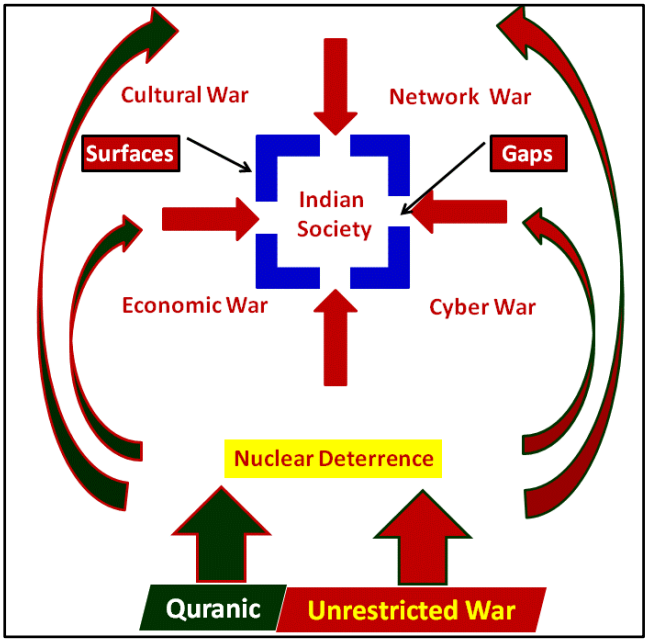
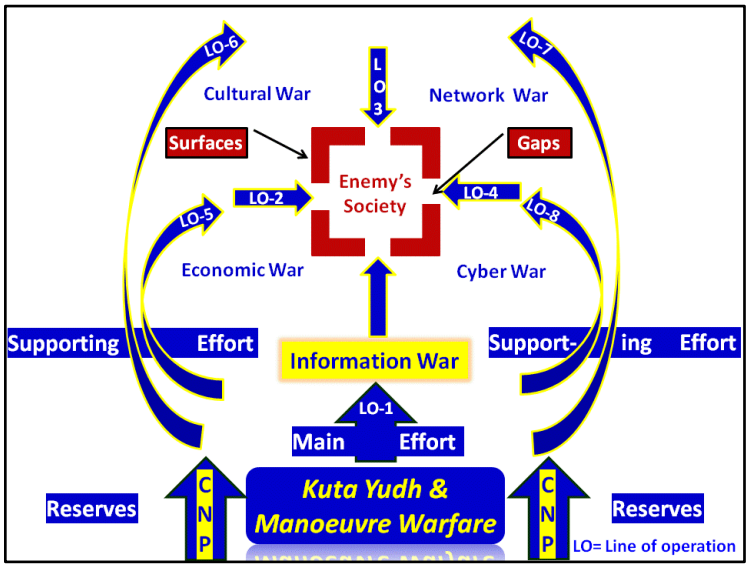
FIRE POWER WILL REPLACE MANOUVRE IN FOURTH GENERATION WARFARE



Unrestricted Warfare against India



Kuta Yudh and Informatised Manoeuvrist Warfare by India for Peace

By

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FIRE POWER WILL REPLACE MANOUVRE IN FOURTH GENERATION WARFARE

By

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A Dissertation submitted in partial fulfilment of the requirement of the award of M Phil by **Devi Ahilyabai Vishwavidhyalaya** at Army War College, Mhow (MP)

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FIRE POWER WILL REPLACE MANOUVRE IN FOURTH GENERATION WARFARE

EXECUTIVE SUMMARY

1. Edge of 21st Century witnessed a shift in power structures and the disintegration of powers that held the world together. The watershed of this *powershift* was **Gulf War I**. This *powershift* led to proliferation of **idea based 4GW** and consequently the US led war on terror; the later fuelling more violence because of its own violent nature.

2. **India Vision 2020** is held **captive** by China, Pakistan and our internal contradictions. For the Nation to rise to the aspirations of its demographic bulge/ dividend**, winning peace and removing fear are initiating imperatives**. Aim of war being **peace and prosperity**, identifying centres of gravity and defining military victory have become complex exercises. Aims of **'decisive military victory'** and **'no loss of territory'** being *attritionist* and anti-peace, need a review.

3. Consequently, the relevance of **developing an Indian design**

of statecraft and war fighting based on *Gudha and Kuta Yudhas, and informatised* manoeuvre-based swarming. This requires de novo review of doctrines, force structures, equipping policies and command & control systems.

4. ***Kuta Yudha* and *Gudha Yudha*** based ***Mandal-istic* statecraft** assumes reorienting enemy's (military & people) **anti ideas** as the only way to **win peace.** It identifies enemy's ideas and people as centres of gravity. **Information dominance and controlled violence (*ahimsa)*** hence, emerge as new principles of war.

5. For counter 4GW war fighting, this Study recommends employment of all **non-lethal cum lethal tools through soldiers and non-soldiers** operating as **swarms of networked small teams** using technology and information to constantly **remain ahead** of the adversary's **OODA loop** at all levels. Exploitation of **surfaces and gaps** by amorphous **multi capability small teams** operating on **mission type orders** through **lines of operations** selected by **ISR pull** with **varying focus of efforts** supported by **fire power** in a **minimalistic** controlled role will deliver **peaceful end state(s)**.

ACRONYMS USED

3GW	Third Generation Warfare
4GW	Fourth Generation Warfare
CNP	Comprehensive National Power
COIN	Counter Insurgency Operations
CT	Counter Terrorist
IAEA	International Atomic Energy Agency
ISI	Inter-Services Intelligence agency of Pakistan
IT	Information Technology
IAEA	International Atomic Energy Agency
INSAS	Indian Small Arms System
IO	Information Operations
ISR	Intelligence, Surveillance & Reconnaissance
IW	Information Warfare
LC	Line of Control
LIC	Low Intensity Conflict
LTTE	Liberation Tigers of Tamil Eelam
LWE	Left wing extremism
OEF	Operation ENDURING FREEDOM
OIF	Operation IRAQI FREEDOM
PLA	Peoples Liberation Army (of China)
PMF	Para Military Force
RMA	Revolution in Military Affairs
SWOT	Strengths, weakness, opportunities and threats analysis
UAV	Unarmed Aerial Vehicles
USA/ US	Unites States of America/ American
WMD	Weapons of Mass Destruction

ABBREVIATIONS USED

C of G	Centre of Gravity
No	Number
Pak	Pakistan(i)
Vill	Village

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FIRE POWER WILL REPLACE MANOUVRE IN FOURTH GENERATION WARFARE

"The arrow shot by an archer may or may not
kill a single person;
but skilful intrigue, devised by wise men,
may kill even those who are in the womb"

-Kautilya, 3 BC

CHAPTER I: INTRODUCTION

Appendix A: - Bibliography.

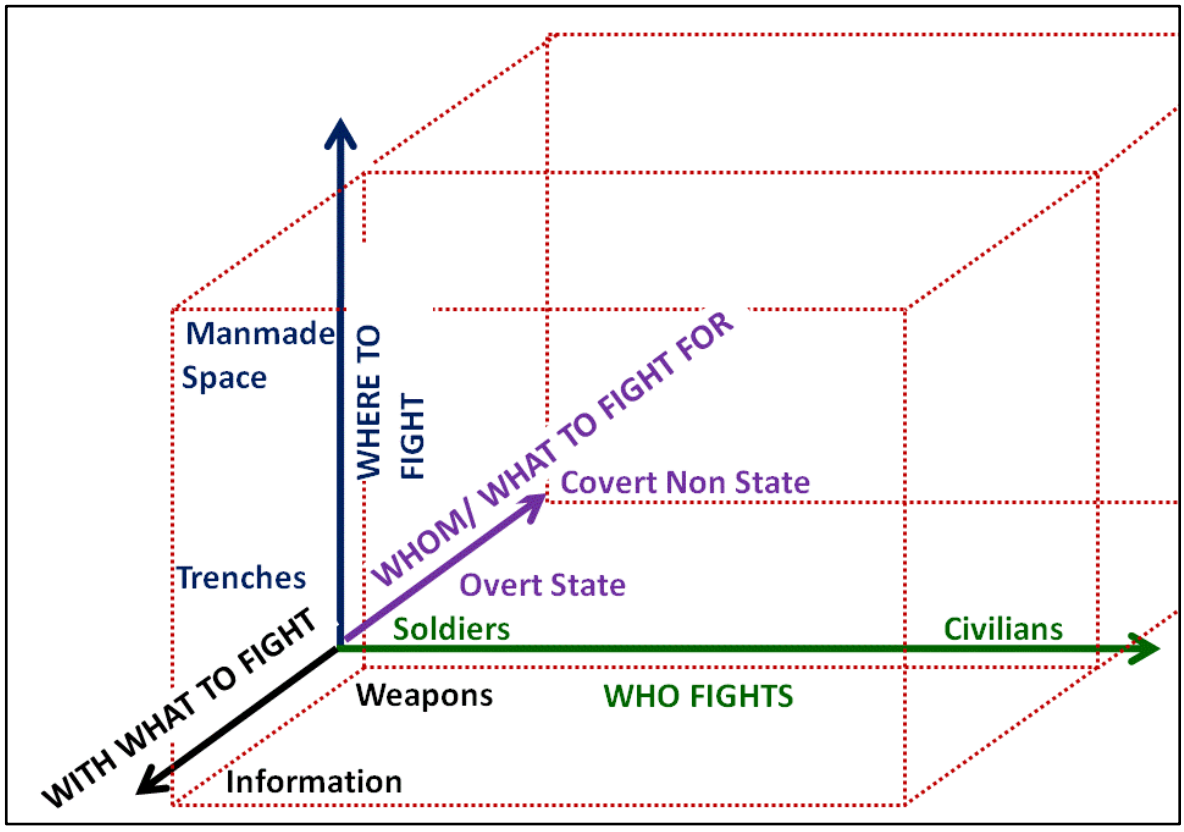
Appendix B: - Application of manoeuvre in counter terrorist operations in Lolab, Kashmir.

The New Face of God of War

1. 20th Century has witnessed profound changes with the decade of 1990's being the watershed of change. Operation DESERT STORM (Gulf War I) has been the lead change agent of this period being called, *'the War that changed the World and ultimately war itself'*. The first decade of the 21st Century has exposed the limitations of military means leading to a commonly assumed military conclusion that, Operation DESERT STORM has led to the rebirth of war. In the post-modern and post-industrial age, warfare has re-invaded human society in more complex, extensive, concealed and subtle ways. This profound change in

war and conduct of war has been driven by **fission-fusion-diffusion of technology**.

2. War in the age of technological integration and globalisation has realigned the relation between weapons, doctrines and war. Non-war actions have proliferated face of future warfare transcending all boundaries/ limits of war and non-war, and of military and non-military. **War God's face** has transformed beyond recognition due to, firstly, constantly evolving weapon technologies that drive revolution in tactics, secondly, *civilianisation* of war that removed the gap between soldiers and citizens, and thirdly, *infinite-isation* of the battlefield which has extended frontiers of war into the invisible. Refer to Graph I below for the changing face of war. 4GW is being fought across spectrum of political, social, economic and military spheres.



Graph I: Changing Face of War

Constant in Changing Change

3. **War always changes**; last 350 years have seen the fastest changes. In spite of ever-changing change, war still remains the ground of death and life and, the road to survival and destruction along which innocence is an ill-fated virtue. **'Kinder'** new concept weapons by their accuracy and non-lethality are set to introduce a new paradigm in military affairs. They have the potential to alter the process of war, but the essence of war i.e. **'compulsion'** will remain an unalterable constant. The varied combinations that give rise to the phrase *'asymmetric warfare'*- asymmetric in interests and capabilities are as given at Graph I above. The drivers generating and supporting a revolution in warfare are listed at Table A below.

DRIVERS OF RMA	
1.	All weather precision weapons.
2.	Stealth technology.
3.	Unmanned vehicles.
4.	Exploitation of space at tactical and operational levels.
5.	Network communication technology.
6.	Joint/ integrated use of military and non-military forces.

Table A: Drivers of Revolution in Military Affairs (RMA)

A Completely New 'Old Generation' of Warfare

4. These radical changes in conduct of war mark the advent of fourth generation of warfare. **4GW is not a revolution, but a *de-revolution*** into the way war was conducted before rise of the 'state'. Citizens and non-states make 4GW novel to conventional militaries although; this situation was widely prevalent before the **Peace of Westphalia**. The amorphous and pervasive nature of war demands a **de-novo review** of relevance and employment of **principles, tools and tactics of warfare**; primary among them fire power and manoeuvre.

Mahatma Gandhi's 'non-violent means'; a classic example of 4GW, is a possible way ahead for India.

5. India must solve its conflicts into peace for generations to come. As war evolves and makes conventional military force irrelevant, India has to reorient to develop a coherent new grand strategy and re-organise to win peace.

CHAPTER II: METHODOLOGY OF RESEARCH

Statement of Problem

1. It is proposed to research the contours of 4GW and identify scope and inter se relation between fire power and manoeuvre in combating 4GW.

Hypothesis

2. **4GW** is characterised with the blurring of war and politics, soldier and civilian and, in which **any one actor is a non-state actor**. 4GW is waged using a information technology **assisted tactical mix** of insurgency, guerrilla warfare, terrorism and psychological warfare by small **networked cells** of non-soldiers (non-state actors) to target the enemy's (state) culture. **Hence, the use of fire power in 4GW has increased vis-à-vis manoeuvre.**

Justification of Study

3. Thinking Ahead. Principles of war influence the conduct of war and as the world enters the 21st Century, it appears that we are in the midst of revolutionary trends in international security, with the forces of 4GW, IT and globalisation seemingly transforming the theory and practice of war. 9/11 has been recognised as the bifurcation point of international security system, where after it split between a traditional 20th Century states centred paradigm and the new 21st Century sub-state and trans-state strata. Refer to Figure 1 below. This bifurcation introduced the reduction in relevance of strategic geography as IT and globalisation denied states and societies the opportunity to retreat behind physical or moral borders. Contours of future wars can be speculated through a study of the interaction between inter-state, sub-state and trans-state conflict, and the diffusion of contemporary military capabilities. The intellectual

challenge is not to dump *Clausewitzian* **'Trinitian Theory'** as Martin van Creveld may want us to believe, but to learn to fight effectively across the entire emerging spectrum.

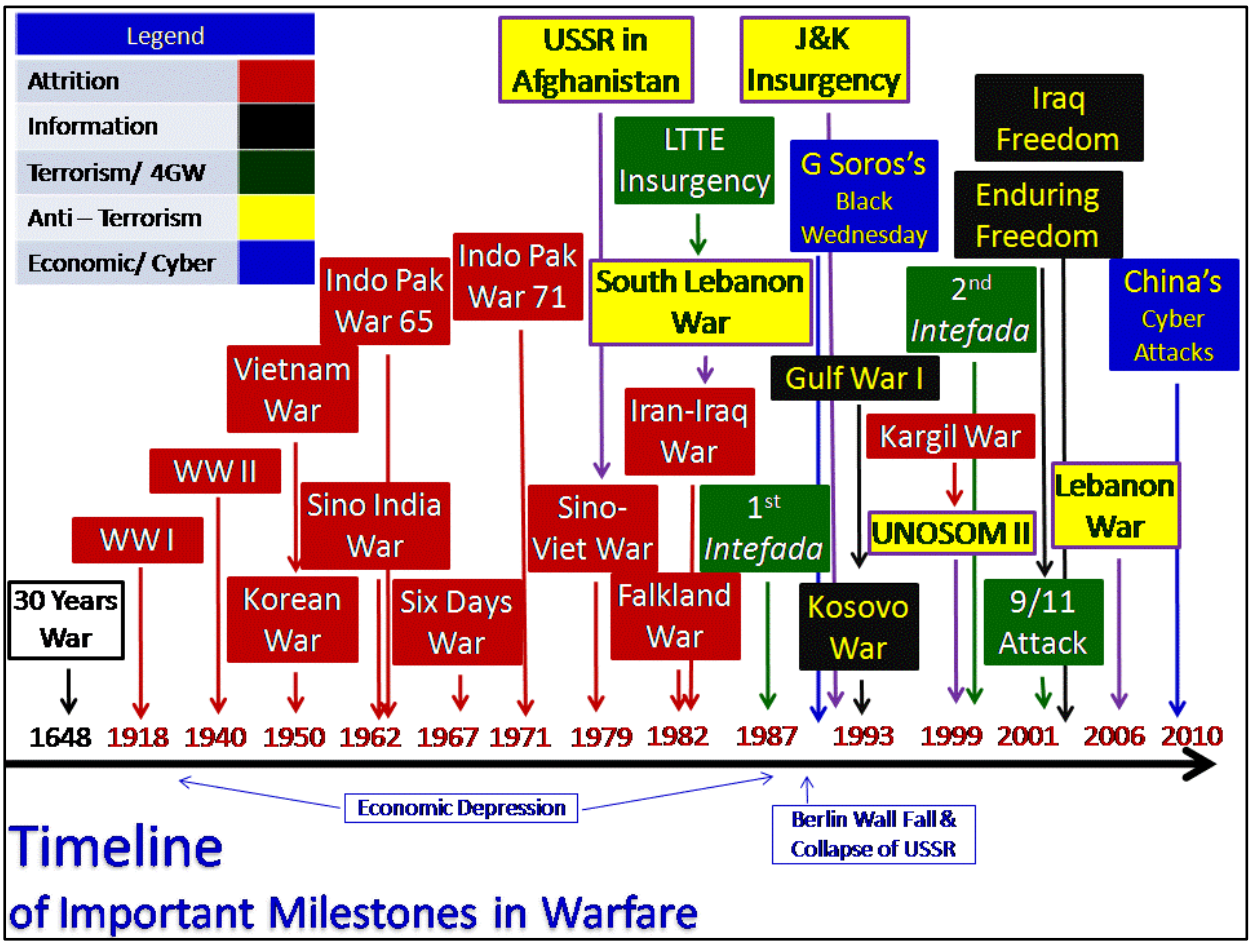


Figure 1: Timelines of War in History

4. Dilemma of Clashing Military Lessons. Important military lessons to emerge after 1990 can be classified into pro-fire power (including air power) and counter-war or **'mastery of violence'**. Refer to Table B below. Military leaders have but one option viz; to rigorously study evolving future war and prepare nations and militaries for the same.

#	Fire Power	Mastery over Violence
1.	Accurate fire power can help keep own soldier casualty figures low.	Collateral damage is counter to peace.
2.	Air & artillery fire power can reach where soldiers and tanks cannot without violating geographic borders.	Pervasive influence of politics at all three levels of war prevents indiscriminate use of violence characterised by fire power.
3.	Technological edge is best used through exploitation of fire power.	Complex spectrum of 4GW requires mastery over violence.

Table B: Clashing Military Lessons

Scope

5. The focus of this dissertation is to research the contours of 4GW and examine the conduct of this new type of war in order to arrive at a method of combating it and identifying the inter se relation between fire power and manoeuvre as principles/ tools of waging or combating 4GW in the Indian context. Reasons for proliferation of 4GW and a solution for the same have been excluded from the scope of this dissertation.

Definitions of Operational Terms

6. **Doctrinal and Strategic Terms.**

(a) National Vision. President APJ Abdul Kalam defines it as an articulation of the **desired end results** in broader terms. [1]

(b) National Interests. Are necessary for maintenance of the State and offer **broad guidelines** to national leaders.

[1]APJ Abdul Kalam, India 2020: A Vision for the New Millennium, New Delhi: Penguin Books.

(c) National Principles. The enduring modes of behaviour that characterise nations and are deeply embedded in **culture, religious ideals and political philosophy of society**.

(d) National Goals and Objectives. Specific goals and objectives designed to secure or support an **interest and/ or principle**. They must be **desirable and attainable**.

(e) National Policies. Specific courses of action designed to achieve an objective. The **aims of a government** are collectively known as its national policy.

(f) National Security. Security means freedom from fear, danger and deprivation. According to Morton Berkowitz and PG Bock, national security can be most fruitfully defined as ***'ability of a nation to protect its internal values form external threats'***.[2]

(g) National Power. The capacity of a nation to use its tangible and intangible resources in such a way as to **affect the behaviour of other nations**.

(h) Comprehensive National Power (CNP). CNP can be calculated numerically by combining various quantitative indices to create a single number held to measure the power of a nation-state. These indices take into account both **military factors** (hard power) and **economic cum cultural factors** (soft power).[3]

(i) Grand or National Strategy. Is the direction of power of a country (and its allies) taken to achieve the aims of national policy. Grand strategy must take a long-term view, as **its problem is the winning of peace**.[4]

(j) Military Strategy. The allocation of tasks to military based on grand strategy led to development of combined tri service strategy. It is the art and

[2] BG Bock and Morton Berkowitz, Emerging Field of National Security. http://www.jstor.org/pss/2009846
[3] http://en.wikipedia.org/wiki/Comprehensive_National_Power
[4] US Army. Joint Publication 102, USA, 16 July 1997, p 653.

science of employing the armed forces to secure the objectives of national policy by **application of force or threat of force**.[5]

(k) Doctrine. Is evolved from concept and lays down **standard guidelines** for functioning under various conditions. It enables establishing a commonly understood way of thinking and engaging in combat and must be reviewed and re-validated periodically with changes in national goals.[6]

(l) War. War is a clash of opposing wills; a struggle between beliefs. Victory goes to the side that **crushes the enemy's will and destroys his beliefs**.

(m) Attrition Warfare. War in which one's **enemy is worn down** to the point of collapse by losses in personnel and material, the war being won by the side with the greatest resources and reserves.[7]

(n) Manoeuvre Warfare. Refer to Table C below for difference between the

ATTRITION WARFARE	MANOEUVRE WARFARE
• Cumulative destruction of enemy by superior firepower. • Enemy's strength is the target. • Efficiency of fire power demands procedures and centralized control. • Body counts and terrain captured are primary battle metrics.	• Systematic destruction of enemy's plan. • Focus of effort and speed cum surprise in execution. • Firepower for localized attrition only and to enable manoeuvre. • Emphasis is on disciplined free action.

Table C: Attrition vs Manoeuvre Warfare

[5] Army War College, Mhow. Theory of War Hand Out. July 2010, p.19.
[6] DSSC Wellington. Army 1 Pamphlet.
[7] http://www.wordiq.com/definition/War_of_attrition

two forms of warfare.[8] Is a war fighting philosophy that seeks to **shatter enemy's cohesion** through a variety of rapid, focused and unexpected actions which create a **turbulent and rapidly deteriorating situation** with which the enemy cannot cope with.[9]

(o) Moral Warfare. Wiki.Answers defines moral conflict as the situation when you think that something is right for one reason but, you think it is wrong for another reason, and you do not know what is going on or what is right. The conflict is due to **differences between fundamental and cherished values**. In relation to manoeuvre warfare, moral strength represents mental capacity to overcome menace, uncertainties and mistrust. **Moral victory is a triumph of courage and esprit de corps** over fear, anxiety and alienation when confronted by menace, uncertainty, and mistrust.

(p) Information Warfare. The **integrated** employment of electronic warfare, computer network operations, psychological operations, military deception and operational security to **influence, disrupt and corrupt adversarial human and automated decision making, while protecting own**.[10] Is doing whatever you need to do to get to the end of your decision cycle before your opponent gets to the end of his.[11]

(q) Low Intensity Conflict (LIC). Conflict that takes place at levels below conventional war but, above routine peaceful competition between states as a result of **protracted struggle between principles and ideologies**.[12]

---

[8]Lieutenant Colonel Jeffrey A. Springman, 'The Rapier of the Club: The Relationship between Attrition and Manoeuvre Warfare'. US AWC Strategic Research Project. 2006.

[9] William Lind. Manoeuvre Warfare Handbook. London: Westview Press, 1985.

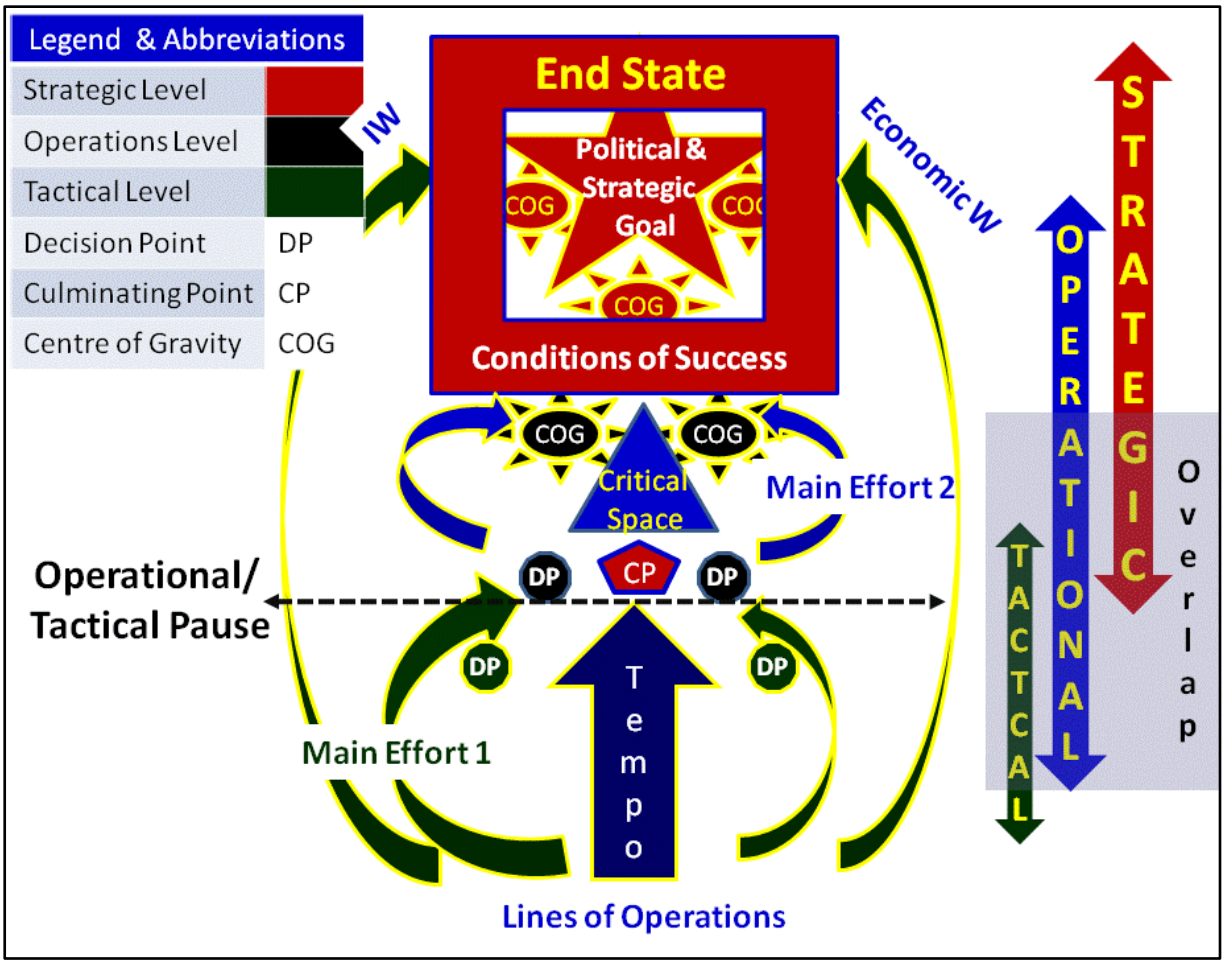
[10] EL Armistead. Information Warfare- Separating Hype from Reality. New Delhi; Manas Publications, 2010. p.10

[11] Bruce Berkowitz. The New Face of War; How War Will Be Fought in the 21st Century. New York: The Free Press, p. 43.

[12] Lieutenant General (retired) VK Sood. "LICO: Historical Perspective and the Indian Scene". College of Combat, Combat Paper No. 3. March 1992.p.39.

7. Operational Terms.

(a) Operational Art. Is a concept of military practice dealing with large, combined armed forces for the accomplishment of strategic goals in a theatre of war. It is the connecting **link between strategy and tactics**.[13] Refer to Sketch L alongside for an explanation.



Sketch L: Operational Art Explained

(b) Centre of Gravity. A set of characteristics, capabilities or localities from where a **military force draws its freedom of action, physical strength or will to fight**[14]. Also, a **point of vulnerability** against which a successful attack is

[13] Lieutenant General DP Singh, AVSM. 'Training for Operational Art'. Infantry Journal. 2004.
[14] Major General (Later Lieutenant General) SA Hasnain, AVSM, SM, VSM**, "The Emerging Doctrine of Effect Based Operations", War College Journal, Spring 2010.p.5.

likely to **cripple enemy's war waging abilities** i.e., critical vulnerability. Strategic and operational level centres of gravity should be complementary.

(c) Shaping the Battlefield. Dynamic process of series of actions and measures to restrict and restrain, if not **regulate the enemy's actions** and options.

(d) Non-Linear Battle. Connotes absence of rigid form or shape traditionally ascribed to a battlefield. **Simultaneity** is the essence of non-linear battle.[15]

(e) Combat Power. Is the total means of **destruction or disruptive force**, or both, that a military unit or formation can apply against the adversary at a given time. Traditionally defeating enemy requires increasing the disparity between friendly and enemy forces by reducing enemy combat power.[16]

(f) Synergy. **Combined effect** of troops, weapons systems, combat support elements and force multipliers that generate combat power, which is not proportionate to a **linear calculation**.[17]

(g) Fire Power. The **amount of fire** which may be delivered by a position, unit or weapon, both lethal and non-lethal.[18]

(h) Degradation. Military actions taken to achieve dilapidation, deprivation and **ruin of enemy**. Meaningful degradation is feasible when all offensive elements are applied in an integrated manner, be it firepower or information power.

[15] DSSC Wellington. Manoeuvre Warfare Pamphlet.
[16] US Army. Filed Manual FM 3.0. p. 4.3.
[17] ibid.
[18] UK Ministry of Defence. UK Glossary of Joint and Multinational Terms and Definitions, Joint Doctrine Publication 0-01.1, 2006. p. F4. (http://www.mod.uk/NR/rdonlyres/E8750509-B7D1-4BC6-8AEE-8A4868E2DA21/0/JDP0011Ed7.pdf)

8. 4GW/ Asymmetric Warfare.

(a) 4GW. Blurs lines between war and politics, conflict and peace, soldier and civilian, and battlefield and safe zones. Refer to Figures 2 & 3 below for

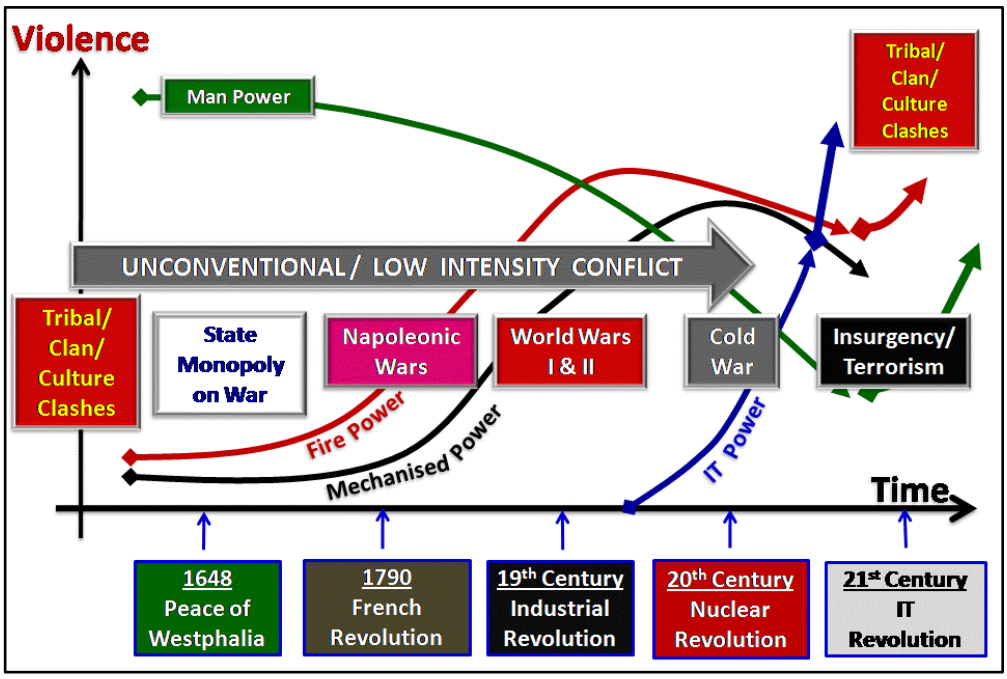


Figure 2: Evolution of Generations of War

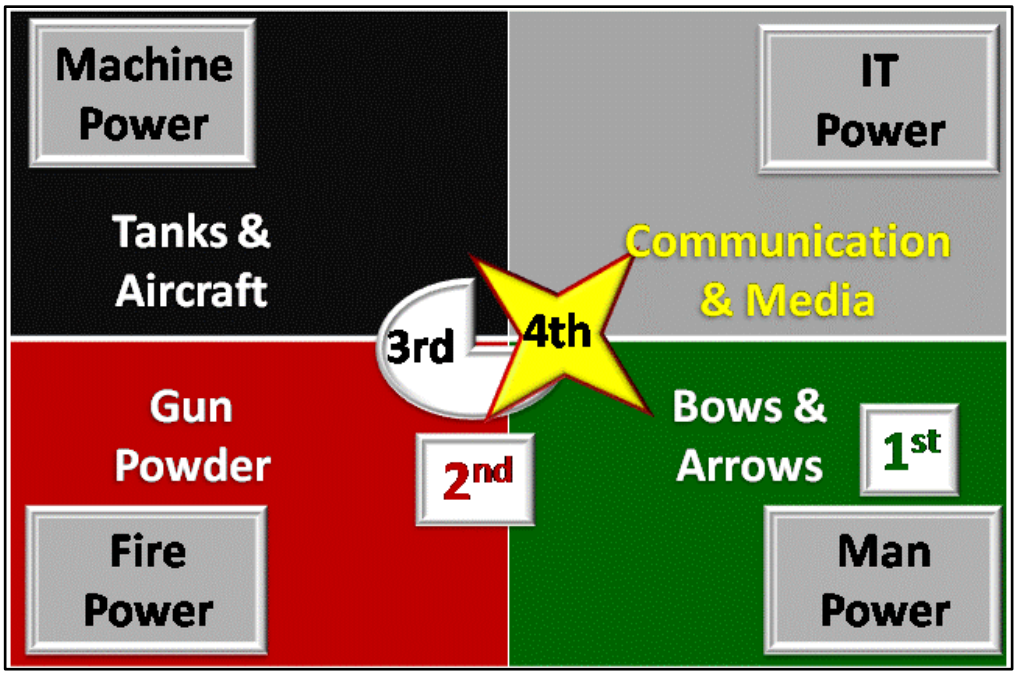


Figure 3: Tools Employed in various Generations of War

the development of generations of war. It has **risen from loss of state's monopoly over violence**. [19]

(b) Insurgency. **Armed rebellion** by a section of the population against a legally constituted government.[20]

(c) Terrorism. **Systematic violence** carried out against private citizens, public property and political enemies with the **aim of enforcing demands** of achieving supremacy.[21]

(d) Guerrilla Warfare. **Irregular warfare** in which a small group of combatants use military tactics like ambush and raid to **harass a large less mobile traditional force**.[22]

(e) Unrestricted Warfare. **Multitude of means**, both military and non-military to strike at the stronger enemy's social, economic and political life.[23]

(f) Asymmetric Warfare. War between two parties with **asymmetry in ideas, interests and resources** that leads the weaker side to use stratagems that aim at **negating superior side's powers**.[24]

9. Manoeuvre Warfare.

(a) Manoeuvre. Organised move of troops during combat to a **new axis** and region for the purpose of taking advantageous position relative to the enemy in order to deliver a **decisive strike**.[25] Refer to Figures 4 & 5 below for an explanation on manoeuvre warfare.

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[19] Colonel SC Williamson, US Army War College. Strategic Research Project; From 4GW to Hybrid War. 2009. (http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA498391&Location=U2&doc=GetTRDoc.pdf)
[20] Army War College, Mhow. Training Note on LIC. 1992, p.5.
[21] Readers Digest Association Limited. Universal Dictionary. London: William Collins & Company Limited, 1990, p. 1561.
[22] http://en.wikipedia.org/wiki/Guerrilla_warfare
[23] Colonels Qiao Liang and Wang Xiangsui. Unrestricted Warfare- China's Master Plan to Destroy America. Dehra Dun: Natraj Publishers. 2007, pp. ix-xii.
[24] RP Juvale. Military Strategy and Diplomacy. New Delhi: Cyber Tech Publications, 2010, pp.141-144.
[25] William Lind, op., cit.

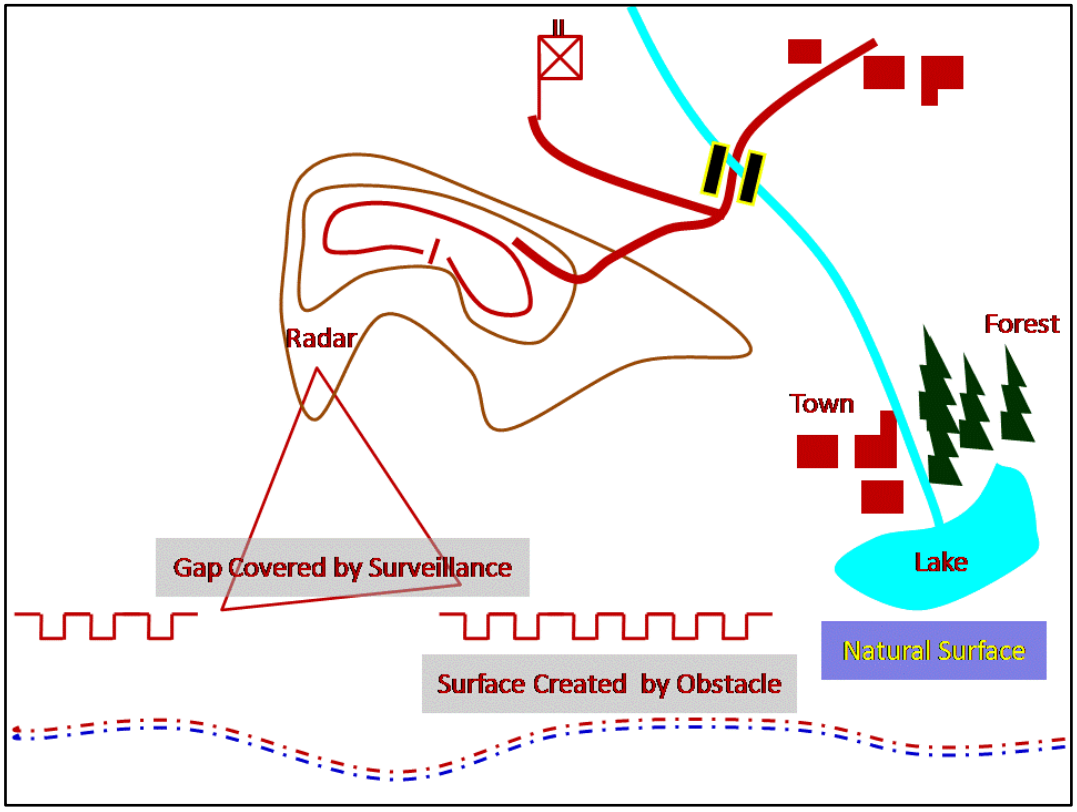


Figure 4: Manoeuvre Warfare Explained (Study of Surfaces and Gaps)

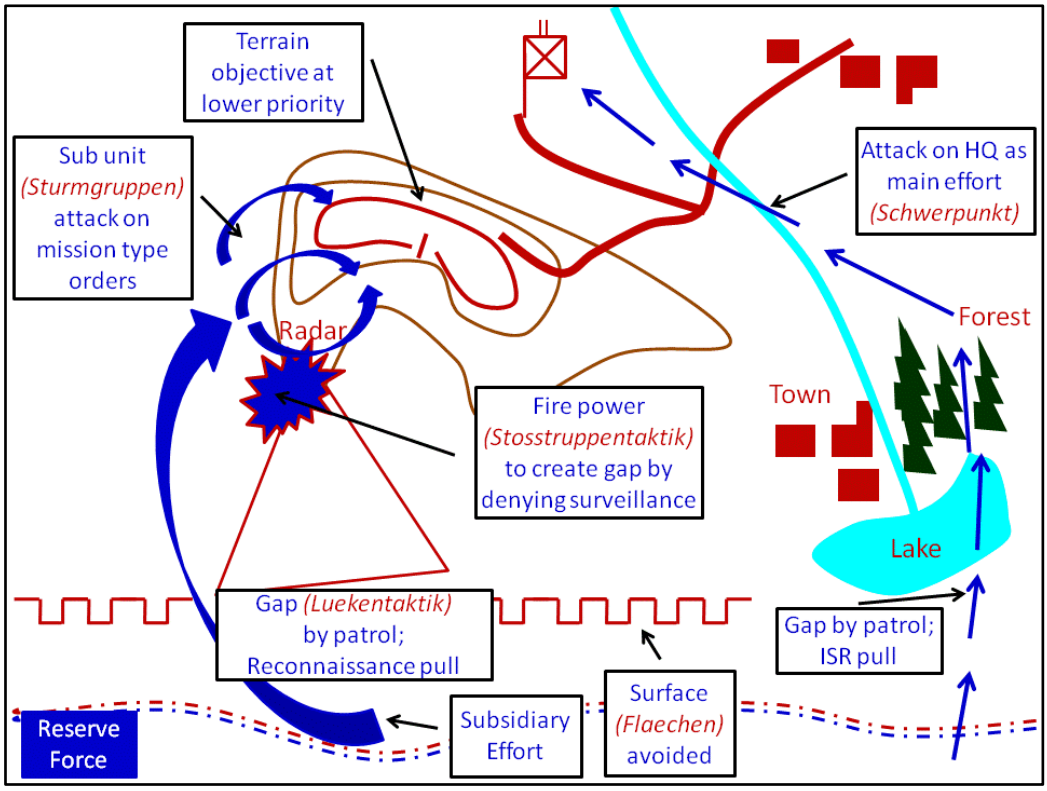


Figure 5: Manoeuvre Warfare Explained (Decisive Point and Focus of Effort)

(b) Observe-Orient-Decide-Action (OODA) Loop. Refer to Figure 6 below for an explanation of OODA loop. Conflict is a collection of **repetitive time**

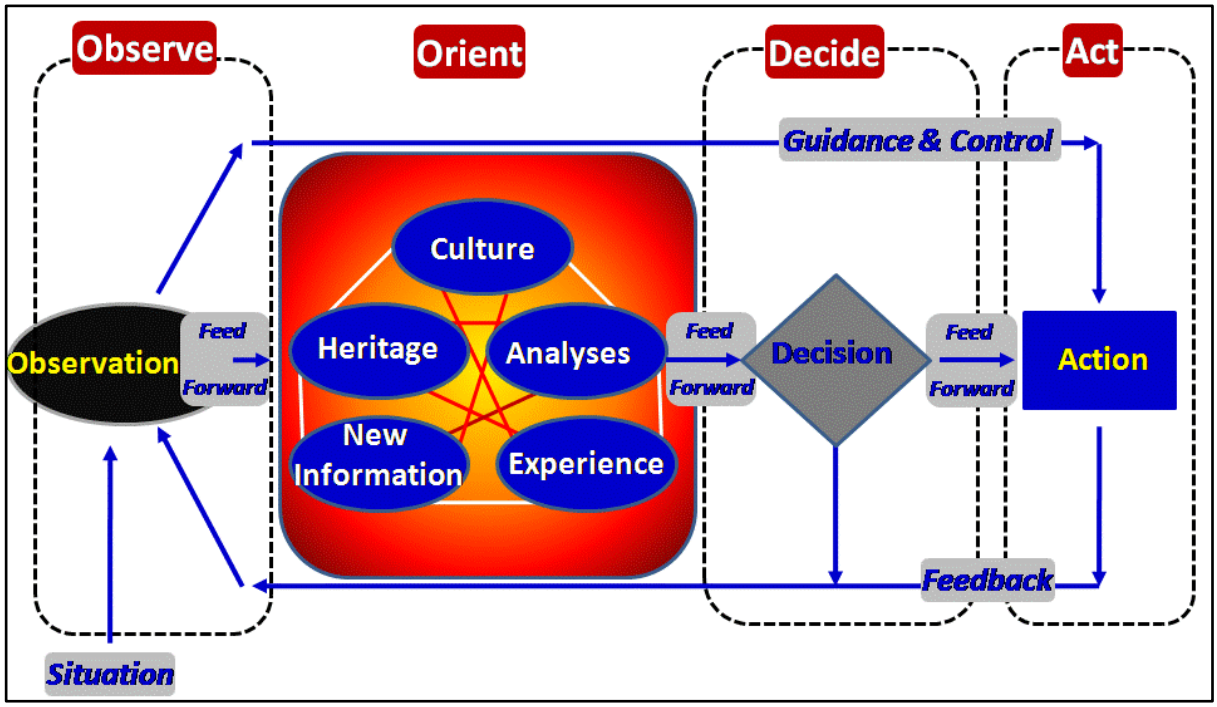


Figure 6: Manoeuvre Warfare; OODA Loop

competitive cycles of Observe-Orient-Decide-Action cycles. Colonel Boyd developed this concept as an F-8 pilot while defeating Mig-15 pilots in duels over Vietnam. Study of **surfaces and gaps, focus of effort, mission type orders and ISR pull** are the main components of manoeuvre warfare.[26]

Chapterisation

10. Chapter I: Introduction. Introduction of the subjects of 4GW, fire power and manoeuvre.

11. Chapter II: Methodology of Study. This Chapter includes the statement of problem, justification, scope, relevant operational definitions and *chapterisation* of the study.

[26] ibid.

12. Chapter III: The New War; Fourth Generation Warfare. This Chapter delves into the history of warfare in order to introduce the 4GW context to strategic planning and operational art.

13. Chapter IV: Back to the Nursery; Lessons from Military Thinkers and History. This Chapter analyses thoughts of great military thinkers and lessons of important related campaigns, wars, battles and terrorist attacks to arrive at lessons for future generation of proponents of national security.

14. Chapter V: The General's Bloody Choice; Choosing the Tools for Winning Peace. This Chapter examines fire power and manoeuvre warfare as war fighting tools in context of 4GW.

15. Chapter VI: Preparing for 2022; Dreams Realised. This Chapter explores the contours of India @ 70 and recommends an operational design for winning peace.

16. Chapter VI: Conclusion. This Chapter summarises the recommendations made as a result of the research carried out; in essence a road ahead to winning peace for a better India and a better South Asia.

Bibliography

17. The bibliography has been listed at **Appendix A** attached.

CHAPTER III: THE NEW WAR;

FOURTH GENERATION WARFARE

"More important than force of arms is
the high strategy which saps the enemy's morale &
disrupts his forces to bring about
his collapse before the armed attack"

-Kautilya, 3 BC

The Birth of 4GW

1. Violence in Post-Modern Post-Industrial Age. The military success of Gulf War I has not been replicated since by any armed forces including those of USA. Since then, war has been no longer what it was, being reborn in a new form and in a new arena, and empowering non-state actors to conduct war. War fighting affected by technology and market forces, is witnessing an increase in political, economic and technological violence. One would be tempted to conclude that, **'greater the generation gap between the ability to create violence, the greater the chance of victory in war'**. But the contrary has been proved right, **'greater the control on violence, the greater the chance of victory in war'**.

2. All is *Weaponable*. 21st Century IT revolution, globalisation and clash of civilisation have created a world where-in, *'there is nothing in the world that cannot be used as a weapon'*. This new truism requires an awareness which breaks all boundaries. **Weapons of new concepts and new concepts of new**

weapons have blurred war. Revolution in weapons which until Gulf War I drove revolution in military affairs, has been turned on its head. Today, revolution in tactics (a.k.a military affairs) is leading the search for new weapons.

3. *Civilianisation* of War. The boundary between war & non-war, state & non-state, military & non-military, and battle space & non-battle space has blurred. Mankind has endowed every space with battlefield significance resulting in **soldiers losing their monopoly over war**.

4. 4GW is Born. Refer to Figure 7 below for timelines in birth and spread of terrorism and 4GW.[27] The 1983 attack on US Embassy in Beirut led US Marines

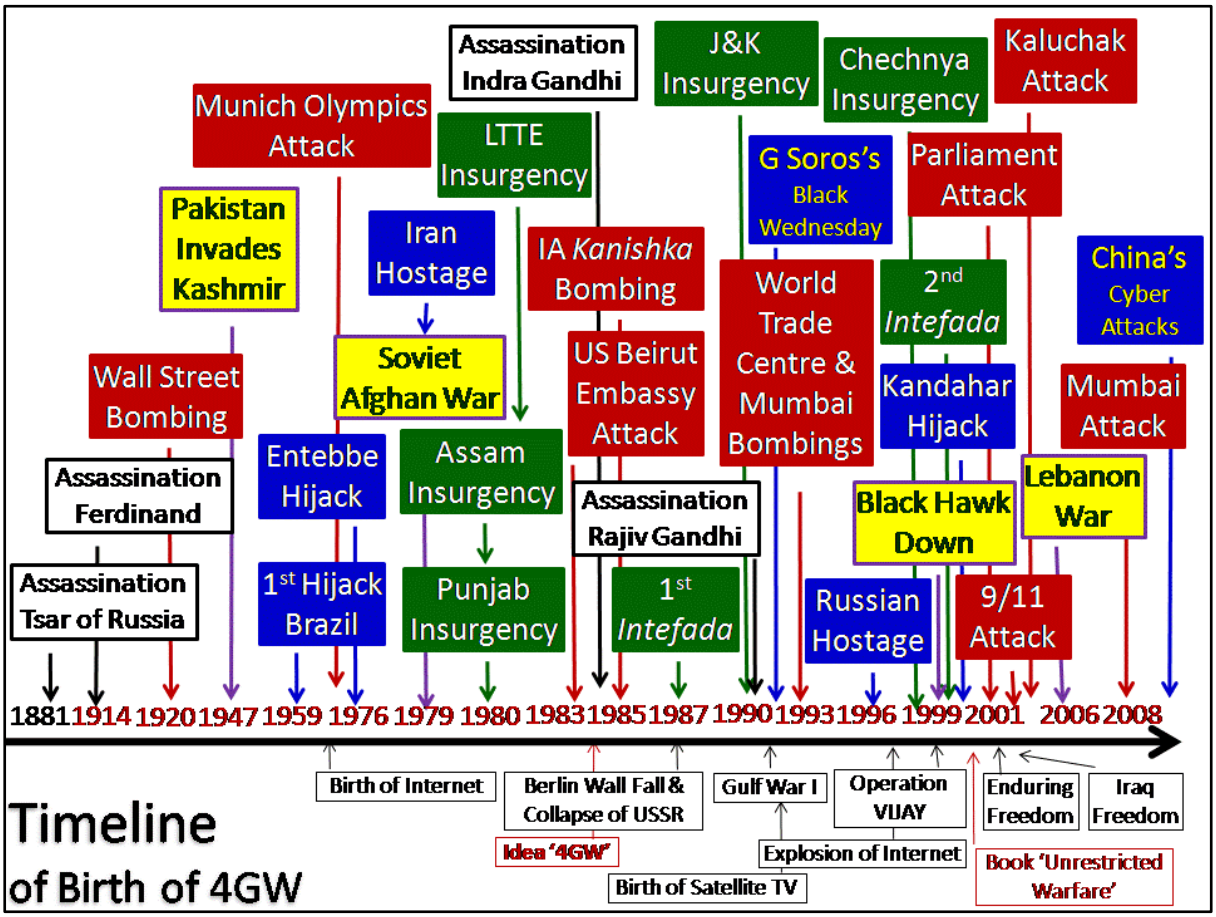


Figure 7: Timelines of Birth and Explosion of 4GW

to examine the new environment, and under William Lind arrived at the concept of 4GW published in the Marine Corps Gazette (October 1989) as 'The Changing

[27] The information has been culled from a multitude of military history books and web portals.

Face of War; Into the Fourth Generation'. These early theorists of 4GW believed that the **asymmetry** between philosophies and resources of nations and non-state actors has been the **'need' behind this invention of a new war**. The subsequent spread of 4GW is attributed to Gulf War I, proliferation of IT and satellite television, and growth of new market forces of free trade and free trans-border movement of money.

Boyd's and Lind's Theories on 4GW

5. 4GW Explained. Refer to Figure 8 for a gist of his theory. John Boyd went

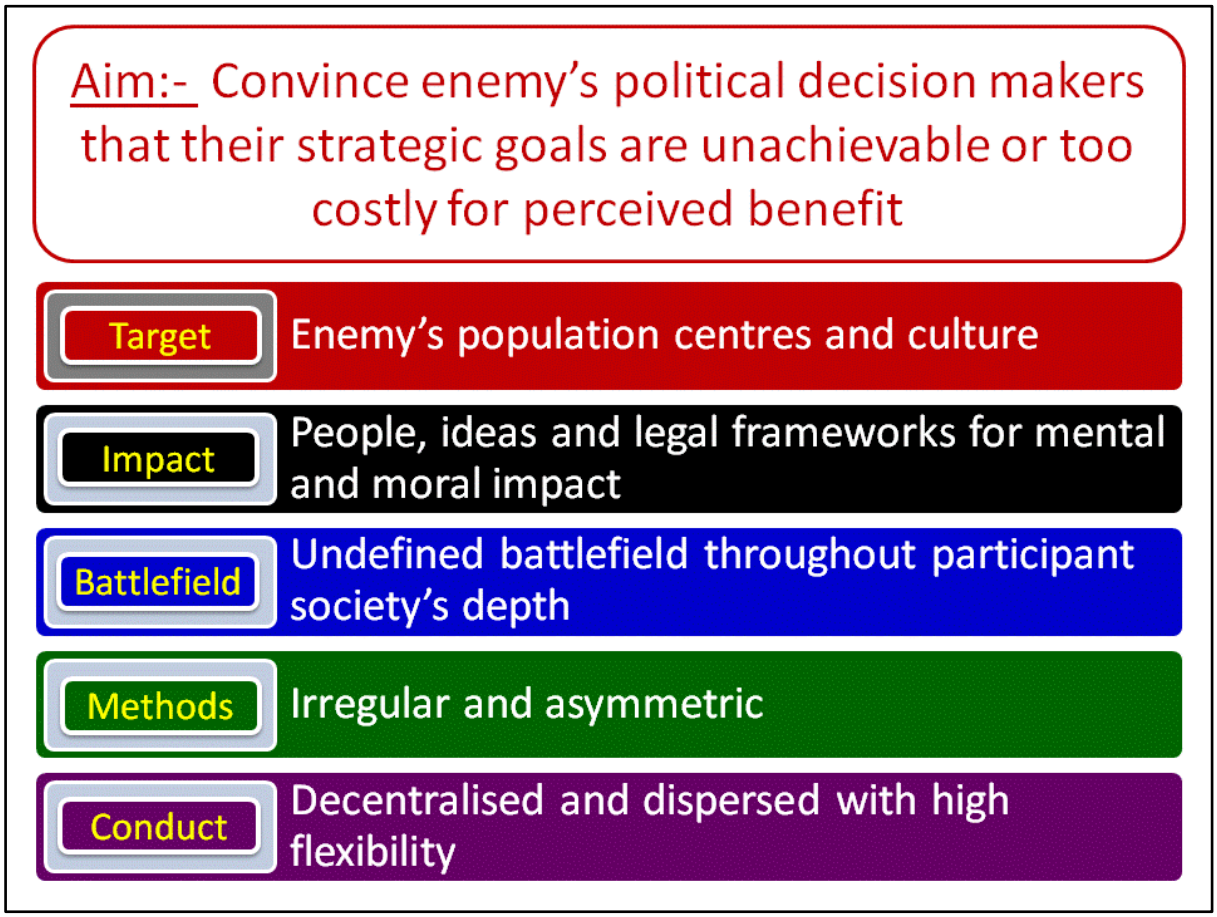


Figure 8: 4GW Explained

on to explain 4GW to the US Marine Corps and subsequently to the US Secretary of Defence before OEF.[28]

[28] John Boyd, "Patterns of War," briefing slides, Pentagon, VA. Slides developed in 1986 used to explain his vision of warfare. Original slides were modified in 1991 to be used to brief Secretary of Defence Cheney

6. Commonalities between 3GW and 4GW. As per William Lind, four elements of warfare carry forward into 4GW.[29] Refer to Figure 9 below.

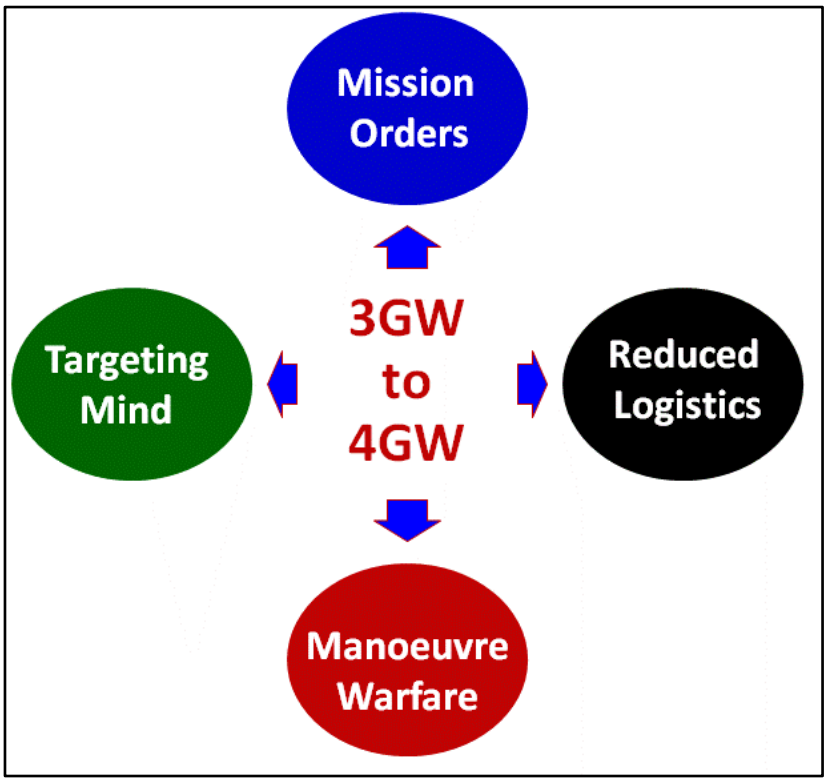


Figure 9: Four Elements Carried forward 3GW to 4GW

7. OODA Loop and Winning & Loosing. John Boyd is often remembered only for the OODA loop. His greater contribution has been on understanding and winning 4GW. The essence of his theory was, *'machines don't fight, terrain doesn't fight, humans fight wars and you must get into the minds of humans for that's where battles are won'*.[30] The key notions of Boyd's opus ***'A Discourse on Winning and Losing'*** are as under: -

(a) War is a dynamic process of **action-reaction**.

---

leading up to the Gulf War. Original presentation available at http://www.dnipogo.org/boyd/pdf/poc.pdf and modified presentation available at http://www.projectwhitehorse.com/pdfs/2a.%204GW_in_Irag.pdf

[29] William S. Lind, Keith Nightingale, John F. Schmidt, Joseph Sutton, and Gary I. Wilson "The Changing Face of War: Into the Fourth Generation", Marine Corps Gazette. (Oct 1989). p. 22.

[30] John Boyd, 'A Discourse on Winning and Losing', a presentation available at http://www.projectwhitehorse.com

(b) Success or failure depends more on intangible **mental and moral dimension** of war-fighting organisations. Military technology comes second.

(c) Adversaries are complex dynamic and adaptive systems and **'adaptive'** is the key to success.

(d) War is an evolutionary game and victory requires close **interaction with the environment** for survival and eventual victory.

(e) **Small, agile and networked sub-units**/ units operating autonomously and in synch supporting the focus of effort with flexibility are essential to maintain a faster OODA loop.

(f) The mental cum moral dislocation and erosion of moral cohesion is best achieved by **moral conflict** which can be then exploited by manoeuvre warfare with its focus on piecemeal **destruction by isolation and fear**.

Unrestricted Warfare

8. The Concept. The book **'Unrestricted Warfare'** authored by Colonels Qio Liang and Wang Xiangsui (PLA, China) in 1999 was a result of Chinese fascination with US success in Gulf War I and the need to develop a strategy for a technologically weak nation to defeat a technologically strong nation. The authors foresaw the USA being attacked by 9/11 types of attack by a weaker adversary. Refer to Figure 10 below for a relevant extract. [31] The many forms of total war identified in unrestricted warfare are given at Figure 11 below. The authors recommend a combination of low and high technology means to create asymmetrical and multidimensional attacks on every aspect of nationhood viz; social, religious, cultural, economic and political spheres.

[31] Liang and Xiangsui, Unrestricted Warfare, Dehradun: Natraj Publishers, 2007. pp. vii to xvi.

> *....If the US encounters an enemy with low-level technology, an intermediate-level enemy, or one with equivalent power at the beginning of next century, then the problem of insufficient frequency bandwidth will possibly occur...*
>
> *.... major explosion at the World Trade Centre or bomb attack by bin Laden, all of these greatly exceed the frequency bandwidths understood by the American military ...*
>
> *This is because .... refused to consider means contrary to tradition and to select measures of operations other than military means.*

Figure 10: Passage from 'Unrestricted Warfare'

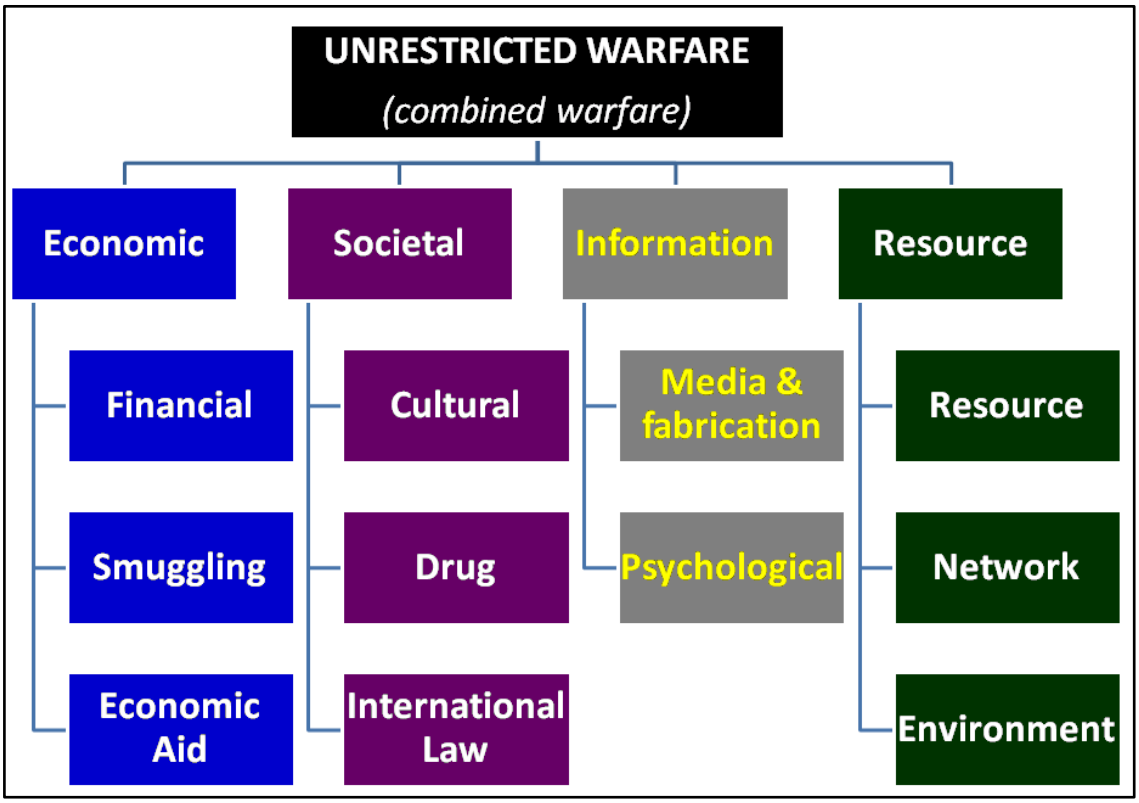


Figure 11: Forms of Unrestricted Warfare identified in 'Unrestricted Warfare'

9. Hafiz Sayeed with a Laptop and Kautilya with an INSAS Rifle! As has been seen, traditional and mechanised methods of thought no longer work in an integrated and systems-oriented environment characterised by rapidly changing

time-space relations. The ***informatisation* of 4GW** demands new thinking, structures and equipment. The new modes of attacks in *informatised* 4GW as amplified by Hafiz Sayeed's 26/11 Mumbai attacks are given at Figure 12 below. India has to rise to the challenge of and for survival.

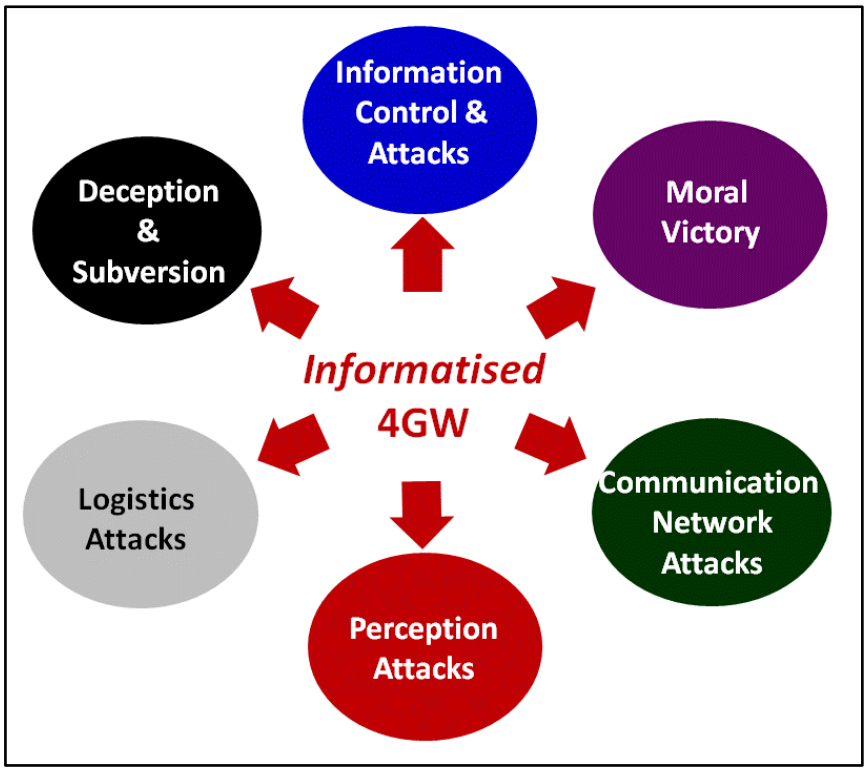


Figure 12: *Informatised* 4GW Attacks

10. Essential Principles for Victory. The essential principles listed by Colonels Liang and Xiangsui are as tabulated at Table D below.[32] The essence of the book is the conduct of **combined war** (combination of weapons, means, battle arrays, stratagems) that goes beyond limits by combining opportunities and means in more directions and areas so as to achieve given set of objectives (not defined in purely national sense). The real hand of cards for fighting 4GW should be a combination of battlefield & non-battlefield, war & non-war, military & non-

[32] Liang and Xiangsui, op,cit. pp.175-188.

military, soldier and non-soldier. This change requires a study of military history and past trends, foresight, flexibility and awareness of drivers of change.

Principle	Explanation
Omnidirectionality	360^0 observation and combined use of all related factors.
Synchrony	Conducting action in different spaces within the same period of time.
Limited Objectives	Objectives limited in time and space, and acceptable
Unlimited Measures	Unrestricted employment of measures, but restricted to accomplishment of limited objectives.
Asymmetry	Use asymmetry as a measure to accomplish objectives.
Minimal Consumption	Use least amount of combat resources sufficient to accomplish the objective.
Multidimensional Coordination	Coordinating and allocating all forces which can be mobilised in the military and non-military spheres converging on the objective.
Adjustment and Control of Process	Continually acquire information, adjust action and control the situation.

Table D: Essential Principles for Victory in Unrestricted Warfare

CHAPTER IV: BACK TO THE NURSERY; LEARNING FROM MILITARY HISTROY

"The source of livelihood of men is *artha* (wealth); that territory and the inhabitants following various professions is the wealth of the Nation. The science by which territory is acquired and maintained is *arthashastra*."

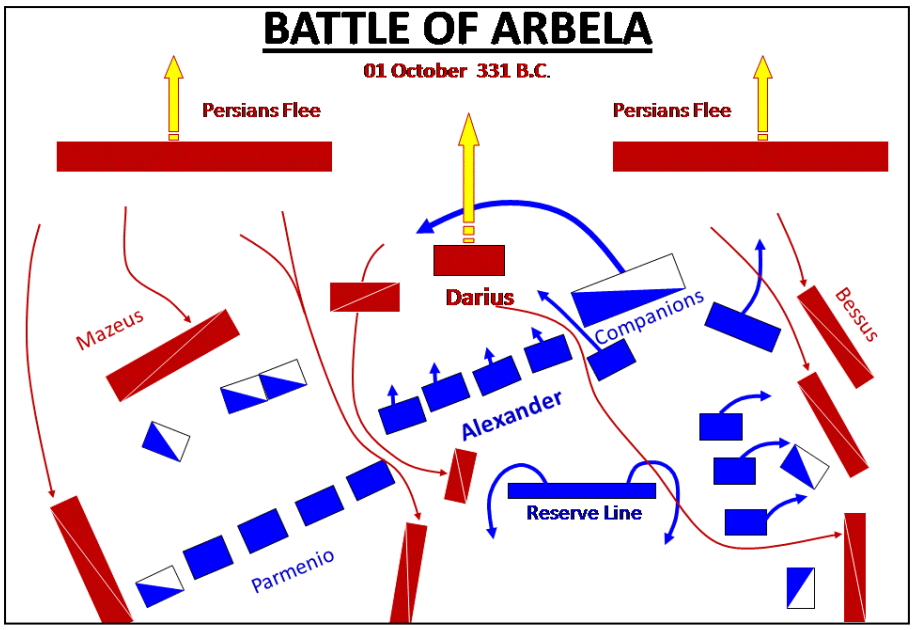
-Kautilya, 3 BC

Military History

1. Why Study and Which Military History to Study? Military history is a humanities discipline studying of causes of war, social and cultural foundations, military doctrine, leadership, logistics, technology, strategy and tactics. As an applied field, it is studied by military commanders to avoid past mistakes, and to improve upon current performance. An analysis of portents of 4GW leads us to learn from theories of Kautilya, Sun Tsu, Jomini, Clausewitz, Creveld, Boyd, Lind and Arquilla. In addition, the relevant battles to be studied are the battles of Alexander, Hannibal, Chengis Khan, Napoleon, German blitzkrieg, guerrilla warfare, Gulf War I, Kashmiri insurgency, Sri Lankan defeat of LTTE, and the ongoing conflicts in Afghanistan and Iraq.

Lessons Learnt

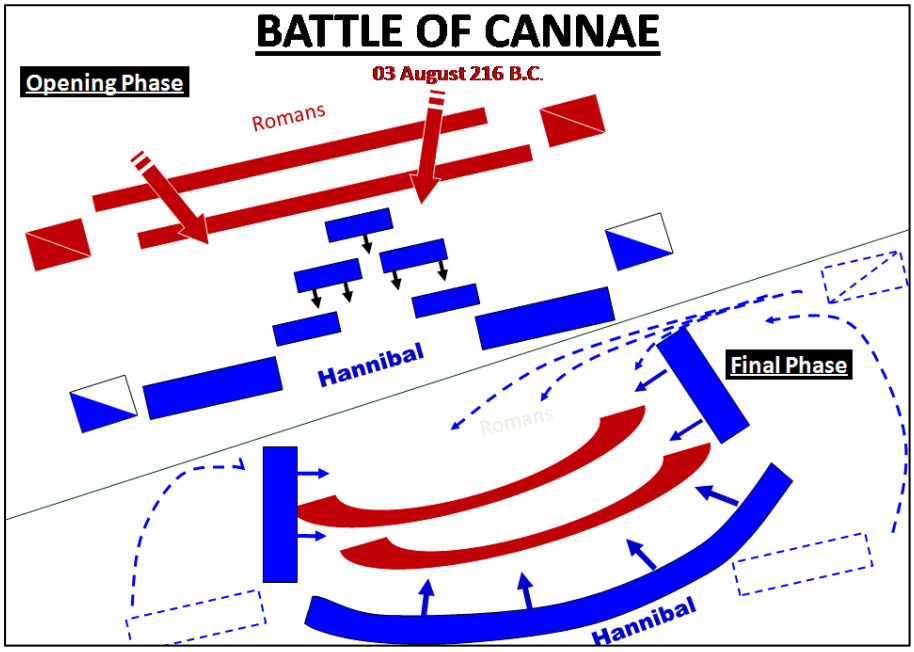
2. Pre 1991 Period. Refer to tables, sketches and maps alongside for important lessons that may be applied while strategising for combating 4GW.



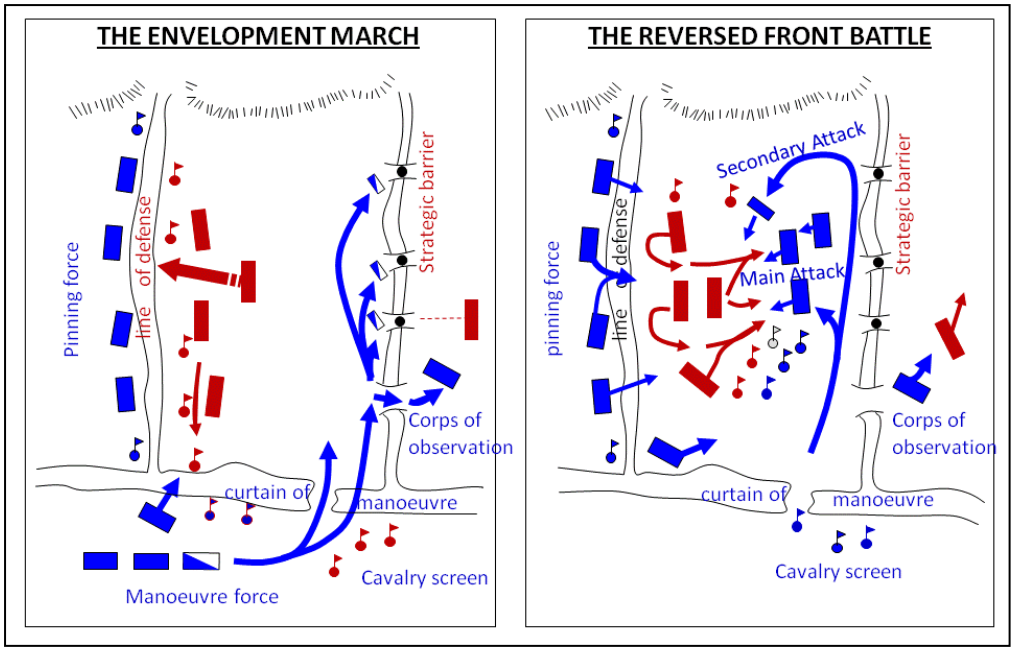
Sketch M: Battle of Arbela

Chief Lessons from Both Battles

*Unequal distribution for **local superiority** and decisive leverage to collapse adversary resistance.*



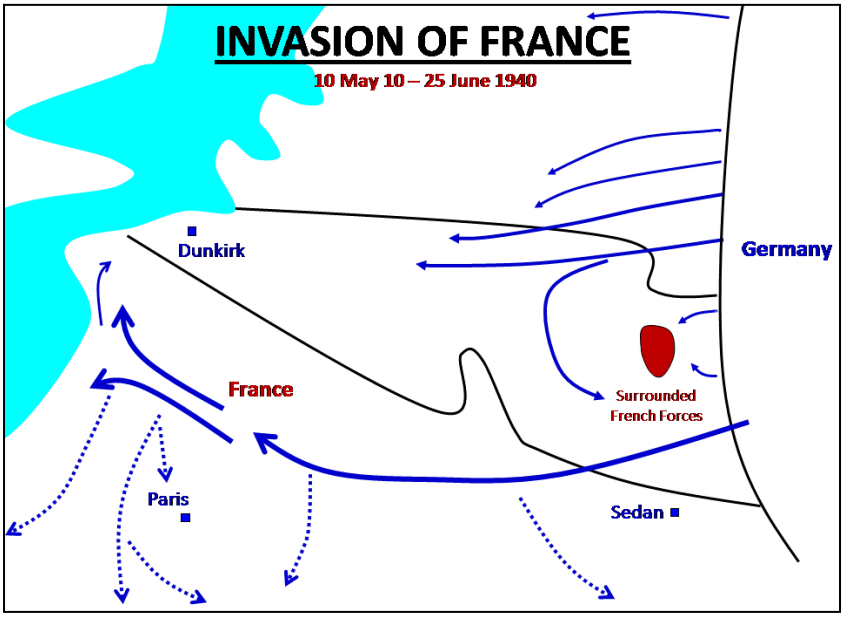
Sketch N: Battle of Cannae



Chief Lesson

Strategic fog *followed by stereotyped and ruinous tactical assaults.*

Sketch O: Napoleon's Strategy of Envelopment



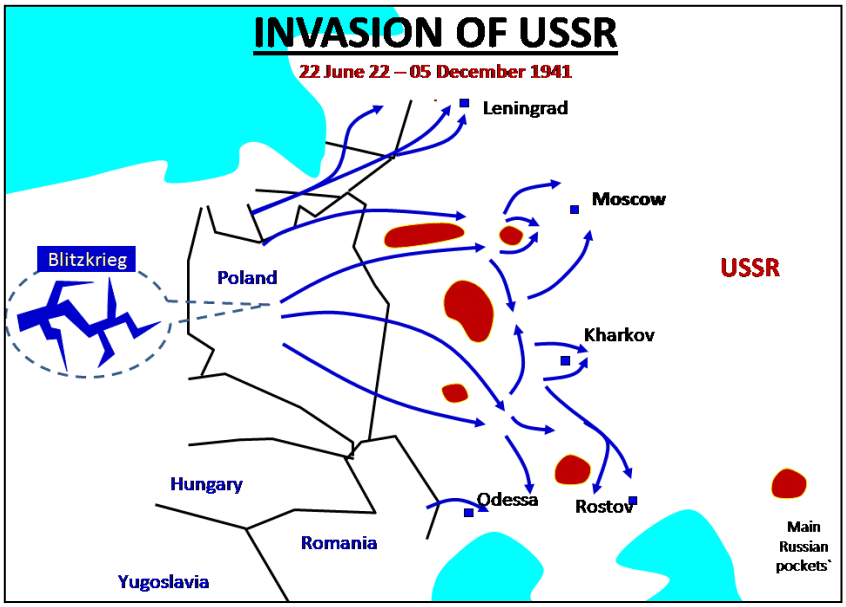
Map AA: Invasion of France, 1940

Chief Lesson

Mobility and cohesion *of small units as basis to insert an amorphous yet* ***focused effort*** *into or through adversary weaknesses.*

Chief Lesson

Infiltrate adversary's system, *generate many* ***moral-mental-physical non-cooperative centers of gravity,*** *as well as seize those the adversary depends upon, in order to magnify friction, produce paralysis, and bring about adversary* ***collapse****.*



Map AB: Invasion of USSR, 1941

3. Post 1991 Period. Refer to tables/ sketches for important lessons that may be applied for combating 4GW. These are tabulated below at Tables E, F, G and H and in Maps AC, AD, AE and AF.

Kautilya	Sun Tzu	Chingiz Khan	Saxe	Clausewitz	Napoleon	Jomini
Mantra Yudha (diplomacy) *Kuta Yudha* (concealed) & *Guda Yudha* (clandestine) warfare(s) to shape battlefield	Probe enemy's organisation to unmask	Clever propaganda	Fluidity of force	Exhaust enemy	Unified lines of operations in mutual support	Move massed forces against fractured forces
Deception & conceit to demoralise enemy	Shape enemy's perception	Strategic manoeuvres	Cohesion of force	Seek enemy's centre of gravity	Isolate to force unfavourable circumstances	Strike in decisive direction and one wing simultaneously
Use 1/3rd to protect base and 2/3rd to attack	Attack enemy's plan, alliance, army & cities - that priority	Baited retreat	Disperse and concentrate	Concentrate effort on centre of gravity	Supporting bases & alternate lines of communication for freedom of action	Attack in rear and block reinforcement
Attack when terrain, climate & logistics suite	Employ *cheng* and *ch'i*	Widely separated thrusts	Lines to threaten alternate objectives	Move with maximum speed	Heavy preliminary bombardment followed by Infantry assault	Pierce centre if enemy extended
Cripple enemy by attacking centre, wings & flanks & exploit weakness		Swirling envelopment	Concentrate fire on key points	Seek decisive battle	Centralised command & control	To envelope, hit in flank and contain front
Ensure balance to retain freedom of action		Hard tactical thrusts		Create condition favouring victory	Careful coordination	

Table E: Lessons Learnt from Great Military Thinkers

World War I Infiltration	World War I Guerrilla	World War II Blitzkrieg	World War II Counter Blitzkrieg	Modern Guerrilla	Counter Modern Guerrilla
Bombardment to disrupt	Gain support of people	Intelligence of enemy pattern	Intelligence & screens to identify thrusts	Capitalise on discontent	Undermine guerrilla cause
Stasstruppen (small teams) to swarm gaps	Attack in depth	Compare forces to develop mission, intent & courses	Mobile reserves behind screens to attack thrusts	Set up administrative & military organisation	Political initiatives
Kampfgruppen (battle groups) follow through gaps	Hit and run by small teams	*Schwerpunkt* (main focus) identified & shifted	Armoured reserves to counter attack thrusts	Establish sanctuary & communication network	Infiltrate guerrilla forces to disrupt and seal guerrilla sanctuary
Reserve to follow & maintain momentum	War by detachment	*Nebenpunkt* (supporting effort) tie down/ disrupt	Counter stroke behind blitz	Propaganda for civil disobedience using tiny bands	Isolate & neutralise leaders
	Present threat everywhere	Special operations to create confusion		Tire security forces using large groups	Security forces to operate as guerrillas
		Fire power to degrade			Social, political & economic initiatives

Table F: Lessons Learnt from Great Military Campaigns/ Wars/ Battles

Operation DESERT STORM[33]	Operation VIJAY[34]	Sri Lankan Defeat of LTTE[35]	OEF[36]	OIF[37]
Clear political directive	Strategic deception by Pakistan	Clear unwavering directive	Early & smooth establishment of coalition	'Generated start' lead by infiltration
Joint planning	Sacrifice of strategic flexibility for moral victory	International cooperation to isolate LTTE	Innovative & integrated use of special forces	Air power to 'shock & awe'
Success of air-land battle	Attrition battles & no manoeuvre	Unified command for synergy	Air power to 'shock & awe'	Helicopters- 'best anti-tank weapon'
Simultaneity & non-linearity	High terrain friction; swarming by fire & force	Zero interference of media/ UN/ NGOs	Optimisation of precision munitions	Simultaneity & non-linearity for Iraqi capitulation
Technology as a force multiplier	IW by Indian satellite television	Peace/ ceasefire not an option	Poor integration of IW	Inter service/ coalition synergy
Media a tool of IW	Exploitation of IW	Conventional tactics by LTTE	Wrong C of G and metrics	Wrong C of G and metrics
	No Pakistani exit strategy	Lack of post war planning	Lack of post war planning	Lack of post war planning

Table G: Lessons Learnt from Recent Military Campaigns/ Wars/ Battles

[33] JT Richleson. Operation Desert Storm:10 Years After. A National Security Archive Book. 2001. http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB39/

[34] Lieutenant General (retired) YM Bammi. Kargil 1999: The Impregnable Conquered. Dehradun: Natraj Publishers.

[35] VK Shashikumar. "The Rajapaksa Model", Indian Defence Review. Oct-Dec 2009. Vol 24 (4). pp13-25.

[36] Committee on Armed Services, US Senate, 108th Congress, 1st Session, Lessons learnt during Operations Enduring Freedom and Iraqi Freedom and ongoing operations in US Central Command Region, US Government Printing Press, Washington.

[37] Ibid.

Operation RAKSHAK - II[38]	Operation PARAKRAM[39]	26/ 11 Mumbai Attack[40]	LWE
Unclear political directive	Lack of strategic manoeuvres to isolate	Limited strategic manoeuvres out (military options ruled out)	Economic and social exploitation of people
Lack of strategic policies & doctrines	Unclear political directive	Ambiguity in definition & role of military in 'internal security'	Unclear political will and directive
Absence of coalition & deterrence	Lack of strategic policies & doctrines	Military prepared to fight 'old war' & not 'future war; 4GW'	Poor leadership and tactical efficiency of Police
Focus on incorrect metrics 'terrorists killed' – *attritionist* approach	Military prepared to fight 'old conventional wars'	Lack of initiative & accountability in national security apparatus	Wrong appreciation of C of G and incorrect strategy
Poor force ethos alienating *awaam* & strengthening *'azadi'*	Lack of synergy within and between services	Absence of synergy amongst & between PMF/ CPO & military	Incorrect force ethos and metrics
Absence of 'post military operations' plans	Absence of demobilisation strategy	Failure of intelligence apparatus	

Table H: Lessons Learnt from Recent/ Ongoing Indian Campaigns/ Wars

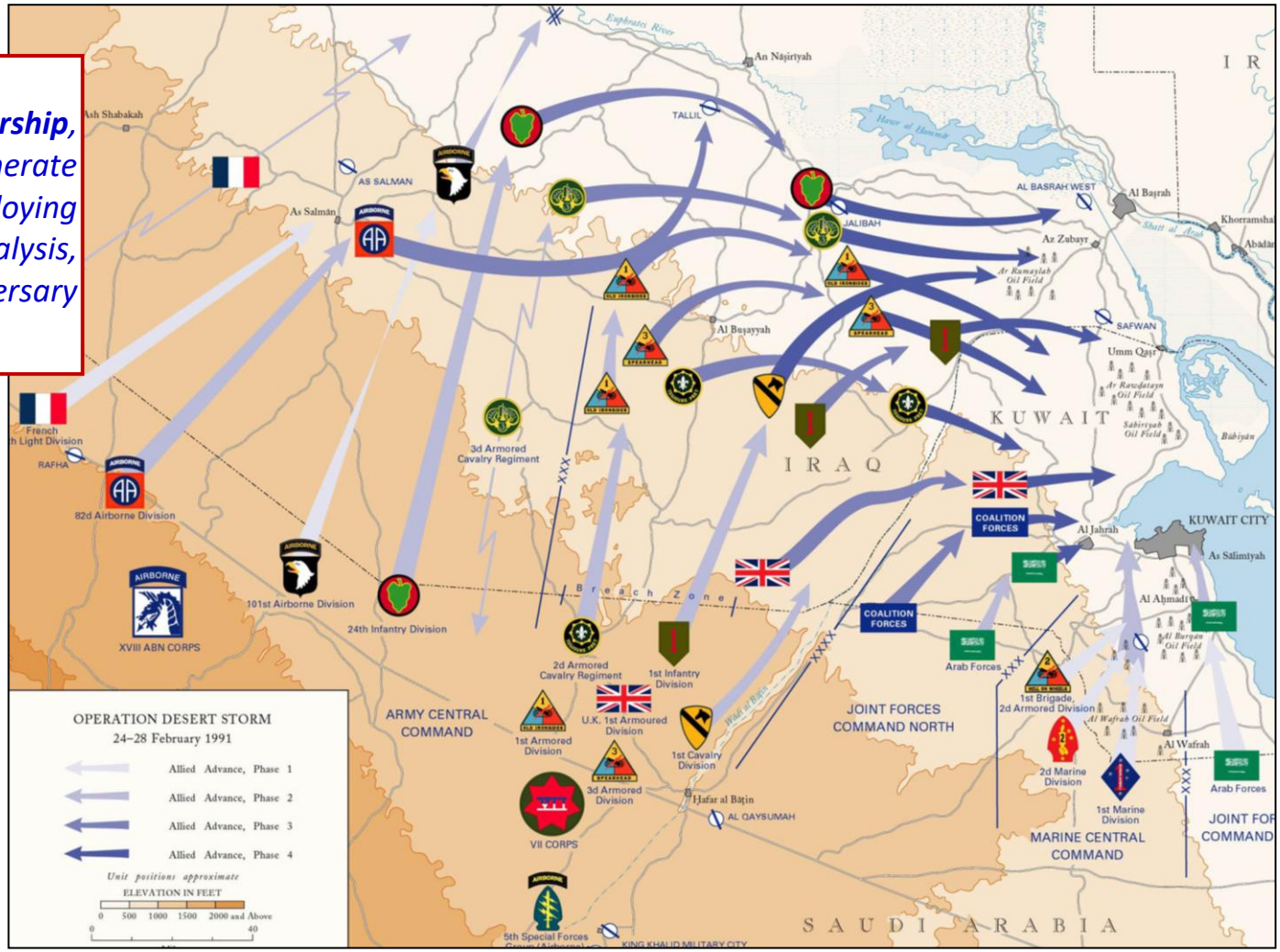
[38] Asian Security Studies, by Sumit Ganguly and David P Fidler, Where Irregular is Regular, by Pragati Books and India and Counter Insurgency, by Routledge.

[39] General Padmanabhan, The Hindu, 06 February 2004 and India Pak Seminar Report Coercive Diplomacy; Operation PARAKRAM: An Evaluation, Institute for Peace and Conflict. August 2003 at http://www.ipcs.org/seminar/indo-pak/coercive-diplomacy-operation-parakram-an-evaluation-577.html

[40] Vir Sanghvi, 26/11: The Attack on Mumbai, Mumbai: Penguin. 2009.

Lesson

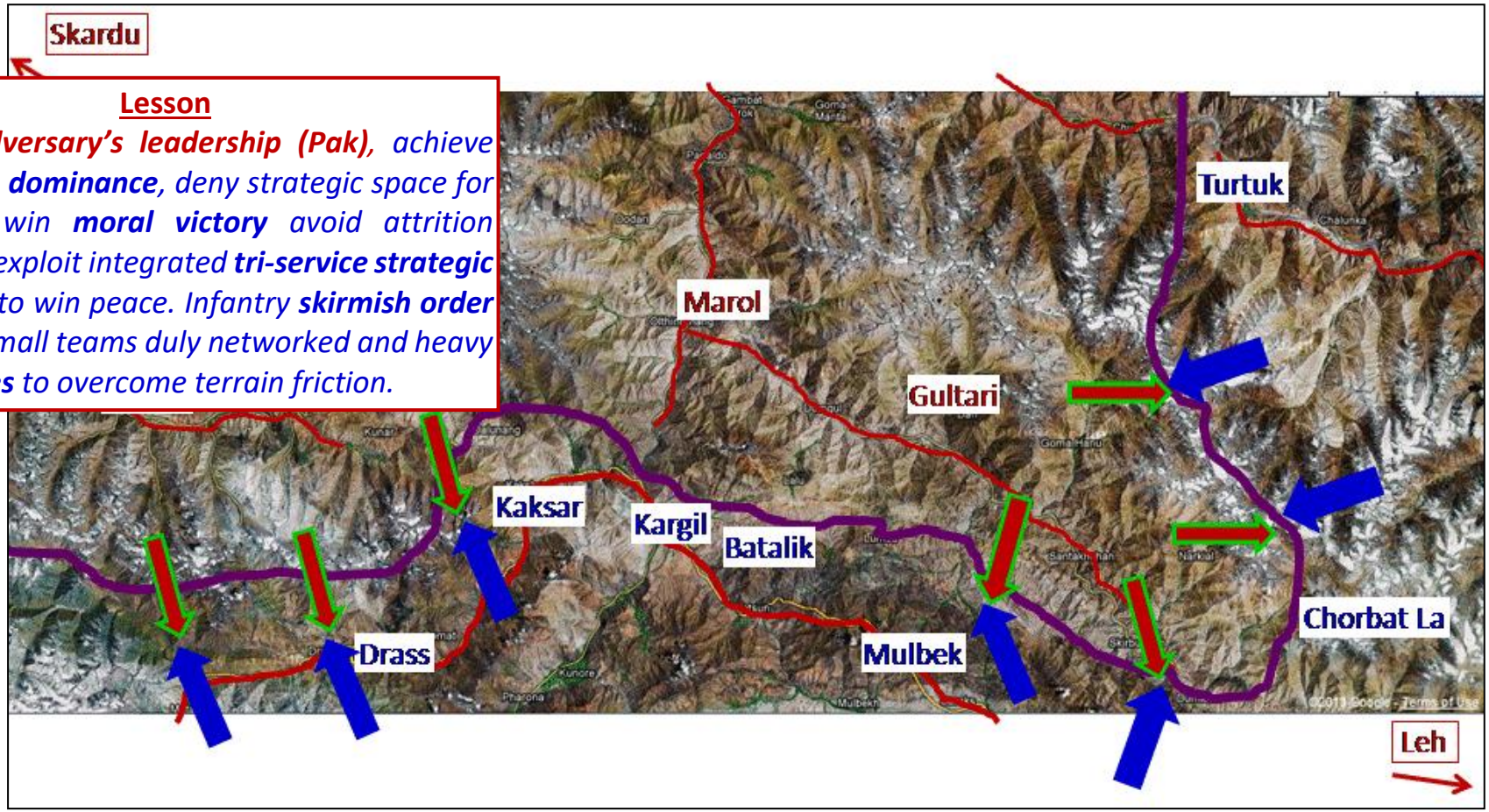
Deceive adversary's leadership, *destroy center of gravity, generate and magnify friction employing air-land battle, produce paralysis, and bring about adversary* ***collapse****.*



Map AC: Operation Desert Storm

Lesson

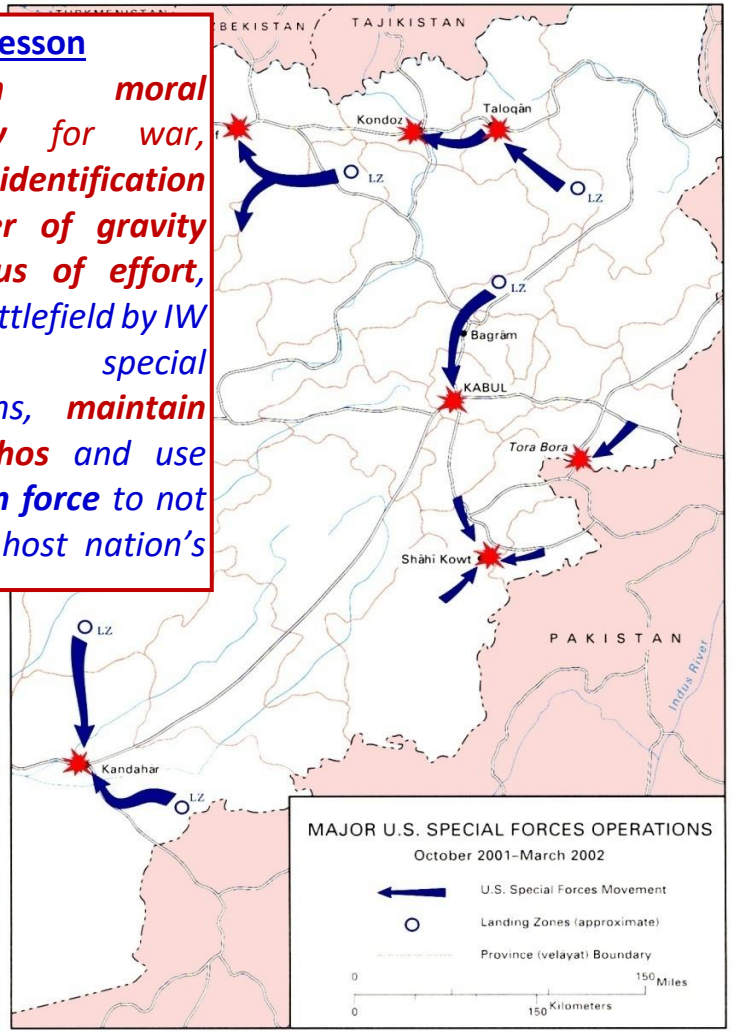
***Deceive adversary's leadership (Pak)**, achieve **information dominance**, deny strategic space for escalation, win **moral victory** avoid attrition battles and exploit integrated **tri-service strategic maneuvers** to win peace. Infantry **skirmish order battles** by small teams duly networked and heavy **Artillery fires** to overcome terrain friction.*



Map AD: Operation Vijay

Lesson

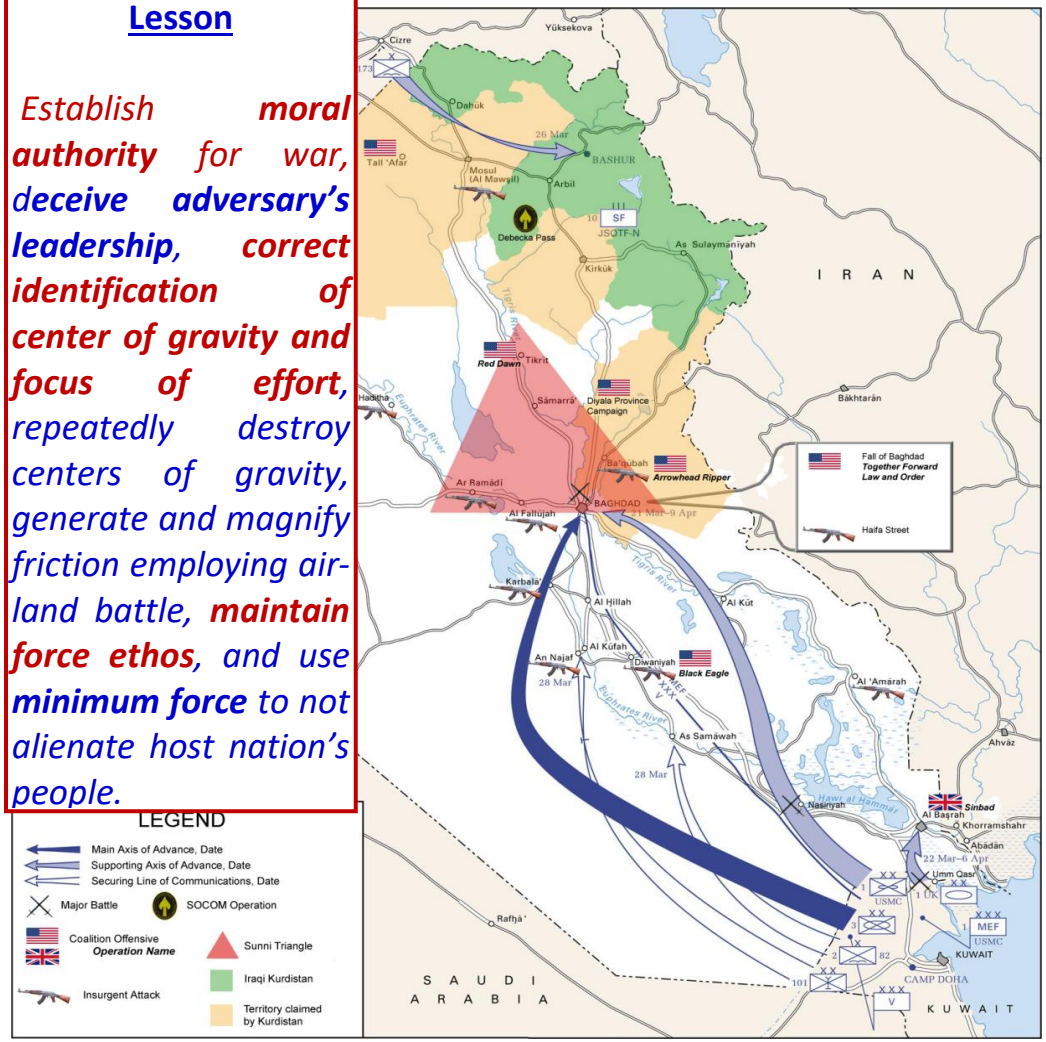
Establish ***moral authority*** *for war,* ***correct identification of center of gravity and focus of effort,*** *shape battlefield by IW and special operations,* ***maintain force ethos*** *and use* ***minimum force*** *to not alienate host nation's people.*



Map AE: Employment of Special Forces in Operation Enduring Freedom

Lesson

Establish ***moral authority*** *for war,* ***deceive adversary's leadership,*** *correct* ***identification of center of gravity and focus of effort,*** *repeatedly destroy centers of gravity, generate and magnify friction employing air-land battle,* ***maintain force ethos,*** *and use* ***minimum force*** *to not alienate host nation's people.*



Map AF: Initial Operations in Operation Iraqi Freedom

Synthesis of Historical Battles for a Paradigm Strategic Matrix

4. Old Ideas. Indian national security apparatus has the onerous responsibility of delivering peace to the Nation in order that, progress and prosperity arrive within reach of our citizens. Learning from the past and preparing for future wars, is therefore the single most important duty of the military. A synthesis of the battles presented above is that military commanders/ thinkers have been trying to: -

(a) **Idea No 1: -** Penetrate adversary's system and mask own system against penetration.

(b) **Idea No 2: -** Create a variety of impressions of what is occurring and what is about to occur.

(c) **Idea No 3: -** Generate mismatches between what seems to be and what is.

(d) **Idea No 4: -** Push adversary beyond his ability to adapt.

5. *Manoeuvrist* Strategic Planning Process. These four old ideas lead to a manoeuvre based strategic planning process as given at Figure 13 below. The central message from the study as John Boyd expressed in his discourse on **'Patterns of Conflict'** is that,

survival and domination require willingness and ability to take the initiative to exploit variety, rapidity and harmony as the basis to create and adapt to more irregular and faster changes of rhythm and patterns, yet shape the focus and direction of effort.

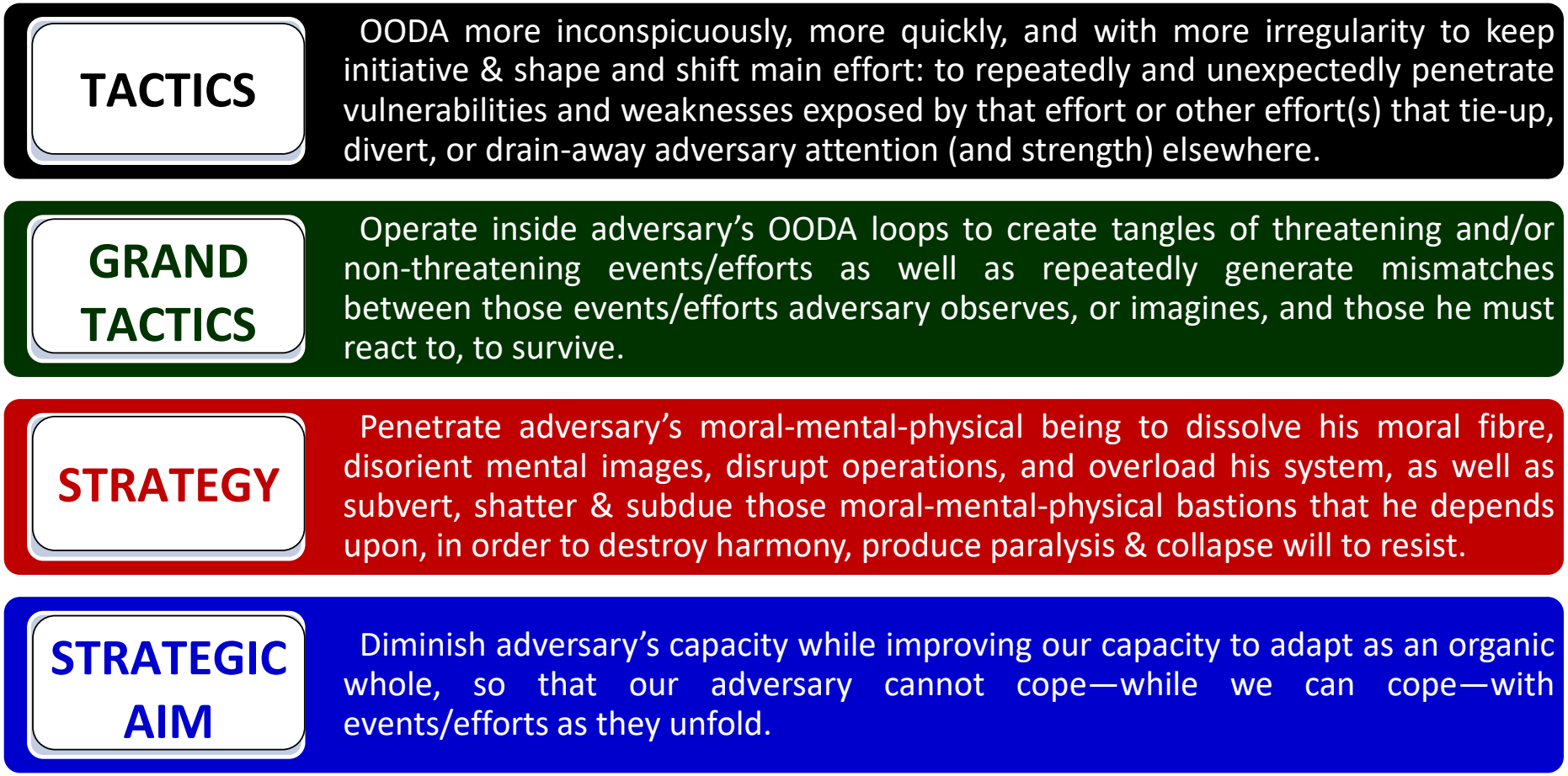


Figure 13: *Manoeuvrist* Strategic Planning Process

New-*est* Idea;

6. Soldier Bees. John Arquilla and David Ronfeldt who developed the theory of swarming in battlefield, define swarming as an amorphous, but deliberately structured, coordinated, strategic way to strike at the enemy from all directions, by means of a sustainable pulsing of force and/or fire, close-in as well from stand-off positions. They further explain that, the theory can succeed only if it is designed around the deployment of myriad, small, dispersed, networked manoeuvre units (like bees). Refer to Figure 14 below for an explanation of swarming attacks.[41] Of the four forms of warfare of mêlée, massed, manoeuvre and swarming, **swarming relies heaviest on information and communication technology**.



Figure 14: Explanation of Swarming Attacks

[41]Arquilla, John and Ronfeldt, David, Swarming and the Future of Conflicts, Rand.

7. *BattleSwarm*; The New-*est* Doctrine. Refer to Table I below for examples of *BattleSwarm* in military history. Swarming will require radical new changes in current military organisations, command and control structures, and logistical support; in short **'a flat military'**. Some advantages of ***BattleSwarm*** **manoeuvre** over **massed force attrition** are as under: -

(a) Applicability across the **entire spectrum of war**, conventional to cyber.

(b) **Speedy mobilisation** into theatre of war; concentrated to counter a larger force and dispersed to counter 4GW.

Period / Location	Examples of Swarming Attacks	Tool Employed
Nature	Bees, ants, wolves, bacteria	
World War II	German U boat anti convoy operations	Stand off fire
	Russian anti tank teams in battle of Krusk	Close up force
	Japanese Pearl Harbour attack	
Post World War II	Vietcong during Tet Offensive	
	US intervention in Haiti	
	Kosovo air campaign	Stand off fire
	Shock and awe campaign of OEF and OIF	
Indian	Indian Air Force over Laungewala in 1971	Close up fire
	Operation CACTUS LILY 1971	Close up force
	Skirmish order assaults in Operation VIJAY	
Terrorists	Al Qaeda 9/11 plane attacks on US	
	Pakistan and LeT 26/11 Mumbai attacks	

Table I: Examples of Swarming Attacks

(c) **Combined/ joint** all arms and all agency **exploitation of knowledge and technology** based on concepts of **manoeuvre warfare**.

(d) **Cost effectiveness** in raising, maintaining and applying.

(e) **High flexibility** in employment and in **control of violence**; therefore, minimum collaterals.

(f) **Reduced vulnerability** to weapons of mass destruction and precision guided weapons.

(g) **Minimal logistical requirements**, improving teeth to tail ratios.

The Art of Success in and against 4GW

8. Recipe for Victory. A just cause, a good end job (peace), proportionality, reasonable chance of success, exit to adversary, legality to declare war and use of war as the last resort emerge as the seven pre-requisites for victory in 4GW.[42]

9. Orient to Win. From the above study, the art of success in and against 4GW appears to be the ability to penetrate adversary vulnerabilities and weaknesses in order to isolate him from his allies, pull him apart, and collapse his will to resist yet, shape events so that we not only magnify our strength but also influence potential adversaries; **a mix of *ahimsa*, *Arthashastra*, Art of War, On War, Patterns of Conflicts, A Discourse on Winning and Losing, and Swarming & the Future of Conflict**.[43] The researcher had employed similar tactical concepts in Lolab, Kashmir while leading **18 RASHTRIYA RIFLES Battalion** in Operation RAKSHAK-II. **Relevant extracts** of the experiences of the people and the Battalion are given at **Appendix B** attached.[44]

[42] *"The US lost its moral high ground after invasion of Iraq"* . Dilip Hiro, After Empire- The Birth of a Multi Polar World. New York: Nation Books, 2010.pp25-86.
[43] Cf, post.p.53.
[44] Infra. p.60.

CHAPTER IV: THE GENERAL'S BLOODY CHOICE;

CHOOSING THE TOOLS FOR WINNING PEACE

"War is only a continuance of state policy by other means.
But war must always serve the larger ends of policy
and not become an end in itself.
The statesman's objective must always be the
betterment of the state as a result of war
and not the defeat and destruction of the enemy."

-Kautilya, 3 BC

The General's Dilemma

1. The concepts of attrition and manoeuvre warfare are basic to study of war. Common military knowledge says that **wars of attrition are costlier** than wars of manoeuvre and yet, modern states and armies indulge in wars of attrition. Also common is the assumption that, a general who defeats the enemy through war of manoeuvre is superior to the one who defeats the enemy through a war of attrition. A better understanding of these two war waging styles will provide national security policy with **improved 'designer options'** that fit the conditions of conflict. Refer to Table J below for the differences in the predominant concepts involved.[45] As modern civilisation demands that wars be won earliest and with minimum cost, military professionals need to **identify the conditions and times that force the course of choice between attrition and manoeuvre**.

[45] Lieutenant Colonel Jeffrey A. Springman, ibid.



Table J: Attrition vs Manoeuvre Warfare Concepts

2. So, What's Wrong? It is time to reclaim the world we have lost to 4GW. The alternative is a dystopian future of permanent war against an invisible enemy in which the fear of terrorism becomes the raison-d'être of the entire world.[46] **4GW cannot be won at home, but it can be lost at home**. We are fighting 4GW with the same soldiers, police, bureaucracy, people, rules, tools and diplomacy that conspicuously failed the world between 1990 and 2010.[47] Winning over 4GW requires **reform of the spirit of the Nation**.

[46] Mathew Carr, Unknown Soldiers- How Terrorism Transformed the Modern World, London: Profile Books, 2007, p.328.

[47] "*US inability to break enemy's alliances and induce cooperation of recalcitrant regimes has helped terrorism flourish*", Dr SK Awasthi, Terrorism as War. New Delhi: MD Publications Pvt Ltd, 2009. p.150.

Ideas and Counter Ideas

3. War of Ideas. 4GW is a war of ideas as terrorists, insurgents, guerrillas and sponsor states are driven by ideology. Refer to Figure 15 alongside for the contemporary clash of ideas.

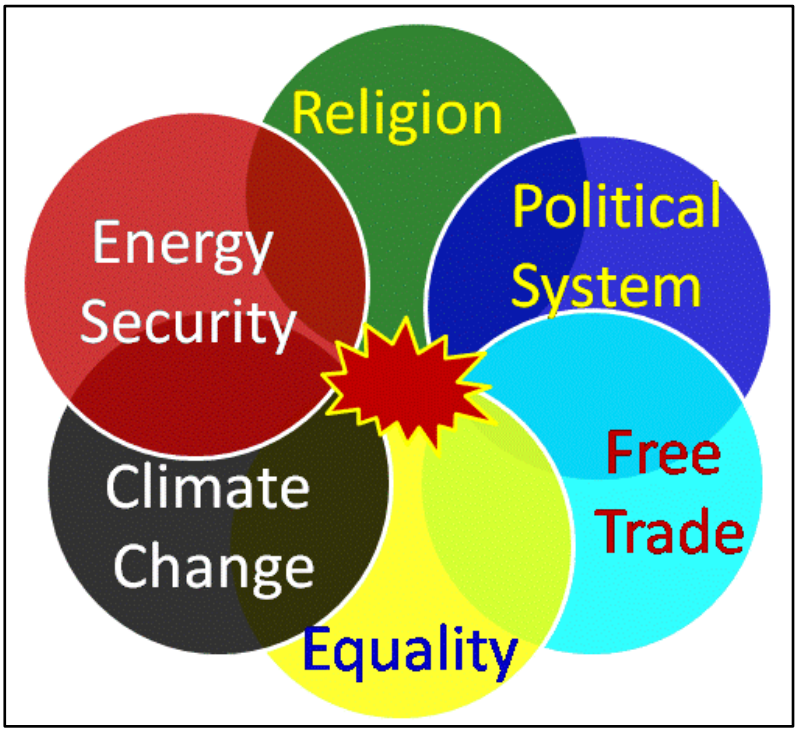


Figure 15: Clash of Ideas leading to Conflict

4. War of Counter Ideas. 4GW or unrestricted warfare has **no rules of combat** for the weak and

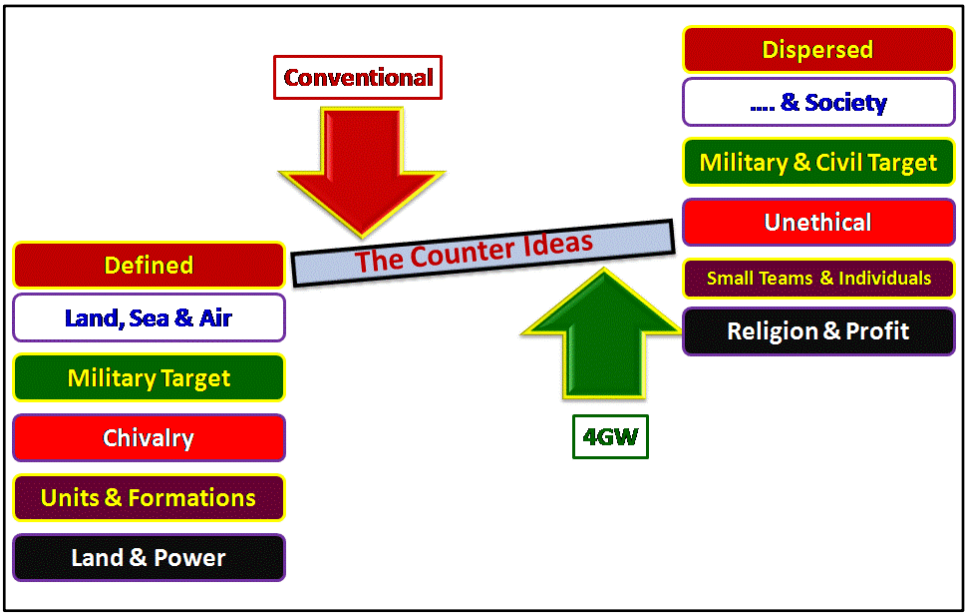


Figure 16: Counter Ideas

includes multitude of means and dimensions of attacks on every aspect of existence of the adversary. Refer to Figure 16 below for the counter ideas between conventional war and 4GW.

5. Revolutionary Military Ideas. As per Bruce Berkowitz, four ideas have combined together to upset the basic assumption of how to plan and fight wars and also upset the relation between strong and weak nations.[48] Refer to Table K below. These four revolutionary ideas have **democratised 21st Century war** and empowered non-state actors to wage war.

Number	Idea	Author/ Innovator
1.	OODA Loop	John Boyd
2.	Asymmetric Threat	AW Marshal & A Wohlstetter
3.	Information Warfare	Thomas Rona
4.	Swarming for Network Centric Warfare	J Arquilla & D Ronfeldt

Table K: Four Ideas Revolutionizing Warfare

Winning Peace by Manoeuvre

6. Genesis of a *Manoeuvrist* Solution. The restraints necessitated by economic, social, cultural, political and international considerations require a new method of defeating the **troika of 4GW; the enemy within, the non-state actor and the sponsor state**. A study of military history, basic tenets of warfare, 4GW and new paradigms in warfare point at a ***manoeuvrist* solution** that **focuses on people as the cause(s) and their ideology**.[49] Refer to Figure 17 below for **'ideas' as centres of gravity** in ongoing conflicts. Selection of centre of gravity is an art, miscalculation in which has the potential to assure failure. The failure of US led Coalitions in Iraq and Afghanistan is a result of wrong identification of

[48] Bruce Berkowitz, The New Face of War. London: Free Press, 2003. p.75.
[49] Sareen. Pakistan Seminar, 02 August 2010 at Higher Command Wing, Army War College.

centre(s) of gravity; **'Saddam Husain' in Iraq and 'Osama bin Laden' in Afghanistan.**[50] Thus we see the continued relevance of capabilities, ideas and intentions of rogue states and non-state actors in all four conflicts; **a stalemate in spite of destruction (isolation) of appreciated (?) centres of gravity**.[51] The wars have to be won on the **mental, moral and physical planes** simultaneously; conflict termination and conflict resolution have to progress simultaneously.[52]

Conflict	Possible/ Suggested Centre of Gravity			
	State	C of G	Non-State/ Proxy State	C of G
Jammu & Kashmir	India	Unified India	Separatist	Idea of *Azadi*
	Pakistan	One Nation for all pre-1947 Indian Muslims	Terrorists	Idea of Islamic *Caliphate*
LWE	India	Socialist democracy	Insurgents	Idea of Marxist equality
Afghanistan	Coalition	Security through US led coalition expedition	Al-Qaeda	Idea of Islamic *Caliphate*
	Pakistan	Strategic depth	Local insurgents	Idea of *Pakhtunwali*
Iraq	Coalition	Security through US led coalition expedition	Al-Qaeda	Idea of Islamic *Caliphate*
	Shiites Politics	*Shiite* domination of Nation	*Shiite* insurgents	Idea of Islamic *Caliphate*

Figure 17: Possible/ Suggested Centres of Gravity in Ongoing Conflicts

[50] Colonels WG Pierce and RC Coon. "Understanding Link between Center of Gravity and Mission Accomplishment". Military Review. May-Jun 2007.

[51] US Army JP 5.0, December 2006 states that, *"the essence of operational art lies in being able to produce right combination of effects in time, space and purpose relative to an adversary to neutralise, weaken, and defeat it. It is the most direct path to the mission".*

[52] Ali Ahmed, "Counter Insurgency in the Liberal Perspective", AAKROSH. April 2010, Vol 13, No 47.

7. Developing an Information Age *Manoeuvrist* Strategy and Plan. War fighting in 4GW if based on the tenets of manoeuvre warfare, should **focus on the enemy's centre of gravity, the source of his (their) freedom of action, and his (their) physical strength or will to fight**. Refer to Figures 18, 19 and 20 below for an explanation of this in contemporary Indian conflicts. As in 4GW

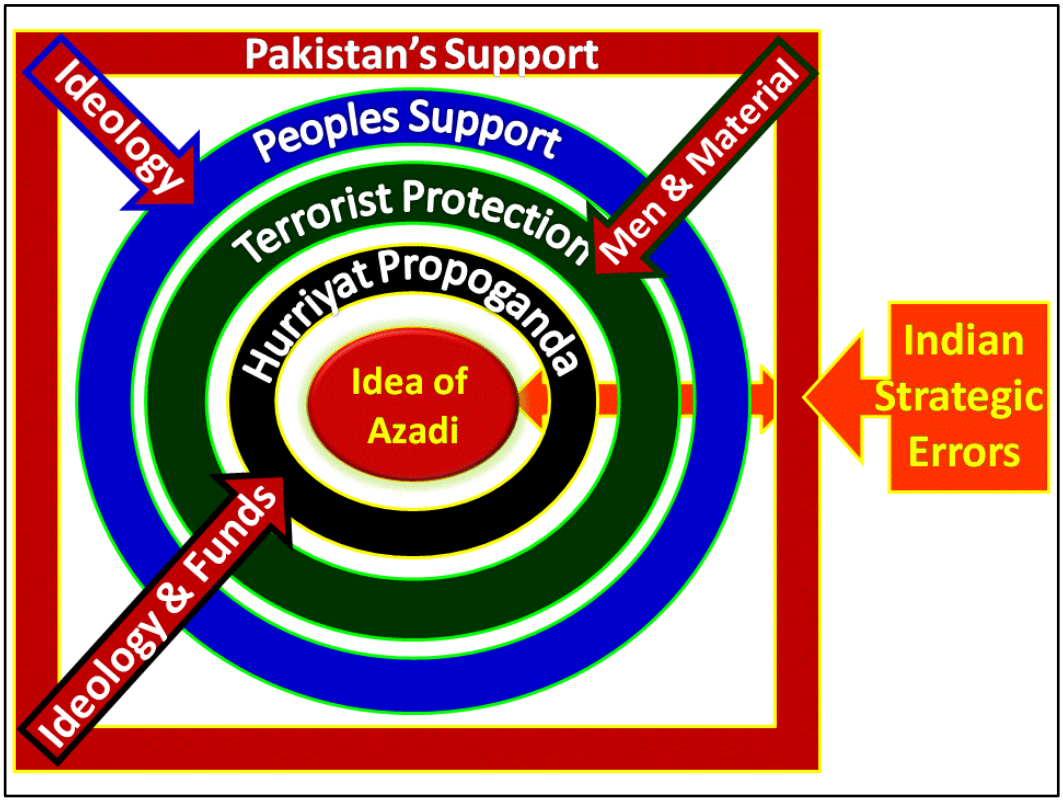


Figure 18: Visualisation of Centres of Gravity in LWE

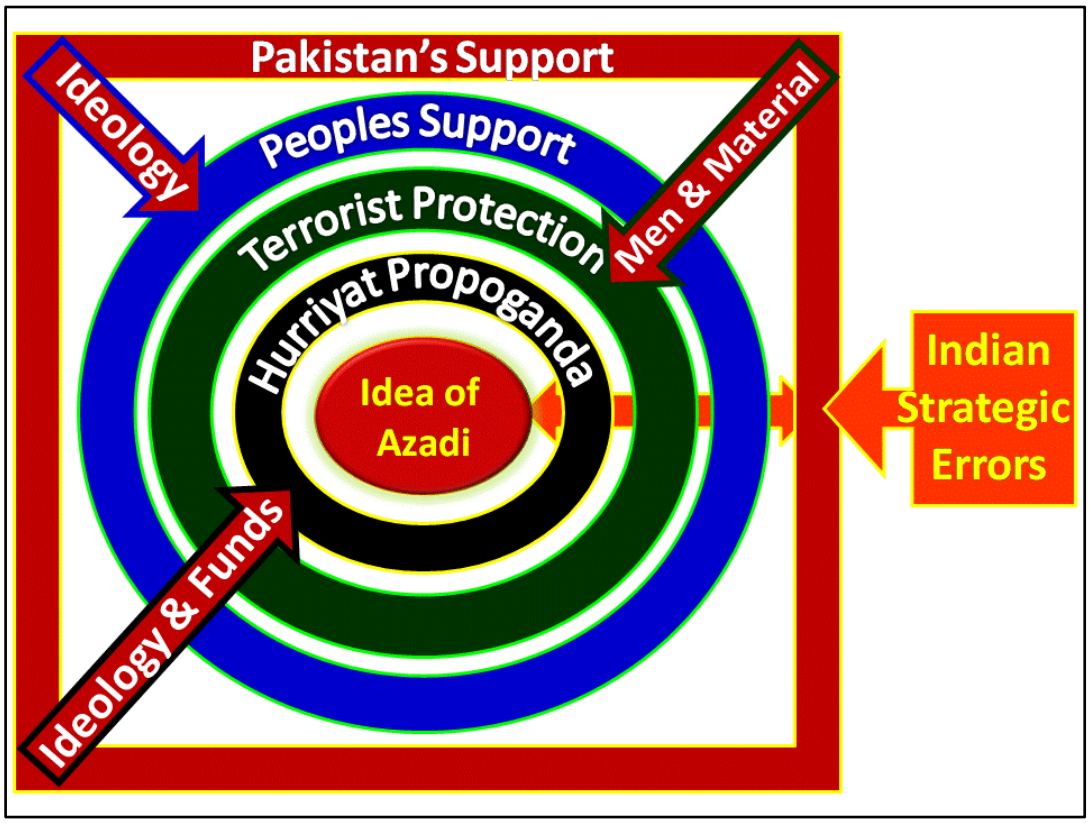


Figure 19: Visualisation of Centres of Gravity in Kashmiri Separatism

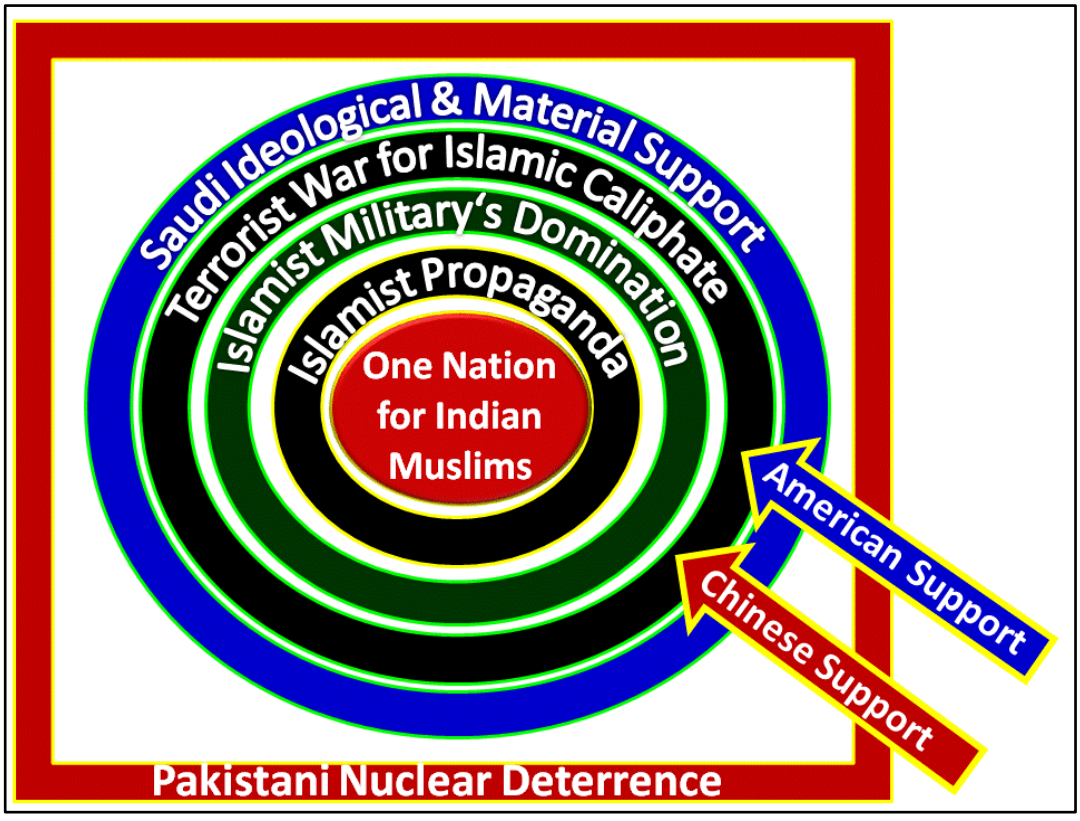
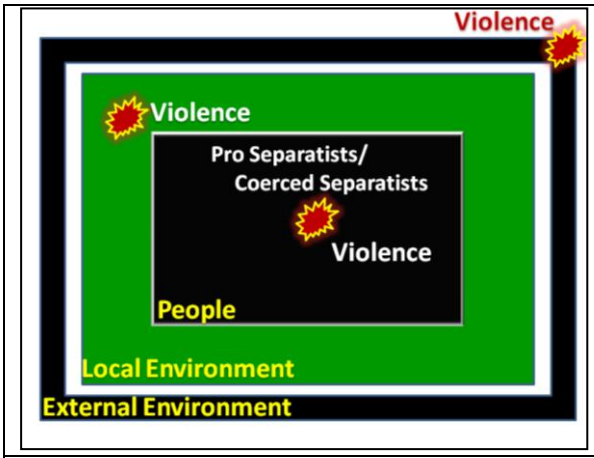


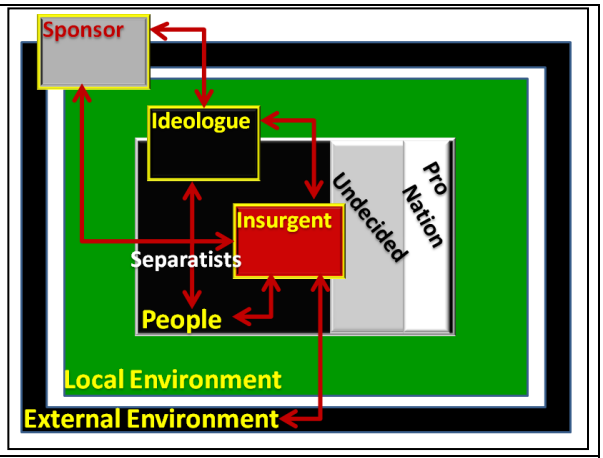
Figure 20: Visualisation of Centres of Gravity in India's Pakistan Situation

the centre of gravity is the **'the society's idea of/ for survival, the people and people's support'**, a *manoeuvrist* strategy should use all elements of military power viz; information warfare, soldiers, firepower, defence and movement to fix and strike the enemy on the moral and physical planes. In the information age, victory usually goes the side having more influence over technology and better access to electronic infrastructure. Today, the ability to collect, communicate, possess and protect information is the most important part of military power.[53] The rigorous application of IT to warfare leads to proliferation in tools of war-fighting. **To the traditional means of firepower and manoeuvre will be added the means of attacking one's enemy ever more powerfully electronically.** IW will enable commanders to inflict **'effective information neutralisation'** upon his adversary in a non-war and non-violent way. This meets the **peaceful end state of war** i.e**. imposing own will, while adhering to the principle of minimum force**.[54]

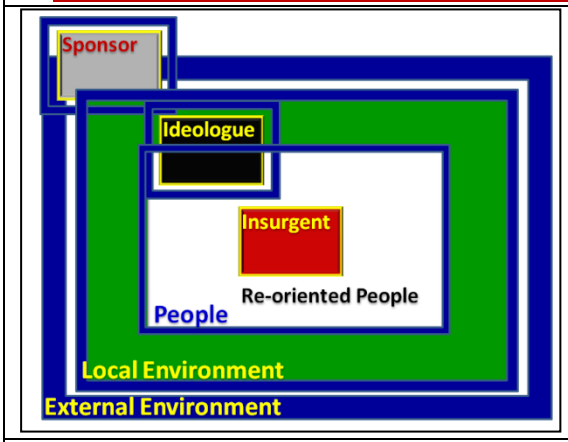
8. <u>New War Fighting to Win Peace.</u> This paradigm introduces fundamental changes in the way we plan and conduct wars. **Information capitulation** and moulding idea of survival of adversary's policy elites and population provide a way to win peace without necessarily inflicting physical pain. The broad strategy and plan should evolve from the following simultaneous and concurrent activities (refer to Figure 21 below for an explanation): -

[53] Bruce Berkowitz, op,cit. p.21.
[54] Cf, post.p.54.

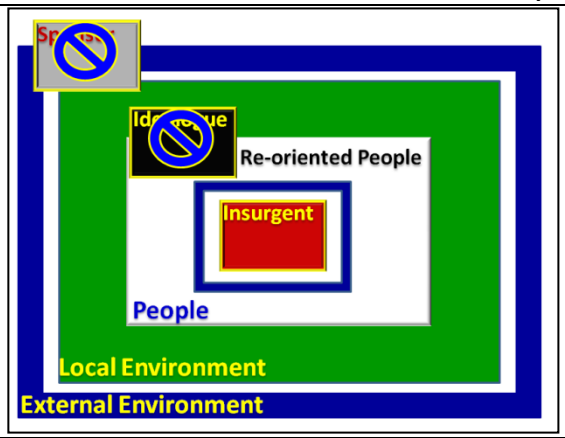




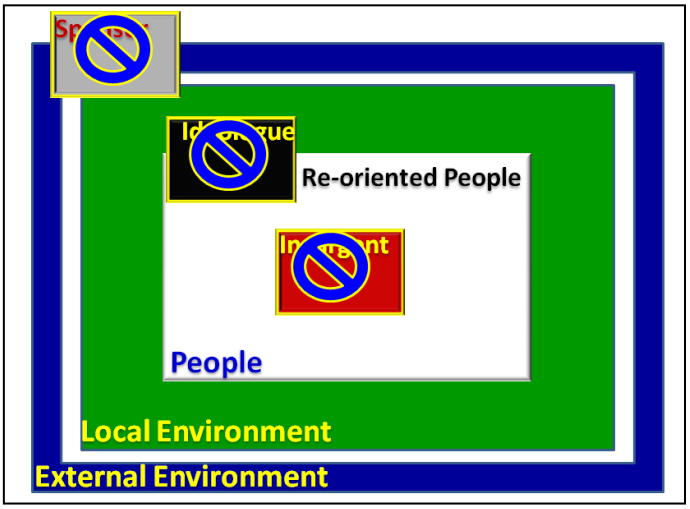
Winning the Information Battle: - Who, What, How, Where, When, Why



Securing the Environment: - Control the Centre of Gravity and Fix the Enemy/ Anti Nationalist in the Moral Plane



Shaping the Environment: - Mold the Centre of Gravity and Isolate the Enemy/ Anti Nationalist



Exploit the Environment: - Destroy the Enemy's/ Anti Nationalist Will, Cohesion and the Enemy/ Anti Nationalist

Figure 21: Information Age Manoeuvrist Strategy and Plan

(a) Winning the Information Battle. This provides the basis for the other three battles and allows the *manoeuvrist* to **locate the enemy in the moral and physical planes**. Winning these battles around the enemy's centres of gravity, his sources of freedom of action and his will cum cohesion is the key to success. OEF and OIF are examples of limited success in this (initial) phase of the campaign, while the present crisis in Kashmir Valley is an example of crisis of failure.

(b) Securing the Environment. Is designed to deprive the enemy of his freedom of action and to wrest the initiative. As the *manoeuvrist* identifies and gains control of the key centre(s) of gravity, the enemy will be faced with fewer options, thereby **fixing the enemy on the moral plane and wresting initiative**. This will enable the *manoeuvrist* to shape the environment to his advantage and **fix cum strike the enemy on the moral plane**. The participative elections of Jammu & Kashmir in 2008-09 were a result of a well secured environment in the Kashmir Valley.[55]

(c) Shaping the Environment. Is intended to give the *manoeuvrist* greater control over the area of operations so that, the **enemy may be fixed in the physical plane**. This process must start from the outset with psychological operations, civic affairs, intelligence (and counter intelligence) operations; all focussed on winning the information battle. The stone wars of Srinagar and other Kashmiri cities of 2010, and the growing coalition losses in Afghanistan and Iraq are examples of inability to shape the environment.

(d) Exploiting the Environment. Once the enemy has been fixed on the moral plane and the environment secured, it is now feasible for the *manoeuvrist* to **find and destroy the enemy**. Faced with deteriorating public support, the

[55] General VK Singh, PVSM, AVSM, YSM, ADC, COAS. Views expressed during an interview to the media during the Kashmiri stone throwing crisis, 11 July 2010, New Delhi.

enemy must act or admit defeat, and in doing so, he either moves to ground chosen by the *monoeuvrist* or reveals his location and intention, which can be subsequently exploited. The situation is now set for **defeating the will and cohesion of the enemy** through offensive psychological operations. **No Indian counter 4GW (terrorism/ insurgency) campaign has reached this stage till date!!**

9. <u>The Victory Enablers beyond 2010.</u> Winning 4GW in the information age requires not just smart weapons that win wars. It is the **total package** – the **total information picture**. Refer to Figure 22 below for the new victory enablers in 4GW. The Israeli Defence Forces learnt this lesson at great human cost in both the *Intifadas*. The consequences of perceiving war on terror/ separatists/ insurgents as an **existential and/ or inter-communal war** by states and the resultant heavy use of attrition, without a similar view by the society/ military has had far reaching negative impact on morale of the Israel Defence Forces during the *Intifadas* and in ongoing coalition forces in GWOT.[56] **Here-in lies an**

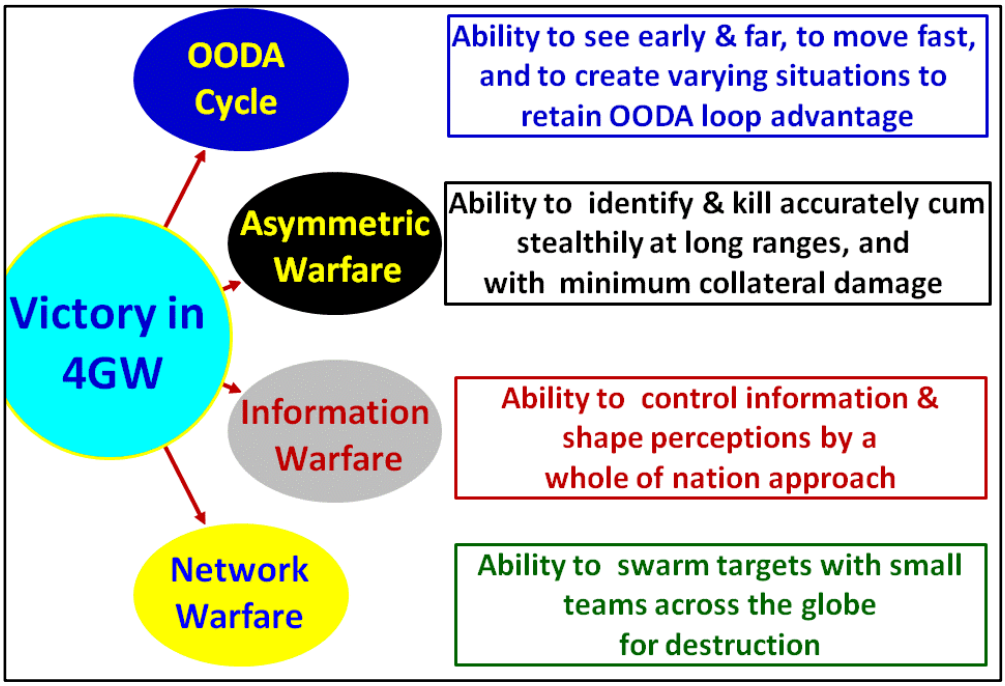


Figure 22: Victory Enablers in 4GW

[56] Sergio Catignani, <u>Israeli Counter Insurgency and the Intifadas</u>. New York: Routledge, 2007. pp.180-186.

important lesson for Indian strategists and *operationalists*. Communalisation of Indian nationhood is a NO NO.[57]

OODA Loop in and for 4GW

10. The Building Blocks. 4GW warriors must appreciate that victory lies in denying the enemy state, the non-state actor and the anti-state people their political aim/ solution. The strategy therefore, in a *manoeuvrist* approach must be **'idea denial'**, the target **'enemy state, local ideologues and terrorists'** and the focus should be the **'people who support'**. The plan should revolve around generating several non-cooperative centres of gravity while reorienting (*Indianising*) those that ideologues depend upon. The aim is to amplify friction, shatter cohesion, induce paralysis and bring about ultimate collapse not only of the terrorists, but the ideological movement as a whole. **Winning minds (information war) as a preliminary to influencing hearts consequently, becomes a critical battle and war influencing factor and civil society gains strategic importance.**[58]

11. Out Boyd*ing* the Enemy Troika. While winning peace in 4GW, the OODA loop is applicable at all levels of war. This is explained as under (refer to Table KA below for applicability at the three levels of war): -

(a) Observe. Transparency being the aim, knowledge of enemy(s), terrain, people and people's culture are the intelligence problems. Establishment of intelligence & surveillance grid leads to **identification of objectives and surfaces & gaps**. **People's war** thus, is an important adjunct of observation.[59]

[57] Amir Ansari, Islam Denounces Terrorism. New Delhi: Cyber Tech Publications, 2010. p.246.
[58] J Howell & J Lind, Counter Terrorism, Aid and Civil Society. New York: Palgrave Macmillan. 2009.p.204
[59] "*Culturally equipped soldiers*", SK Nayadu, "The US NATO Counter Terrorism Experiences in Afghanistan", Maroof Raza (Editor), Confronting Terrorism. New Delhi: Penguin.pp.155-159.

Aspect	Enemy State(s)	Non-State Actor(s)	Local Terrorists	People
Observe				
Strategic	Geo-strategic goals & policy	Clashing ideas & interests	Clashing ideas & interests	Culture & traditions
Operational	National interests & security strategy	Leadership & perception of supporting people	Leadership & perception of supporting people	Political & social organisations
Tactical	Plans, centres of gravity & surfaces/ gaps	Modus operandi, support network, surfaces/ gaps	Modus operandi, support network, surfaces/ gaps	Customs, traditions & active supporters
Orient				
Strategic	Own national interests	Own national security strategy	Own internal security strategy	Aspirations & likes/ dislikes
Operational	Develop own concept of operations	Develop own concept of counter support operations	Develop own concept of counter terrorist operations	Develop own concept of IW/ perception management
Tactical	SWOT analysis and identify mission and metrics	SWOT analysis and identify mission and metrics	SWOT analysis and identify mission and metrics	Identify force ethos and re-orientate ideas using IW
Decide				
Strategic	Select own national security strategy	Select own national internal security strategy	Select political measures to diffuse crisis	Select political measures to remove alienation & *Indianise*
Operational	Select doctrine of statecraft & war fighting	Select lines of operations & sequence of events	Select lines of operation, sequence of events & rules of engagement	Select own force ethos and lines of IW to re-orient people
Tactical	Select lines of operations & focus of effort	Select lines of operations & focus of effort	Select lines of operations & focus of effort	Implement own force ethos and plans to win minds
Act				
Strategic	Defeat idea and isolate state	Defeat idea and isolate groups	Defeat idea and isolate groups	Replace idea and *Indianise*
Operational	Deter/ dissuade from war	Isolate & deter/ from 4GW	Isolate & deter/ from 4GW	Win political support
Tactical	Attack to break state-terrorist cohesion	Deny infiltration & neutralise terrorists and protect people	Neutralise terrorists & supporters and protect people	Win groundswell, stop recruitment & remove support for terrorists

Table KA: Applicability of Manoeuvre Warfare at Three Levels of War in 4GW

(b) Orientation. Is the **fulcrum of the loop** as situational awareness and **correct SWOT analysis** shapes mission, force ethos and plans. Mental agility, discipline and moral values assist in correct orientation. Trusting leadership and cohesive small teams working on 'mission type orders' and 'ISR pull' are a result of correct force orientation **(education and training)**.[60]

(c) Decide. Orientation dictates and colours our decisions and enables **speedy decision making** resulting from force discipline and leads to **high tempo**. Selecting objectives, lines of operations, sequencing of events/ operations/ battles, and detailing the main and subsidiary efforts cum reserve are part of the decision process.

(d) Act. Ultimately, it's action that matters. **Pulling the trigger at the correct target, at the right time & place, and with the appropriate violence** closes the loop. Effectiveness of action is enhanced by deception & surprise, innovation & ingenuity, and non-linearity & simultaneity.

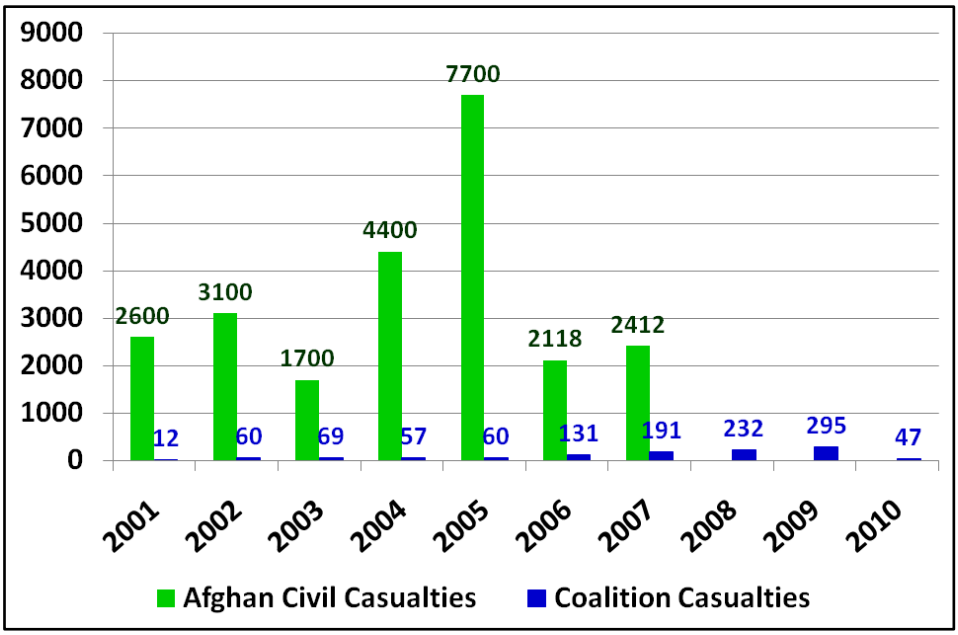
Failure Yesterday, Today and Tomorrow

12. **Fail Grade** to Combat Ratios. The lesson from Afghanistan and Iraq are clear, **'civilian casualties are counterproductive in 4GW'**. Refer to Graphs II & III below for casualties in Afghanistan and Iraq. A misplaced orientation of ***'life of US soldiers is dearer than that of the locals'*** has exacerbated the situation. The continued failure of attrition-based strategy (and use of combat power) to deter our neighbours form waging a proxy war against India and to assimilate the Kashmiri, Naga, Mizo, Assamese and Bodo people into mainstream India yesterday and today, is signalling to the generals of today and tomorrow, the **eclipse of attrition warfare**. Long wars versus inferior adversary(s) end in loss of self-esteem and feed more violence.[61] Focusing on wrong ***'measures of***

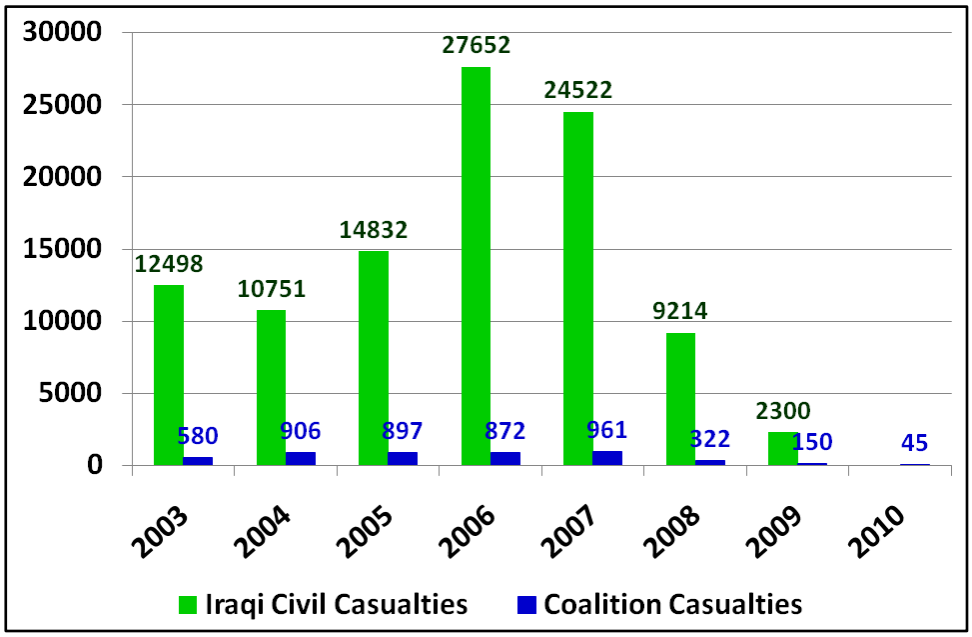
[60] Cf, post.p.60.
[61] M Wade & A Maljevic (editors), A War on Terror? London: Springer, 2010. pp.291-294.

effectiveness' and ***'tomorrow'*** has led to these failures. The key therefore, is to focus on the ***'war of ideas'*** and on the ***'battles of day after tomorrow'***. A war for Kashmiri *azadi* or for an Islamic Caliphate cannot be won by metrics of [62]

'ratio of terrorist killed: troops martyred'.



Graph II: Casualties in Afghanistan



Graph III: Casualties in Iraq

[62] Cf, post.p.47.

13. <u>The New Idea for Day After Tomorrow.</u> The focus has to simultaneously be upon: -

(a) **Mental, moral and physical preparation of own society and military** to magnify our inner spirit so as to shape perception of adversaries and neutrals so that they accept our national values, interests and vision.

(b) **Mental, moral and physical isolation of adversary** from its allies and of its society from its military (and other systems) to magnify internal friction, produce paralysis and bring about collapse or change in politico-socio-economic policies so that they no longer contest/ inhibit our growth and vitality.

14. **Therefore, idea driven 4GW has to be fought at ideological and moral levels** with networks waging the counter war **relying mainly on IW and manoeuvre** (assisted by fire power) to **win peace**.[63] Refer to Robert Cassidy's six paradoxes of asymmetric warfare as enumerated in Figure 23 below.[64]



Figure 23: Robert Cassidy's Six Paradoxes of Asymmetric Warfare

[63] Cf, post.p.55.
[64] Dr SK Awasthi, op.cit.p..

CHAPTER VI: PREPARING FOR 2022;

DREAMS REALISED

"An honest & chivalrous enemy is to be fought by honourable methods, whereas a cunning & deceitful enemy is to be dealt in a similar manner."

-Kautilya, 3 BC

The Future; Unknown, Uncertain and Unexpected

15. *Powershift* and Conflict. Alvin Toffler describes the edge of 21st Century as an 'era of *Powershift'* based on the shifting structures of power and disintegration of power that held the world together.[65] This he attributes to the **changes in access to knowledge and ever-increasing dependence of force and wealth on knowledge**. He concludes that*, "this new system will lead to personal, political and international conflicts*". The great oil game, Al Qaeda & Ghost Net 2.0 attacks, West's operations in Afghanistan & Iraq and India's internal conflicts are manifestations that prove ***Tofflerian Powershift* true**. War is becoming more a conflict of decision process, and success will be determined by the **information differential** between nations, forces and commanders. Physical and mental dislocation cum reorientation of enemy's cognitive system (political leadership, military commanders and units) rather than destruction is the new success mantra for winning peace.

16. Let History not Repeat Itself. The changes hurtling us into day after tomorrow are not random or independent. The past will not continue into the

[65] Alvin Toffler, Power Shift. London: Bantam Book. 1990. p. 2 & 464.

present, nor will the present extend into the future; there are no straight lines into the future. This requires a coherent synthesis of the environment so as to develop a national vision, make space for hope and to prepare a plan for dealing with future clash(es) of forces. We need to identify future trends and their **tipping points** and attune to the **rhythms of day after tomorrow**.

The Long View into the Future

17. Global Trends 2025; A Transformed World. The **'Global Trends Report 2025; A Transformed World'**, prepared by National Intelligence Council of USA in 2008, developed **four scenarios of the future** as given in Figure 24 below, based on following **key trends/ drivers** of the international system[66]:-

(a) **Economic growth** fuelling rise of emerging powers.

(b) **New transnational agenda** of food scarcity, climate change and information technology.

(c) **Prospects of terrorism**, conflict and proliferation of WMD.

(d) **Diminishing power of USA** and rise of a complex international system.

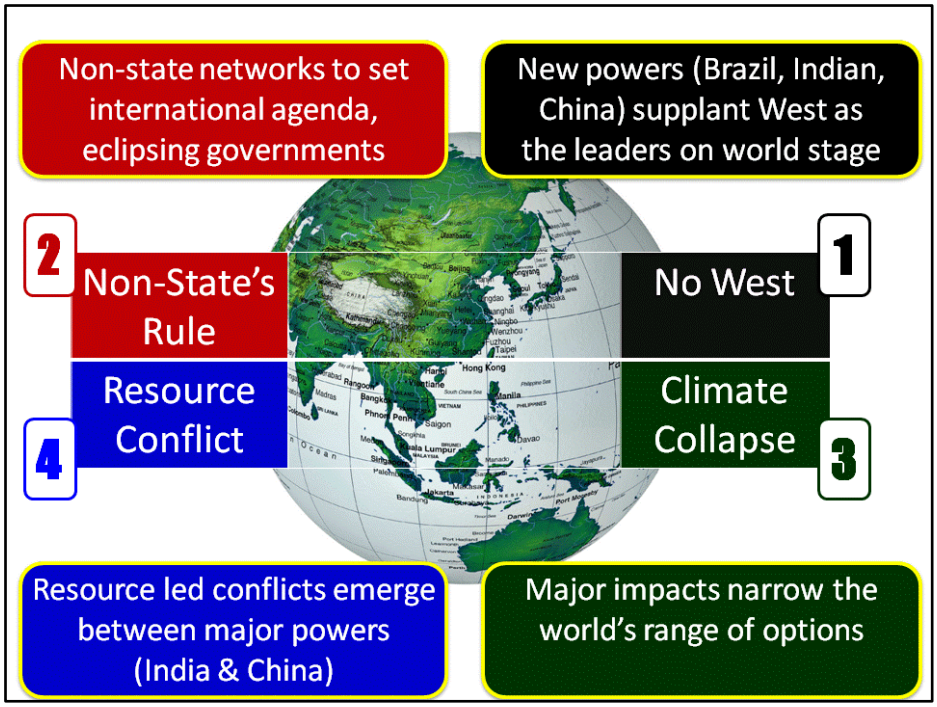


Figure 24: World Scenarios 2025

[66] National Intelligence Council, Government of USA. www.dni.gov/nic/NIC_2025_project.html

18. India Scenario 2025. The World Economic Forum published its report **'India and the World; Scenarios to 2025'** in 2005.[67] The **three scenarios** painted at Figure 25 below are based on the following trends and challenges as elucidated in the Report: -

(a) Favourable **demographics**.

(b) Large pool of low-cost skilled **labour**.

(c) **Entrepreneurial** indigenous companies.

(d) Continuing **economic reforms** and global integration.

(e) Stable **democratic** political system.

(f) High sustained **growth** rate.

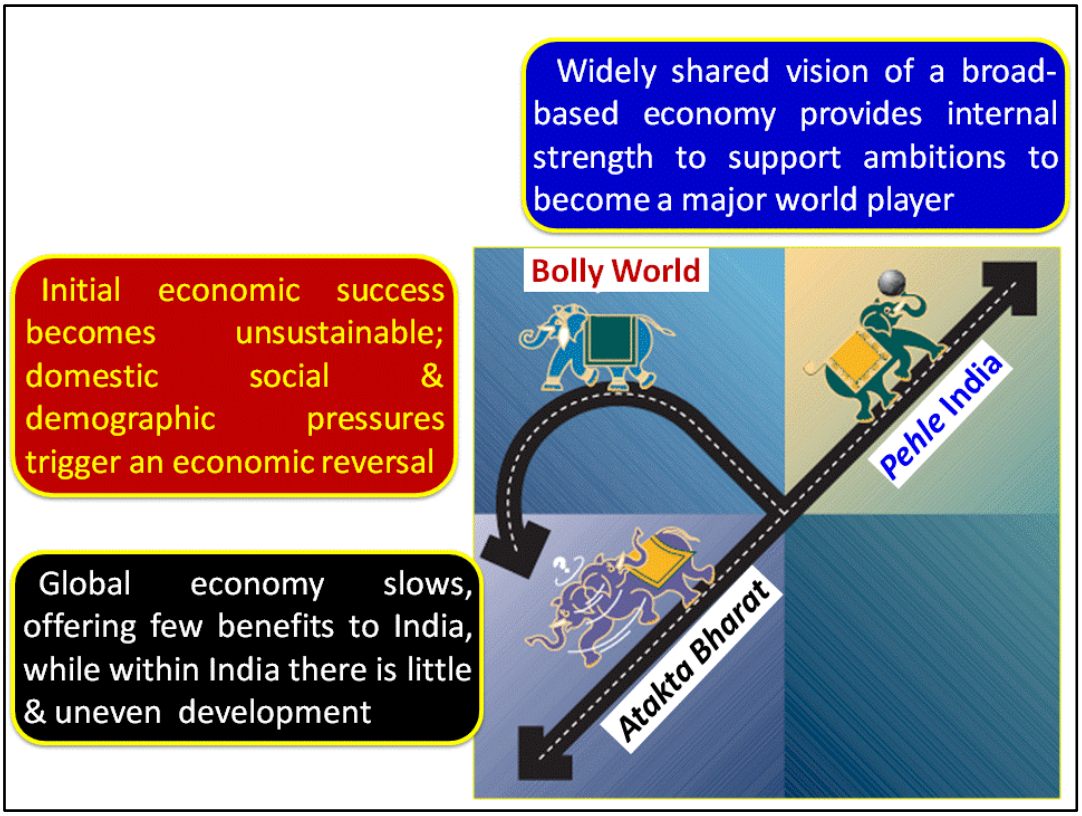


Figure 25: India Scenarios 2025

[67] World Economic Forum. www.weforum.org

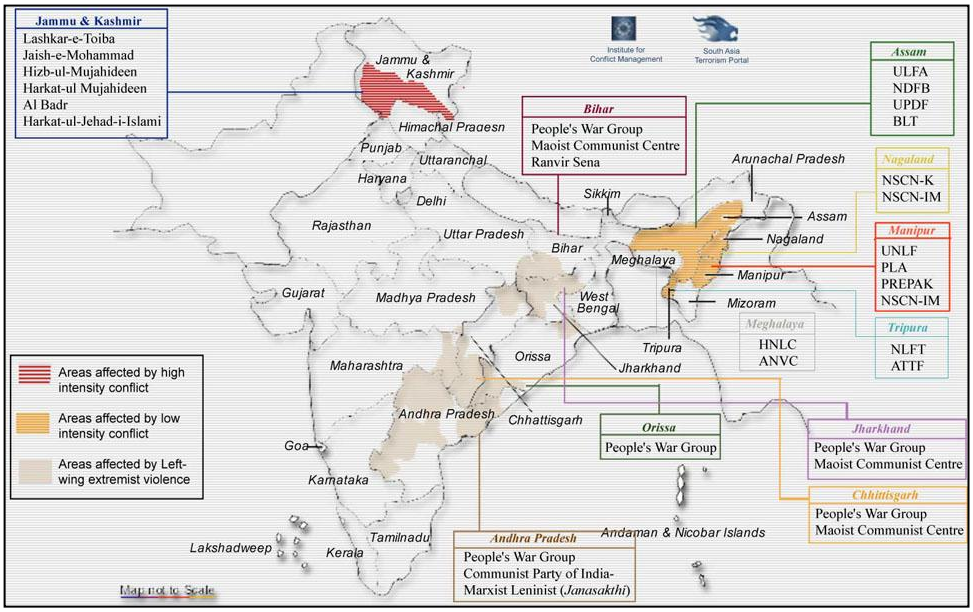
19. Keys to Scenarios. The key to the scenarios prepared by both the American National Intelligence Council and the World Economic Forum with respect to India are: -

(a) Will India be able to **engage the whole Nation** in its quest for sustained security and prosperity?

(b) How will India's **relationships with the world** impact Indian agenda?

India Vision 2020 Achieved

20. Absence of Fear. India Vision 2020, the well-researched vision document prepared by the Planning Commission is based on Sir Rabindranath Tagore's poem, *'Where the mind is without fear ……., Into that heaven of freedom, let my country awake'*.[68] By choosing **'absence of fear'** as the foundation of the Vision, the government has recognised the primacy of the role of its security forces in ensuring the continued success of various engines of growth of the Nation. Ongoing separatist movements on the Nation's fringes and terrorism/ insurgency in the heartland, appear to be holding Vision 2020 to ransom. Refer to Map AG alongside for conflicts afflicting India in 2010.[69] Warfare is the greatest affair of



Map AG: Conflicts in India

[68] Report of Committee on India Vision 2020. Planning Commission of India. 2002. p.17.

[69] KPS Gill, India, 'Backgrounder on Conflicts, South Asian Terrorism Portal. http://www.satp.org/satporgtp/kpsgill/2003/chapter6.htm

state, the basis of life and death, the way to survival or extinction and hence, must be thoroughly pondered and analysed.

21. The Awakened Nation. India has never been short of dreams; from Tagore's *'fear free Nation'* to Nehru's *'tryst with destiny'*. Failure of national security strategy and apparatus based on a **'no win' defence philosophy**, to secure India's borders and hinterland demand a de novo appraisal of our plans, policies, strategy and tactics. India's craving for peace at any cost has resulted in its neighbours nibbling into its territorial limits.[70] The *manoeuvrist* ideas of Kautilya, Sun Tzu, Boyd, Lind and Arquilla have potential to deliver peace to the Indian sub-continent and the starting point is a **strategic shift from 'defence of territory'** to **'defence of national interests'**. Safeguarding the future of India's demographic dividend so that it drives a growth rate of 5% for India until 2050[71] requires an awakened national security apparatus with *manoeuvre* as the key driver of security issues at strategic, operational and tactical levels.

Indian Statecraft and War-fighting for 4GW

22. New Thinking for New Forms of War and Non-War. In ***informatised* 4GW**, **creative thinking** is the **pivot** for developing innovations in military theory and practice, and will become the golden key to the door to success and peace. Protracted war in the future will have adverse effects on India's demographic dividend besides eroding the Nation's *ch'i* (spirit) to wage/ support war.[72] Therefore, the need today is to develop a culture of creative thinking that leads to **control over war of day after tomorrow,** instead of reacting to it and making war-time changes required yesterday. Under nuclear deterrence in the Indian Sub-continent and a low technology edge that India shares with her adversaries, a Gulf War I styled victory falls in realms of Cinderella. Consequently, the hard

[70] Bharat Verma, Fault Lines. New Delhi: Lancer, 2009. pp.25-29.
[71] Nandan Nilekani, Imagining India. Delhi: Penguin, 2008.p.54.
[72] RD Swayer, Sun Tzu & Sun Pin, The Complete Art of War. Oxford: Westview Press, 1996. p.23.

reality is that 4GW is a clear, present and future danger. **Our adversaries (will) continue to inhibit our values, interests and vision.**

23. 'Non'-Decisive Military Victory. A victorious national security apparatus **first realises the condition for victory and then seeks to engage in battle**. No one knows what the future holds or what will work best in Third Wave societies. A single massive **reorganisation/ revolution** or a top-down imposed change would be most inappropriate.[73] As 4GW erupts into everyday lives, existing doctrines, strategy and tactics need to be questioned and declared obsolete. Changes will also affect drills, procedures, rules and leadership. It is not possible to change all these without first deeply altering the entire military context and character of the future. In the era of **'total war'**, the annihilation of the adversary required simple straight directions, strategies, principles and tactics for war. In the era of 4GW, globalisation and interdependence impose politico-economic restraints on the way statecraft and war fighting are practiced. *Nuclearisation* and proxy war have made defining end state of wars a complex exercise. **'Decisive military victory'** is no longer in the interest of the new Third Wave World, as it **seeks to destroy the very object it tries to protect**. **'Deterrence of war'** through imaginative use of hard & soft power and Chinese military doctrine of **'limited war under high-tech conditions'** appears to be two possible ways ahead.[74] Consequently, the aim in future state wars should shift focus to attaining key objectives that provide **post-war political leverage** for conflict resolution, while that of 4GW to objective of a **politico-economic solution**. Excessively ambitious aims of destroying opposition and its required violent use of fire power, fuels the very violence it seeks to remove. OEF, OIF and Operation RAKSHAK-II are reflective of the focus on **'metrics as a measure of victory'**

[73] Alvin Toffler, The Third Wave. London: Bantam Book. p.442.
[74] RN Gupta, Principle and Art of War. New Delhi: Cyber tech Publications, 2010.pp. 251-269.

resulting in **strategic stalemate** for the state and victory for the non-state cum anti-state actor. The nature of 4GW emphasises on the need to **synergise political and military goals** with the recognition that, flexibility in one should lead to re-orientation of the other. Refer to Figure 26 below for a possible application of this in India's **'Islamist-Pakistan'** situation. **Politically**, the aim should be to establish network of coalitions to isolate theories of **Islamic Jihad and Islamic Nation**, and orchestrate politico-diplomatic-economic isolation while, **strategically** the focus should be on breaking the will of the Pakistan military/ ISI-terrorist combine, while maintaining will of the Indian system. At the **operational level**, these messages should be delivered in variety of lethal and non-lethal ways combined with **tactical networked operations** to secure own people (especially fringe population) and neutralise separatists/ terrorists.

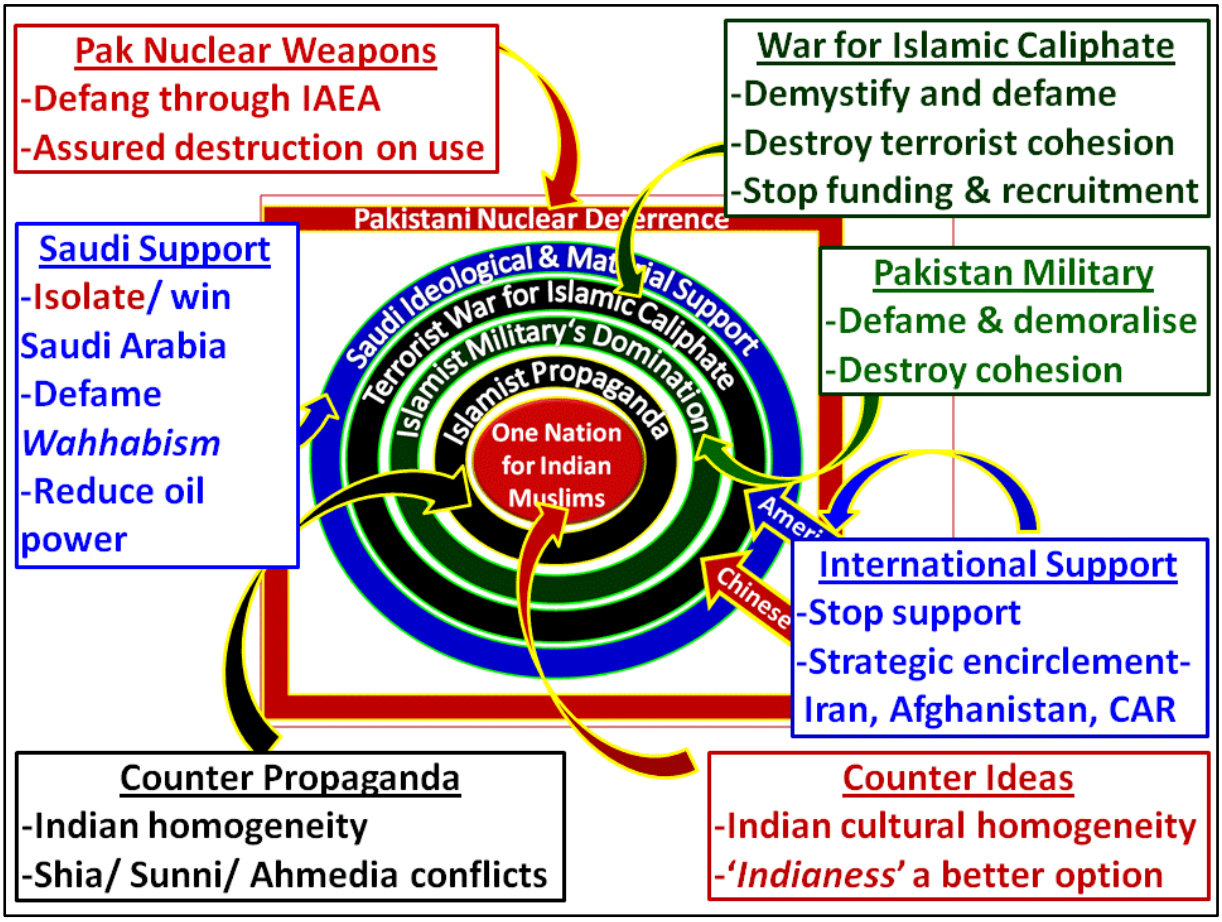


Figure 26: A *Manoeuvrist* Approach to Winning Peace over Islamist Pakistan

24. Kautilya x (Byod+Lind+Arquilla)^{IT}. Boyd's OODA loop combined with Lind's theory of manoeuvre and Arquilla's theory of swarming when applied in *informatised* environment in consonance with *Kuta (*indirect*) Yudha, Gudha (*clandestine*) Yudha* and *Mandala* theories of Kautilya can provide for a truly Indian way of statecraft and war fighting. The contours of this systemic war fighting doctrine that must have the capability to evolve, to adapt, to learn and to deny such capability to the enemy, are explained in following paragraphs. This Indian war fighting doctrine should be researched, developed, documented, disseminated and all ranks educated and trained in its application. A possible shape of this Indian war fighting against *al-Qaeda/ Lashkar-e-Toiba/ Marxists* is as explained through Figures 27 & 28 below.[75]

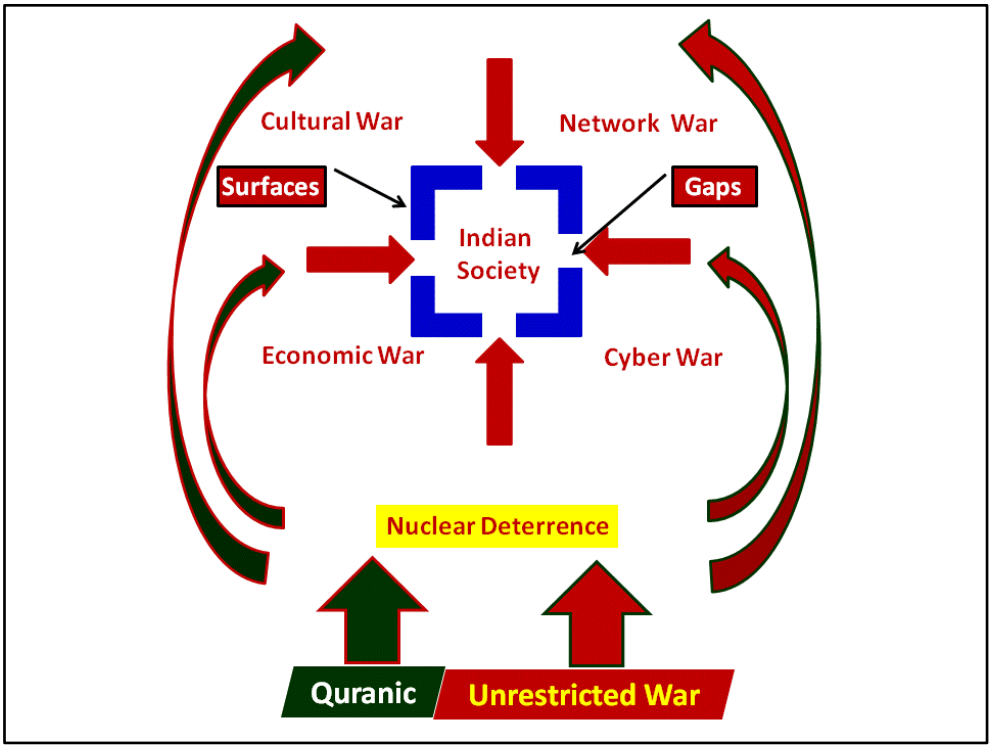


Figure 27: *Quranic* & Unrestricted Warfare against India

[75] Lashkar e Toiba's Slogan is, 'Fight the evil trio of America, Israel and India'. Jeremy Kahn, "The Next Al Qaeda", Newsweek, 08 March 2010, pp.22-27.

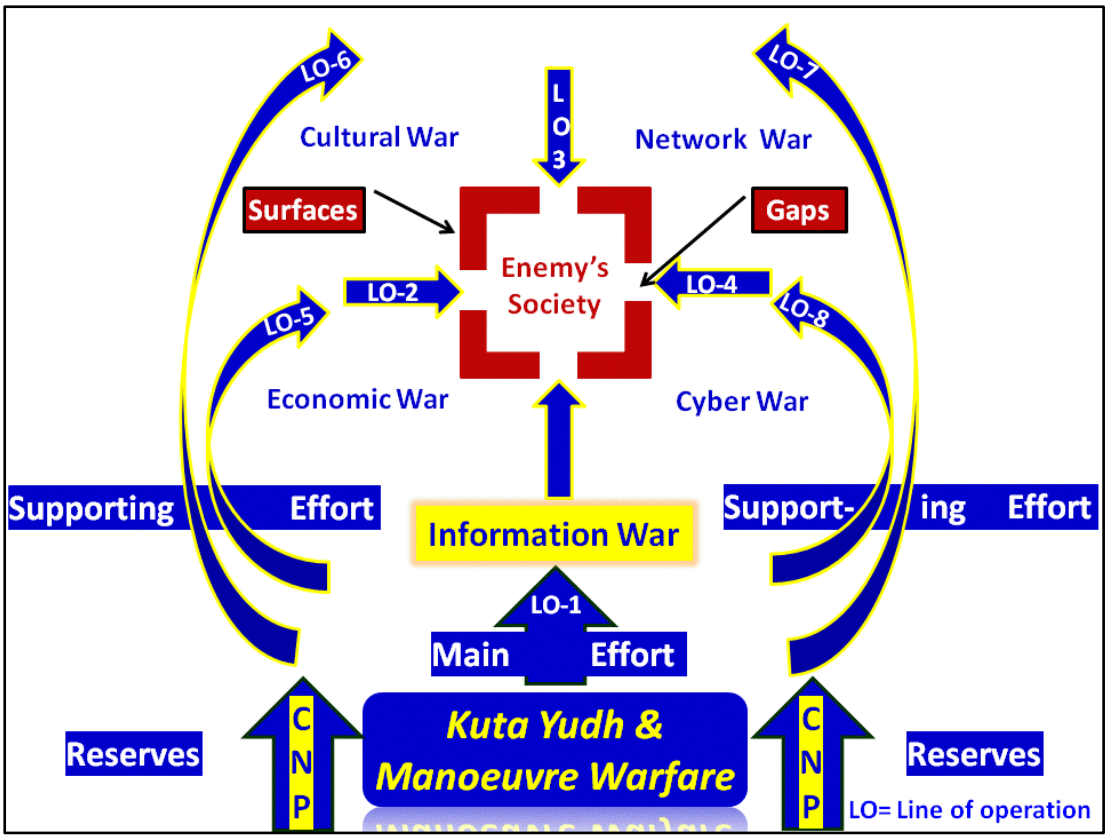


Figure 28: *Kuta Yudh* and *Informatised Manoeuvrist* Warfare by India

(a) Grand Strategy: *Mandala*. Shape political and societal environment and adopt a mode of statecraft the adversary is ill-suited to, while simultaneously uniting India **(*Mandala*)**. The aim is to isolate China's/ Pakistan's anti-India ideas and their military/ ISI-Islamist terrorist combine, thereby converting this system from an open to a closed system, which will then **entropy for an Indian moral victory**.[76] This should be the main effort; **the *shwerpunkt***.

(b) Strategic Level: *Kuta & Gudha Yudhas*. Evolving and adjusting national security **doctrines** and **force structures** to **disorient China's/ Pakistan's orientation hypotheses** patterns *(a constant evolution, and not one time revolution)* to degrade their military's relevance as a national centre of gravity **(information capitulation** by *Kuta Yudha***); the manoeuvre**. Indo-US nuclear

[76] US and Pakistani reactions to Indian Proactive Strategy is an apt example of both 'entropy of Pakistan' and 'mental victory for India'.

cooperation and India's proactive strategy are master strokes which will continue to be relevant for a limited future only (*Gudha Yudha*). Doctrines and force structures should enable their effective exploitation/ implementation. Simultaneously, the Indian strategic thought should focus on searching for the next military strategy for the day after tomorrow.

(c) Operational Level: *Informatised* Manoeuvre. Developing a **inter departmental and tri-service networked system** capable of converging on the enemy across the borders or within, using combination of all available tools of statecraft and warfare, lethal to non-lethal, with **control of and over information, and speed of action** over unlimited battle space. The primary aim being to isolate the enemy and his anti-India idea from the people and to re-orient the people's ideas leading to **moral victory**.

(d) Tactical Level: Swarming Manoeuvres. Enabling **networked swarms** of multi capability small teams operating through shared values, doctrines, tactics, procedures to **protect own population and neutralise separatists**/ terrorists through distributed, yet harmonious operations for **physical victory**.[77] Chief enablers are shaping of decision space of subordinate commanders, orchestrating networked distributed operations and responsive lateral/ vertical/ environment interaction.[78]

25. Knight and Castle: Strategy and Technology. Thus **strategy** and **technology** have emerged as the **new force multipliers**. Technology can impose fog of war and heighten friction, dis-colouring adversary's strategy. Hence, the c**ommand of networks and information gain campaign and battle winning importance**. They are the prime enablers in attacking enemy's plans and will lead to the necessary **doctrinal shift from attrition to manoeuvre** with a focus

[77] 'Skirmish Order Battle', 'Small Teams Operations' and 'Cliff Chop Assault' are all varied forms of swarming.
[78] Colonel KK Kapoor. "Swarming – A Bottoms Up Approach". War College Journal. Army War College, Mhow. Spring 2010. pp.25-30.

on psychological centre(s) of gravity, mobility, agility and technology.[79] However, s**trategy/ tactics should drive technological innovations**.

26. Use of Combat Power. The principle of concentration of force has been valued since Sun Tzu. But it lost its relevance after **'killing power'** as a function of 'mass of a unit' was turned over its head by 'increased accuracy, rate of fire and range of weapons'. **Technology has altered the traditional aggressive relation between quantum of forces and their combat power**, introducing new targets, weapons, delivery means and effects. Today fire power is no longer a summation of mass of forces. A **counter war strategy based on the disciplined control of violence** may therefore, have to be imposed in an extremely complex political condition in which law and order are missing, but rules of engagement must be upheld in statecraft and at all levels of warfare.

"The Artillery conquers; the Infantry occupies."

-A French Maxim on 2nd Generation Warfare

27. The New Formulae. Combat power has been rationally expressed as

Combat Power = Quantity x Destructive Power x Mobility.

Symmetric wars up to Gulf War I were won by concentration of mass enabled by manoeuvre/ massing of forces. Asymmetric wars (fought after the watershed Gulf War I) based on concentration of fire in time and space have after the initial success, got bogged in quagmires of 4GW as they fuelled the very objective they were supposed to win viz; the idea/ the people. **'Controlled violence'**, has thus emerged as the new principle of war and consequently the new relation between 'effect' and 'force' is

Effect = Force/ Fire x Strategy.

[79] Lieutenant General (retired) V Oberoi, Approach Paper, Indian Army 2020: Shape, Size, Structure & General Doctrine for Emerging Challenges. New Delhi: Knowledge World, 2005.pp.14-20.

Some Indian supporters of fire power in the post Operation VIJAY 1999 period glorified the role of fire power as the 'conqueror of Kargil heights'; a view that missed the big picture of Kargil intrusions itself as a tool of 4GW, and which was retrograde by two generations of warfare.[80] OEF and OIF are apt examples of state violence spiralling into increased people's violence and losing the war of minds and hearts; the primary aim of the global war on terror.[81] This observation also has the potential to be applied to conventional warfare demanding a **review of 'military force as centre of gravity'** and the resultant **'military aim of degrading war waging potential of the enemy'.[82]**

28. Dealing with Loss of 'Loss of Surprise'. 'Foolproof deception' and 'maintenance of surprise' in technologically advanced non-battlefield (under nuclear symmetry) has lost its relevance, more so for the state actor. A *manoeuvrist* approach would **expand 'surprise' to 'competitive advantage'** or **'generating asymmetry'** at all three levels of war aimed at keeping enemy off balance (cheat and strike where the enemy is not[83]). The generation and sustenance of favourable asymmetry is a product of competitive edge in technology, effectiveness of *jointness*, number and variety of lines of operations, speed of change imposed into the enemy's OODA cycle, and secured logistics.

29. Initiative through Information Dominance. The relevance of information operations is that, states/ non-states which could never hope to match Western (US) military might have been offered a level playing field.[84] It is imperative to **grasp initiative in 4GW through information dominance and control of**

[80] Brigadier (retired) Gurmeet Kanwal, Indian Army: Vision 2020, Noida: Harper Collins, 2008. pp.226-228.
[81] NATO norms of force application in COIN is **20 to 25 soldiers to 1,000 people**. This force:people ratio assisted by high technology has failed in winning peace because of incorrect C of G and war metrics, and an unrepentant use of military violence.
[82] Avinash Bharati, Terrorism- Reducing Vulnerabilities and Improving Response. New Delhi: Cyber Tech, 2010.p.151.
[83] Paddy Griffith, The Viking Art of War. Hvertown, PA, USA: Casemate. 2009.pp.105-126.
[84] E Leigh Armistead, Information Warfare. New Delhi: Manas Publications. 2010, p.49.

communication networks.[85] It gains relevance as a **core principle of war**. Information must take a leading role in any manoeuvre around the psychological centre of gravity while, fire power should be delegated to controlling tactical level operative processes.

30. The Military 20:80 Rule. Clausewitz has put it correctly that, the army that can mobilise, concentrate and strike before the adversary is ready, can by retaining initiative, push its strategic combinations to a successful end result.[86] **The 20% systems that will actually play a key role in early mobilisation and sustenance of military force(s) in 4GW are people's support, space systems, networked systems and logistics systems**. These will have the highest effect on combat effectiveness and should be given importance at all levels and stages of war planning. Internal human resource of the military forms part of people's support and therefore, its management has to be given due consideration.

31. Military Organisations and Force Structures. Once the new manoeuvre-based India specific culture, strategy and doctrine is put in place, the next milestone should be moulding military organisations and force structures. Strategy, technology, doctrine, weapons and structures have to be in harmony so as to lead India towards victory.[87] **Theatres of war will have to be redrawn and procurement plans will need to be reviewed and re-written**.

32. Command, Control and Information Channels. 4GW can be defeated by swarms of networked small teams operating along distributed multiple lines of operations. This requires new ethos of command and control; in fact **'command and control'** needs to be replaced by **'trust and support'** so as to manage chaos. Additionally, **value-based leadership provides a strategic competitive advantage** to the cutting edge when the centre of gravity always has people as

[85] Bruce Berkowitz, The New Face of War. London: The Free Press.2003. pp.179-196.
[86] Michael I Handel, Clausewitz and Modern Strategy. London: Frank Cass, 1986. p.73.
[87] ibid. p.146.

its main component.[88] Trust and supporting information channels enable simultaneous lateral, vertical and environmental interaction.

33. Training for An *Informatised Manoeuvrist* Indian War Fighting Doctrine. Strategy and doctrine is as good as the generals and soldiers applying it. **Development of skills and technology thresholds** is a success imperative in a counter 4GW strategy based on *informatisation,* manoeuvre and swarming.

34. Indigenisation of Technology. Sun Tsu has said that, if you obtain your equipment from within the state, the army's supplies will be sufficient and here-in lays the strategic importance of domestic defence production industry.[89] This view has also been expressed by Nandan Nilekani in his book **'Imagining India'**. Indigenisation of technology and military hardware will not only insure against sanctions during war, but will also **provide employment to the youth bugle** of the Nation, preventing a possible **unemployment revolution** in post 2020 period.[90] Our Nation should not fall into the trap of Western arms producing nations whose business is the business of war.[91]

[88] Colonel D Palsokar. "Random Thoughts on Manoeuvre Warfare". War College Journal, Spring 2010. Army War College, Mhow. pp.31-36

[89] Colonel (retired) SC Narang, New Defence Policy of India. New Delhi: Prashant Publication House.2010. pp.259-303.

[90] Views expressed by Mr Mohan Guruswamy during Seminar on Pakistan on 13 August 2010 and Lieutenant General KT Parnaik, UYSM, VSM, DGPP during lecture on 18 October at Army War College.

[91] Dr VK Verma. Terrorism in an Unstable World. New Delhi: MD Publications Pvt Ltd. p. 189.

FIRE POWER WILL REPLACE MANOUVRE IN FOURTH GENERATION WARFARE

"The arrow shot by an archer
may or may not kill a single person;
but skilful intrigue, devised by wise men,
may kill even those who are in the womb"

-Kautilya, 3 BC

CONCLUSION

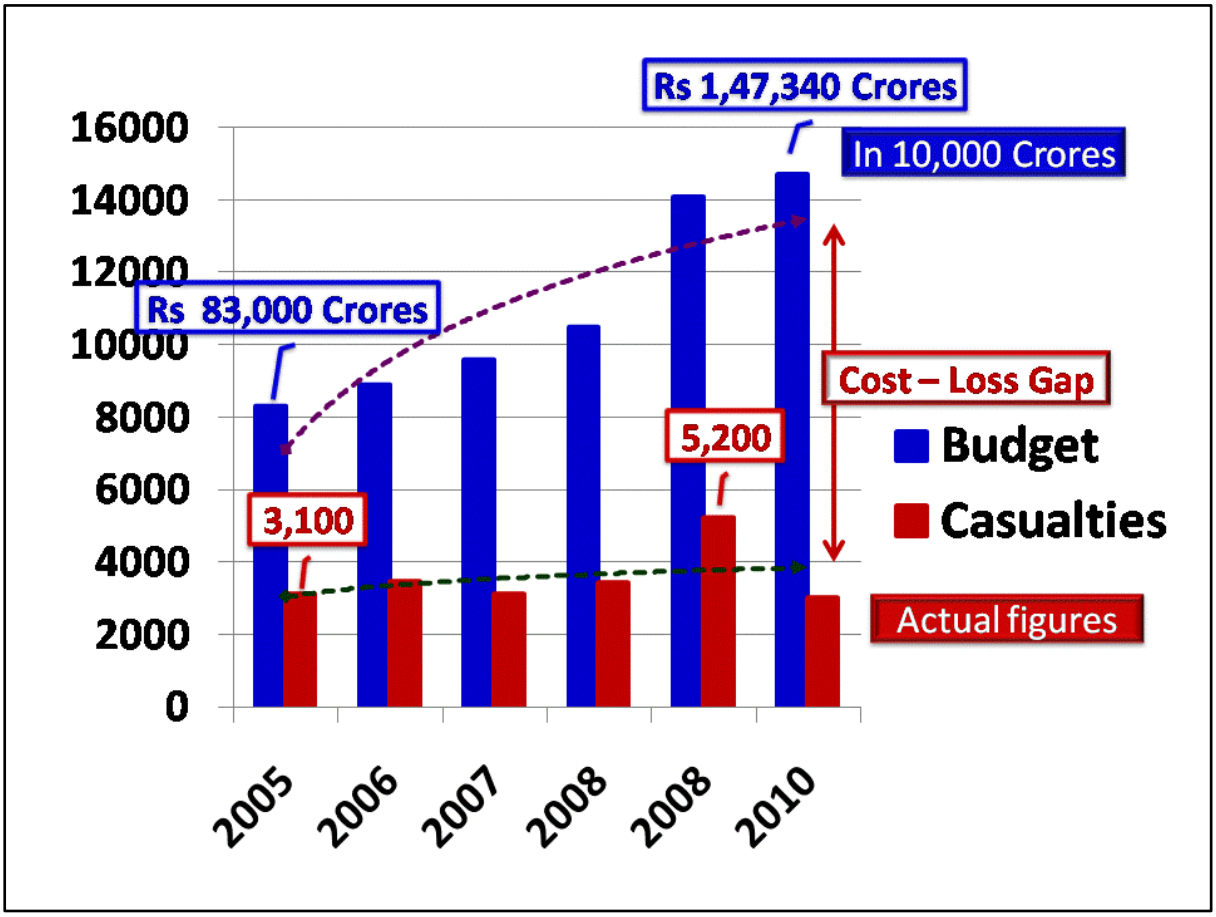
Indian Strategic Culture

35. *Panipat* Syndrome in *Kautilya's* Land. Strategic brilliance of Kautilya precedes that of Sun Tzu, Clausewitz and Napoleon. *Arthashastra* is one of the greatest politico-military treatise and *Mandala* Theory of foreign policy and *Dharma* (direct), *Gudha* (clandestine) and *Kuta* (indirect) *Yudha* approaches are its greatest contribution. However, the famous Indian chivalrous attitude led to a gradual **overshadowing of *Kuta* and *Guda* by *Dharma,*** finally culminating in birth of a **defensive mindset** after being ruled by the Moghuls and British for five centuries.[92] The exception being Operation CACTUS LILY 1971-72. This strategic culture or the lack of it has resulted in **'fear' becoming a part of Indian**

[92] Lieutenant General (retired) SS Mehta. "Evolution of India Way of War Fighting", Indian Way of War Fighting. CENJOWS. June 2008. pp. 148-152.

society; a severe bottle neck in our growth towards being a developed nation; succinctly described as the '*Panipat* Syndrome' by Air Commodore Jasjit Singh.

36. 'Fear'; Second Nature to Indians. Refer to Graph IV below showing relation between Indian defence budget allocation and casualties suffered for the period 2005-2010. Our Nation must realise that, conflicts of tomorrow and the day after tomorrow will not result from clash of ambitions of states, rather from the **weakness of our State**.



Graph IV: India's Defence Budget and Casualties for 2005-2010

37. *Gudha Yudha, Kuta Yudha,* Manoeuvre and Swarming as Counter 4GW Strategy. Future warfare holds unlimited possibilities for the world, especially for India. This same **future also belongs to both irregular and regular warfare** in a political context that can alter rapidly. 4GW (and *informatised* 4GW) can be

best waged and won embracing Kautilya's *Gudha* and *Kuta Yudhas,* Mahatma's ***ahimsa,*** the *manoeuvrist* approach developed by Boyd and Lind, and swarming theory of Arquilla and Ronfeldt. The combine of statecraft and war fighting developed around these ideas holds immense promise of enabling strategy and operational art deliver peace to and for India and Indians.[93] This is the recommended strategy for combating religious, political or economic extremism.

Transforming Indian Way of Statecraft and War Fighting

38. Recommendations. History of warfare demonstrates that, nations which take a lead in transforming their strategies and militaries during periods of change will seize the initiative in future wars. The research conducted during this Study has brought to the forefront the following recommendation for the **winning peace in a three-front** situation: -

(a) Adaption of a **culture of *Mandal-istic* manoeuvre at political, diplomatic and military levels** through concerted research, education and training. The aim being to develop an Indian system of statecraft and war fighting that focuses less on **'destruction of enemy forces'** and **'no loss of territory'** and more on **'destroying anti-India idea(s)'** and **'protecting Indian interests'**. India and Indian's have to design an **'Anti *Quranic*' and 'Anti Unrestricted Warfare' security strategy** that stops/ prevents our adversaries from carrying out a **strategic encirclement** of our national interests and from **bleeding us by 1,000 cuts (*Kuta Yudha*)**.[94]

(b) **Education and training** of political, diplomatic and military leaders in **correct selection of centres of gravity**, identification of weaknesses there-in and selection of lines of operations to orchestrate capitulation (protection of

[93] Cf, ante.p.27.
[94] Cf, ante.p.30

own) of the selected centres of gravity across the entire spectrum of conflict (refer to Figures 17, 25, 26 and 27, and 28 and 29 at **Appendix B**).[95]

(c) **Examining and replacing** existing conventional ***attritionist*** **military aims** of **'decisive victory'** and **'degrading war waging potential of the enemy'** with *manoeuvrist* aims. **'Information capitulation'** is the recommended aim in counter 4GW (*Gudha Yudha*); dislocation cum reorientation of adversary's cognitive system for a **moral victory**.[96] This is the way ahead for lasting peace to the various separatist/ extremist movements our Nation is suffering from (refer to Figures 17 to 21).

(d) Attaching **technology and information strategic importance as enablers of manoeuvre** in the new **three block war**; conventional, 4GW and out of area operations (peace and aid). **Self-reliance in high technology** should become a National Goal so as to achieve **technological asymmetry and competitive advantage**. [97] Strategy, doctrine and tactics should guide technological innovation, unlike the vice versa of today.

(e) **Developing Indian principles for counter 4GW.** The list should include the manoeuvre paradigm, information dominance, competitive advantage, control of communication networks, control over violence ***(ahimsa)*** and people's support, as the primary principles for counter 4GW.[98]

(f) **Assigning fire power,** the function of **controlling tactical battles** in context of **controlled violence** through improved transparency and precision, faster response, longer range, and focussed lethality.[99]

(g) **Re-equipping, re-organising and re-structuring** National Combat Power (military, police and PMF) based on doctrine of **swarming manoeuvres** with

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[95] Cf, ante.pp.44-45.
[96] Cf, ante.p.32.
[97] Cf, ante.p.48.
[98] Cf, ante.p.26.
[99] Cf, ante.pp.36 and 47.

emphasis on mobility, *deployability* in area of influence, battlefield transparency, network-centricity, accurate lethality and survivability. This should form part of National Policy on development of comprehensive national power.[100]

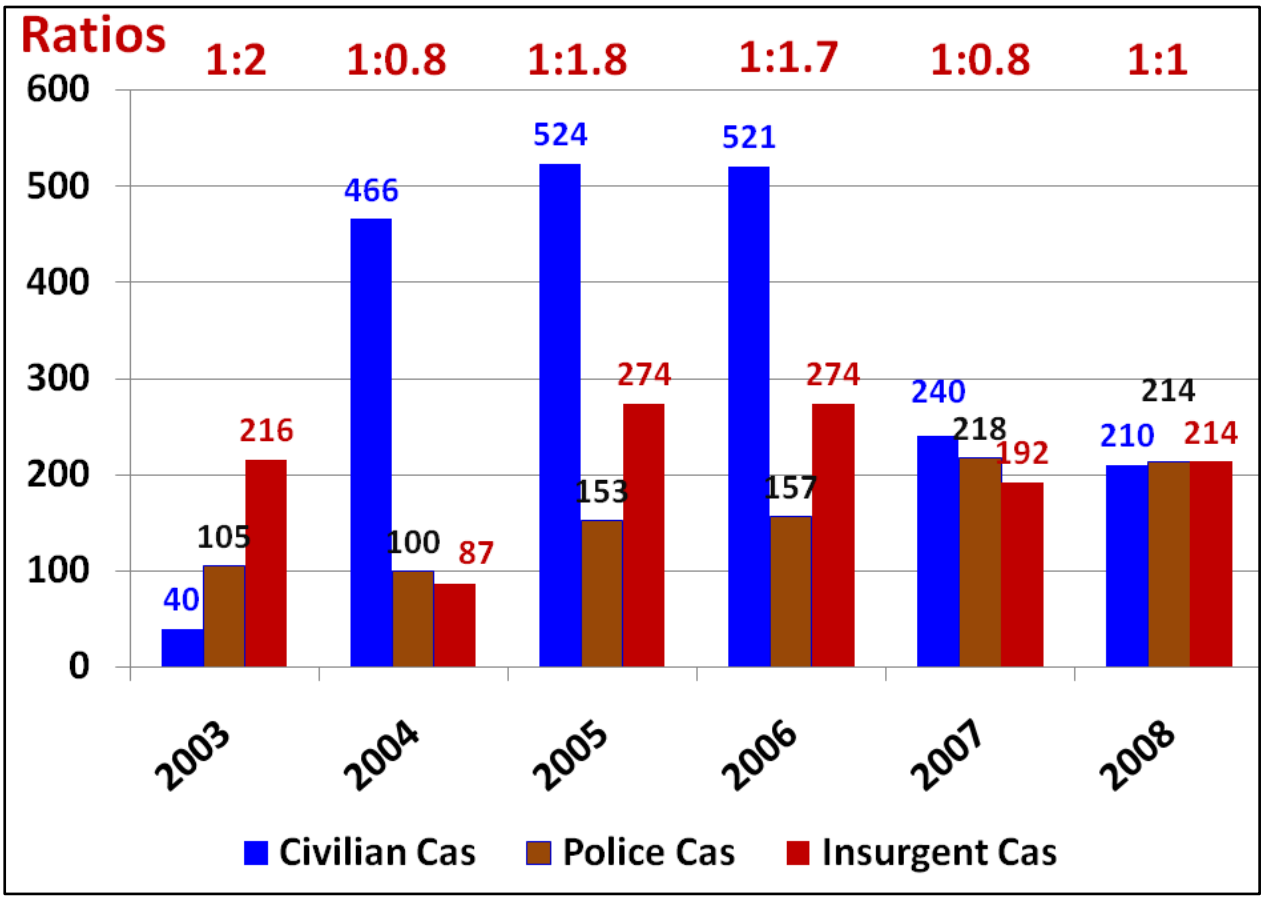
(h) Introducing a matching **command and control philosophy** based on **value-based leadership leading and supporting** small mobile and networked autonomous teams.[101]

(i) **Educating the diplomatic corps and security forces** in the new Indian statecraft and war fighting doctrines, strategy and tactics to counter 4GW through *informatised* and *manoeuvrist* swarming of enemy's centre(s) of gravity and **training in its implementation** in an infinite battlefield.

39. Crystal Ball Gazing; 4GW to 5GW. As the enemy's C of G becomes his God (vis-à-vis his Nationhood), military power (a.k.a fire power) will increasingly become ineffective. **Political (moral) will** of losers of globalisation/ economic development/ environmental degradation is/ will be **empowered to defeat economic and political might of states** in a **war that will be measured in decades** as is being seen in Assam, Kashmir and LWE. **The prize in 5GW will be psychological** and hence, **psychological, mental and moral levels of statecraft cum war fighting have to be in harmony**. This would require political courage, moral astuteness, a non-parochial approach and singularity of purpose that leads to **removal/ prevention of birth of the four pre-requisites of 4GW/ 5GW viz; birth of radical idea(s), precipitators, facilitators and perpetuators** so that India can become a 'power within' on its road to 'regional power status'.

[100] Cf, ante.p.50.
[101] Cf, ante.p.35.

40. National Security Commission. Refer to Graph V below for Police : Insurgent casualty ratios in the ongoing conflict of LWE.[102] Indian **Defence Forces and PMF of 2025** have to emerge **ethical, light, lethal, wired and ready to win peace** in future wars and non-wars in order to ensure stable internal security and regional stability for the economic prosperity of India (and its neighbours). An empowered **National Security Commission** to develop a ***informatised manoeuvrist*** **National Security Strategy**, and to navigate the military and PMF through a **Strategic Security Capability Plan 2012-2027** and its related **Long Term Integrated Procurement Plan 2012-2027** is the closing recommendation of this research.



Graph V: Police : Insurgent Casualty Ratio in LWE Conflict

[102] Om Shankar Jha. Combating LWE- Is Police Training Lacking, IDSA Occasional Paper No 3, June 2009. At http://www.idsa.in/system/files/OP3_LeftWingExtremism_osjha.pdf

Researcher's End Word

41. Hypothesis. The initial hypothesis of this research was that, **'fire power has replaced manoeuvre in 4GW'**. This research points to the contrary and concludes that,

'IW and swarming manoeuvres (in a whole of Nation approach) assisted by controlled fire power will enable winning peace against 4GW'.

42. Researching the Un-Answered. The framework of this research and its final counsel to strategic leaders instructs on future incisive allied studies for: -

(a) Role and principles of war for the Army in flat globalised 4GW environment.

(b) Force ethos and performance metrics for success in 4GW.

(c) Organisational changes enabling Army's transformation into a *manoeuvrist* force.

(d) Identifying Cs of G, critical vulnerabilities and lines of operations leading to a resurgent India **free from fetters, fears, hatred and wants**.[103]

[103] NR Narayan Murthy. A Better India, A Better World. New Delhi: Penguin Group.2009. p.xiii.

Appendix A
(Refer to Para 17 of Chapter 2)

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Appendix B
(Refer to Para 9 of Chapter 4)

EXPERIENCES OF PEOPLE OF LOLAB AND 18 RASHTRIYA RIFLES BATTALION[104]

VISION OF THE BATTALION

Lolab votes for Indian in plebiscite 2010.

TACTICAL CONCEPT OF OPERATIONS OF THE BATTALION

1. **Win minds and influence hearts** of *awaam* to **isolate terrorists** and re-mould/ **re-orient anti-India** and **pro-*azadi* perceptions**.
2. **People's war** in villages to **generate intelligence** for operations and to **deny intelligence** to terrorists.
3. **Synergised intelligence and surveillance network** based on overt and/or covert observation posts, anchor/ or mobile thermal imaging detachments and electronic intelligence detachments.
4. **Set stage for neutralising** a group of terrorists and over ground workers by sustained and focussed **ISR efforts**.
5. Orchestrate **unit level manoeuvre based swarming operations** around small teams with good knowledge of people and terrain, and coordinated communication to **attack the targeted group's plan** (terrorist and over ground worker).
6. Continuous **education, training and motivation of small teams** to enable **buddy/ squad level manoeuvre swarming** while ensuring **people friendly** and **collateral cum fratricide proof** operations.

Note: -

Refer to Figures 29 & 30 for an explanation of use of manoeuvre in CT operation at tactical level in Lolab, Kashmir.

[104]Supra.p.27.

Appendix B (continued)

MEASURES TO RE-ORIENT AWAAM

1. **Scouts** functioning not as ***gabbars*** of movie *Sholey*, but **pied pipers** (Kashmiri and Urdu language, respectful conduct, toffees, pencils, etc).
2. ***As Salaam Ale Qoom*** and **not *Jai Hind*,** the way to greet all *awaam*.
3. **Calling on *Hajies*** on return from Mecca in their house and seeking their blessings along with *Zam Zam*.
4. ***Iftaar*** parties during holy month of *ramzan*, distribution of ***kheer*** on Id-ul-Fitr and **slaughter of goats** (one per post) on *Id-ul-Juha* for distribution of ***jaba* meat** along with toffees and toys.
5. Boards of **'Please overtake'** and **'weekly IW message'** on body of all Battalion vehicles running on Lolab's roads.
6. Celebrating **Independence Day** by distribution of **miniature tri-colours** and conduct of children's cultural events in schools with officers in attendance.
7. On **Republic Day** inviting children to participate in **flag hoisting parades,** and to **witness Rajpath Parade** and **Beating the Retreat** on television in all posts.
8. **Sports matches** with school children and stress busting ***pagal gymkhana*** in conjunction with medical aid camps.
9. Recommending posthumous award of **Shaurya Chakra to Rifleman (late) Abdul Hamid Chara** ex Territorial Army (Home & Hearth) of the Battalion's area in a Battalion operation and constructing the Valley's first ***Shaheed* Gate** in his memory in his village.

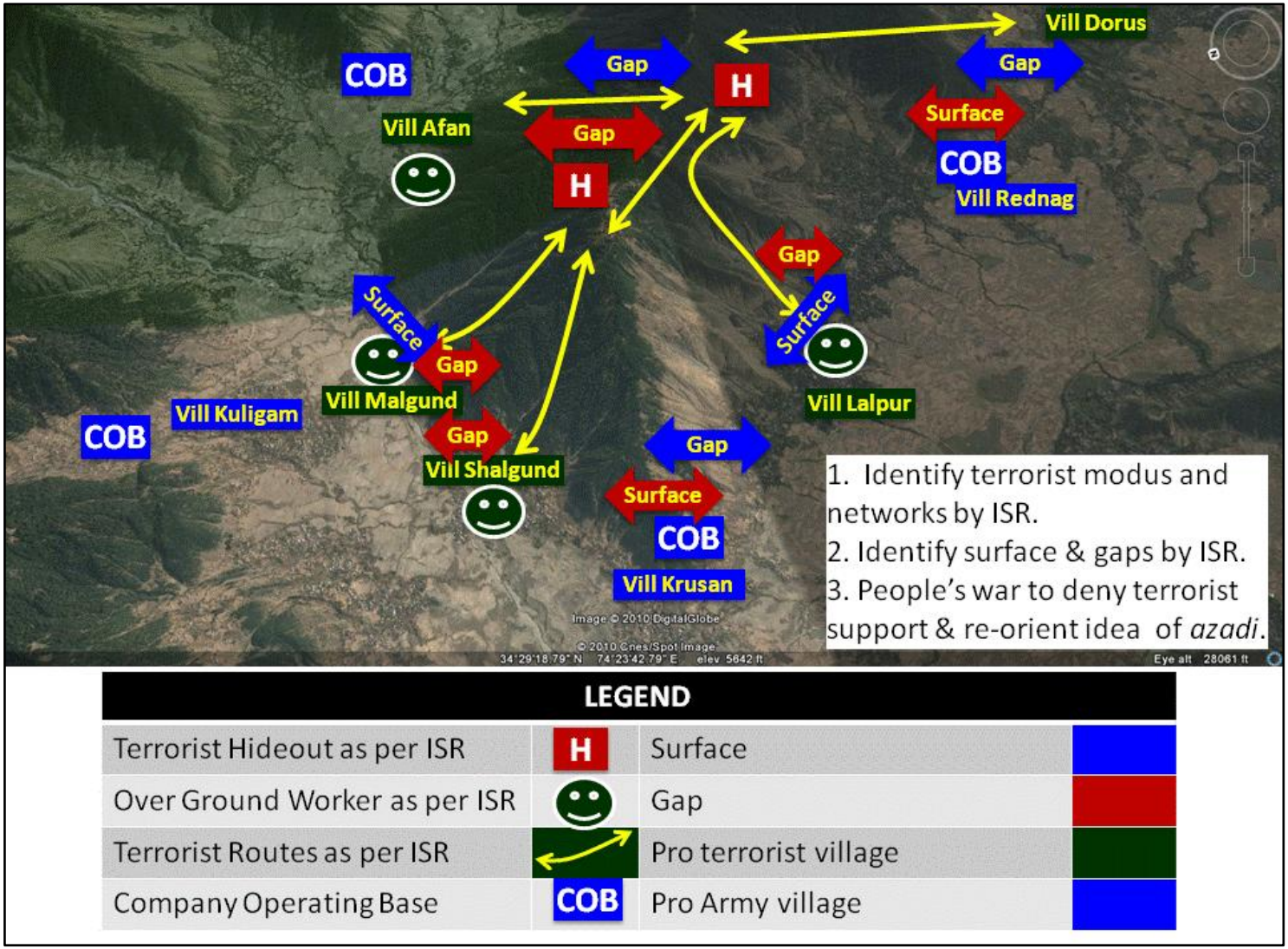


Figure 28: Manoeuvre in Lolab; Surface, Gaps & ISR Pull

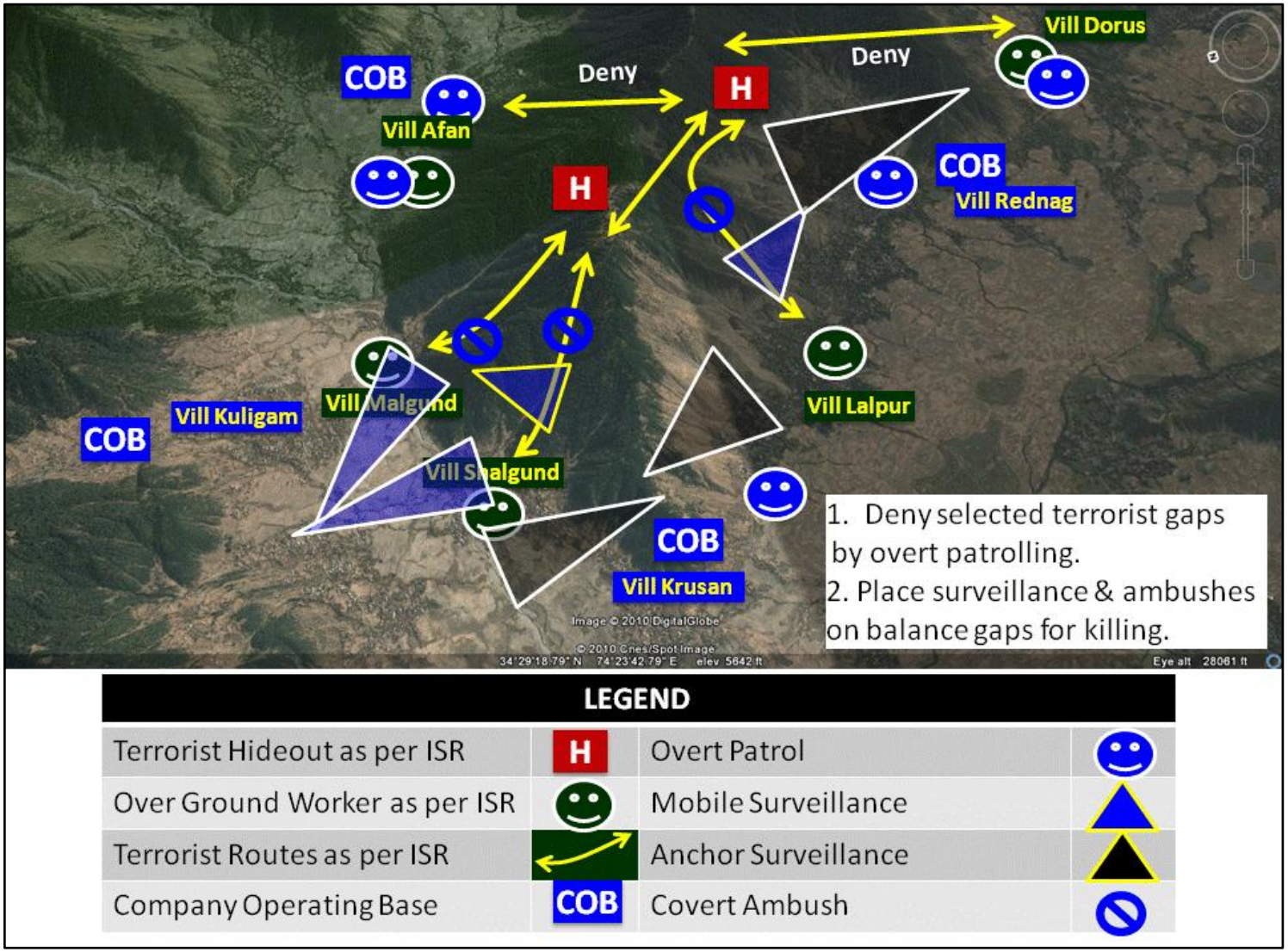


Figure 29: Manoeuvre in Lolab; An Orchestrated CT Operation Plan

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