warfare.

5. Fourth Generation Warfare

5.1 The Definition and Concept. "The term argues that war is being changed from a mechanical to an information/electronic society, the blurring of lines between war and politics, peace and conflict, battlefield and safety and combatants and non-combatants while assuming that the state is now more accountable to international system and is thus losing its monopoly on violence and thus ability to conduct war".William Lind and Colonel Thomas Hammes are the primary proponents of 4GW and theory was first time given in 1989.

5.2 Development in 4th Generation Warfare. Another significant advancement is found in what Marine Colonel Thomas X. Hammes calls major developments in 4th generation warfare[1], they are: -

5.2.1 Strategic Shift.

5.2.2 Organizational Shift.

5.2.3 Shift in Type of Participants.

5.2.4 Operational Shift.

6. 5th Generation Warfare

6.1 Definition. [2]The secret deliberative manipulation of actors, networks, states or any earlier generational warfare forces to achieve a goal or set of goals across a combination of socioeconomic and political domains while attempting to avoid or minimize the retaliatory offensive or defensive actions/ reactions including powered actors, networks, institutions and / or states.

6.2 Features of 5th Generation Warfare. Some salient features are as follows:-

6.2.1 Violence is so dispersed that the losing side may never realize that it has been conquered.

6.2.2 The very secrecy of 5GW makes it hardest generation of war to study/ fight. Most successful 5GW are those that are never indentified.

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[1] Thomas X. Hammes, "Fourth Generation Warfare Evolves, Fifth Emerges." Military Review (May-June 2007): 15 - 16

[2] Eurasia Review, "5th Generation Warfare-OpEd by Imran Shahani" 4 February 2018. Accessed on 3 January 2020. Available at https://www.eurasiareview.com/.

6.2.3 5GW attacks occur below the threshold of observation.

6.2.4 It focuses on open source warfare, systems disruption, and virtual states as a new form of political organization.

6.2.5 Actors are single individuals who perform their roles in a grand strategy without realizing their roles.

7. Critical Examination of 4th and 5th Generation Warfare Concept

8. Receding 4th Generation Warfare

Changes in Social and Political Systems. Abasic assumption made by the proponents of fourth generation warfare concerns collapse of nation states thus leading to reduced monopoly of states over violence.

8.1 Each new generation required developments across the spectrum of society.

8.2 Politically, there have been extensive changes since the end of World War II and number of states has increased from 51 in 1945 to 195 now.

8.3 Rise in the number of stateless actors to include both transnational and sub-national elements.

8.4 As the inter-state wars receded due to their global unacceptability and economic costs, states and non-state actors resorted to low intensity conflicts and proxy wars.

9. Emergence of 5th Generation of Warfare

9.1 Has Fifth Generation Warfare Already Manifested? Despite the fact that framework of the Fourth Generation of Modern War is not very old, first appearing in print in 1989, military thinkers are now talking about a Fifth Generation. Some see the Fifth Generation as a

product of new technologies, such as bio and nano technologies. Others define it as the state's struggle to maintain its monopoly on war and social organization in the face of Fourth generation challengers.

9.2 Transition to Next Generation. 5GW has made following transitions:-

9.2.1 Strategic Shift.

9.2.2 Organizational Shift.

9.2.3 Shift in Participants.

10. Evolving Character of Future Wars and It's Politico – Military Dimensions

10.1 Introduction. While war certainly has evolved and will continue to do so its nature i.e. violence has remained unaffected. Developing better understanding about evolving character of war will thus require better insight into the human nature, reasons for future conflicts and options available with future warriors might it be states, state sponsored non state actors or independent non-state actors in pursuit of their political interests.

10.2 How the Future Wars will be fought?

10.2.1 Future Warriors.

10.2.2 Ability to Conduct Unrestricted Warfare.

10.2.3 Al Qaeda's Model of Insurgency.

10.2.4 Evolution of Insurgencies.

10.3 Transition to 5th GW. After insurgencies have built themselves on the compound wars model then depending on the availability of advanced technology they can either transit to 5th GW provided they can control cyber space and bio and nano technologies and

integrate them with new war fighting ideas or failing above can still remain in 4GW and hence more complex hybrid wars.

South East Asia (ASEAN) Context

1. ASEAN Security Challenges.
2. **Significancant Role of Thailand**
    a. Geopolitical Importance.
    b. Centre Stage for Contesting Security Frameworks.
    c. Role of Bridge Builder.
    d. China's Clear Strategic View of Region in Future.
    e. The Security Outlook of the Asia-Pacific Region.
    f. Make no mistake, the Asia-Pacific region would be the laboratory of their fierce contestation.

    g. **Key Questions for The Future**
        - Can ASEAN's centrality in Asian regional architecture be assured for next 20 years?
        - ASEAN 2030: "Wise counsel of Asia or marginalized relic of the past"?

Conclusions and Recommendations

1. Summarised Conclusions
2. Developing International Environment and Implications on Nation States.

Political Domain/ National Strategy

1. Clear Strategic Direction to Prevent and Fight the Future Wars.
2. Political Ownership of the Conflict.
3. Creating Enabling Environment for Developing Fully Empowered Societies.
4. Formulation of Counter Narrative(s).
5. Revamping Legal Systems to Fight Future Wars.
6. Inter – Agency Cooperation.
7. Reforms for Capacity Building of Law Enforcing Agencies (LEAs).

8. Preparing for a Lengthy War.
9. Information Control.
10. Inter – State Cooperation.
11. Capacity Building to Fight 5GW and Open Source Warfare.
12. Research and Development for Meeting the Challenges of Disruptive Technologies.

Kinetic Component/ Military Strategy

1. Changes in Military Culture.
2. Ability to Adapt and Learn.
3. Adaptive Campaigning.
4. Strategic Communication through Use of Mass Media.
5. **Tactics and Operational Art**
    a. Reduced Emphasis on Operational Art.
    b. Blending of Tactical and Strategic Levels.
    c. Force Multipliers.
    d. Mission Oriented Orders.
    e. Force Protection.
    f. Population Protection.
    g. Information Operations by Using Mass Media.
6. Restructuring of Units
7. Training of Leaders.
8. Winning the New Conflict in Moral Sphere.
9. Notion of Victory in the Modern Warfare.

Conclusion

One key to success in future wars may be "losing to win." Part of the reason the wars in Afghanistan and Iraq are not succeeding is that west dismissed the choice of people and initial invasion destroyed the state, creating a happy hunting ground for modern day empowered warriors. Fighting has to be aimed at creating peace and not conquering territories and for this very reason has to be civilized as was educated by Islam Finally, 5GW is an evolving, interesting yet imperfect concept. Even though

war’s character is evolving and new technologies are increasing the operational fusion of future warriors, developing nation states like us are finding it difficult to contain and fight these integrated groups. Future threats are complex thus asking us to shun old mindsets and develop empowered social and political structures to deal with them more effectively.