INFORMATION WARFARE IMPACTING JOINT WARFIGHTING

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"Know thyself know thy enemy, thousand battles thousand victories."

- Sun Tzu

Abstract

Over time, Information Warfare (IW) has emerged as a separate mode of warfare due to continuously evolving technology and availability of plethora of targets in every spectrum of society as well as organisations. The adaptive nature and facelessness of IW complicates the nature of the problem by commencing war without the crossing of borders or firing a single bullet. The most lethal way of warfighting, 'Joint Warfighting' or 'Multi Domain Operations (MDO)', has also not been spared by the IW, impacting it in every single stage of the battle. The ability of IW to raise the horizon of Grey Zone coupled with asymmetric threats imposes decision dilemmas in political as well as military hierarchy remarkably, impeding the warfighting capability of a nation by exploiting fault lines in society and breaking the cohesion of joint forces. The heavy reliance of joint forces on sensors, 'Command and Control (C2)' elements, communication and network spectrum to execute any mission makes it more vulnerable to IW creating intangibles in fog of war. However, careful orchestration of IW protecting own vulnerabilities at all costs enhances effectiveness of own joint forces manifolds reducing troop requirement to fight and cost of war providing victory with limited or no bloodshed. The paper reinforces the fact that, "IW can be fought only by IW" and if employed by us with complete technological superiority guarding own vulnerabilities, can enhance joint warfighting capability manifolds ensuring a strategic victory. Further the paper also provides a detailed understanding of IW and joint warfighting culminating into the

impact of IW and measures to combat IW especially in Indian scenario as Indian Armed Forces are into process of enhancing joint warfighting capability.

INTRODUCTION

The quote given above highlights the importance of information in warfighting. Today, with increased technological threshold and enhanced means of warfighting, the IW has become a mainstay and gained sizeable portion in the spectrum of warfighting. Blurring the boundaries and providing a certain mean of dislocation of enemy, IW fits into every space time matrix of warfighting. Weaponisation of information is not new to the world, right from 'Mahabharata' where Dronacharya was made to believe the death of Ashwatthama to today's warfighting, IW has always played a pivotal role in victory in any form of war. With evolving modern day technologies and increased reach as well as ability to influence the masses, IW provides an opportunity to win and threatens to checkmate the opponent. Impacting every element of national power, IW has seeped deeper inside in today's politics, military and economics thereby degrading war waging ability of the nation.

IW AND COMPONENTS OF IW

The changing nature of international politics is making intangible and complex form of power more important. Power is passing from the 'capital rich' to the 'information rich'. The rapid advancements in information technologies are creating new problems and vulnerabilities for the country where national and military data have become a national treasure. Today's technology has shifted conflicts from traditional spectrum to non-traditional spectrum, weaponising information and providing a tool of warfighting which is IW.

IW is a complex notion and has many meanings as it has proponents, detractors and observers. IW can be defined as 'actions taken to protect the integrity of one's own information systems from exploitation, corruption or destruction while at the same time exploiting, corrupting or destroying an adversary's information systems and in process achieving an information advantage in the application of force. It is also

includes actions taken to achieve information superiority in support of military strategy by affecting adversary's information and information systems while leveraging and defending our information and information systems'.[1] The IW consists of defensive as well as offensive components[2] and both are required to be employed in coordinated manner simultaneously for successful orchestration of IW.

In an interconnected world, access to quick, accurate, secure information, infrastructure and services is essential to the military to conduct operations. Subsequently, the ability to deny, delay or degrade these to the opponents could potentially prove decisive in war. Equally, the ability to deceive opponents about the true nature of a situation would provide obvious and potentially lethal advantages. So, IW can be said to be using alternate means to achieve goals that previously required the use of serious military force and a lot of bloodshed. In other words, IW is the effort to win wars without or with little fighting by influencing opponent's mindset, C2, sensors and data by using and managing information to pursue a competitive advantage through offensive and defensive efforts[3].

The targets of IW include a nation's government, military, private sector and population making human cognition the ultimate 'Center of Gravity (CoG)'. The IW uses physical, cognitive and information dimensions to carryout activities like network centric operations, electronic warfare, psychological operations, military deception and operations security, all of which are also components of IW. The advancements in technology have enhanced horizon of IW manifolds engulfing civil populace into the conflict to degrade war waging ability of the country by shaping opinions and destabilising Internal Security (IS) of the country.

Therefore it won't be wrong to assume in today's scenario that, "IW is a conflict between two or more states in the information space with the goal of inflicting damage to information system as well as carrying out psychological campaigns against the population of a state in order to destabilize society and the government".[4] Hence, IW falls into the domain of political warfare as it targets various elements of national power. Increasingly, IW is becoming central in conflict and confrontational situations as the human cognition has

become CoG in determining the outcome of conflict or confrontation.

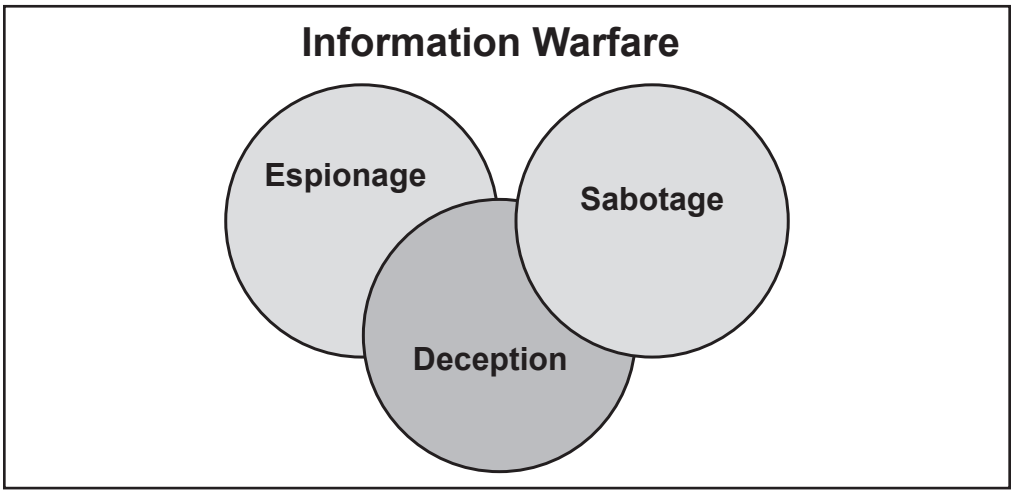
The impact of IW can be understood in detail if we understand its methods of execution. IW plays a crucial role in today's warfighting techniques by shaping the battlefield right before the commencement of hostilities and throughout the war using various non kinetic measures to affect the human cognition of civil as well as military nature, sensors and data involved or related to the conflict. In military domain, IW can be orchestrated using defensive as well as offensive components impacting OODA loop and imposing decision dilemmas[5]. The components of IW are as given below[6]:

- **Command and Control Warfare (C2W).** Involves attacks on opponents ability to generate commands and communication with the services and deployed forces.
- **Intelligence Based Warfare (IBW).** Integration of sensors, emitters and processors into reconnaissance, surveillance, target acquisition and battlefield damage assessment systems.
- **Electronic Warfare.** Techniques that enhance, degrade or intercept flows of electrons or information.
- **Psychological Warfare.** Designed to affect the perception, intentions and orientations of decision makers, commanders and troops.
- **Economic Warfare.** Expressed in one of two forms i.e., information blockade or information imperialism.
- **Cyber Warfare.** The use of information systems to carryout series of attacks and counter attacks between nations is termed as cyber warfare. The goal is to disrupt a country's critical operations and infrastructure to gains access to research, intelligence and data. Cyber warfare is motivated by government or military interests or hacktivism. Hacktivism is a combination of hacking and activism that can be socially or politically motivated.

Recognising the gravity of situation and post assessing IW campaigns waged by adversaries, the Indian Armed Forces have also stepped

up their efforts to orchestrate IW using both offensive and defensive components. In continuation with the process of modernisation and to orchestrate IW in coordinated manner, the Indian Army has established IW branch to combat misinformation and false propaganda being spread through social media for adverse psychological impacts. To keep up with needs of the future battlefield, hybrid warfare and social media reality, the new office of DGIW has been established which is being held by an officer of the rank of Lieutenant General under whom ADGPI and IW branches have been placed for a coordinated response. The ADGPI deals with media projection and has a social media wing. Besides this, a separate cyber unit has also been placed under DGIW as part of 'Reorganisation of the Army HQ'. The new reorganisation provides enhanced offensive and defensive IW capabilities allowing synchronised execution of IW.

IW is relatively cheaper and offers high returns on investment for resource poor nations. The technology to launch attacks is simple and is widely available worldwide. IW systems can be cobbled together from parts available in electronics stores on the streets of any city in the world or can be delivered online. International law is also ambiguous regarding criminality and acts of war on information infrastructure. Besides information hardware, IW produces huge impact in battlefield with lesser human resource requirements to execute missions and also reduces bloodshed. This character of IW bridges technology and force



Source: Author

parity between two countries allowing relatively weak nation to stand against a stronger adversary.

CONCEPT OF JOINT WARFIGHTING AND PRINCIPLES OF JOINT WARFIGHTING AFFECTED BY IW

Enhanced battlefield transparency and kinetic as well as non-kinetic enablers of combat coupled with potential threat of non-state actors and asymmetric warfare have complicated today's battlefield manifolds necessitating rapid technological and doctrinal advancements in traditional warfighting methods. Though advancements in technology have increased the tempo and lethality of operations in every sphere but there exists a need for seamless integration of armed forces to generate maximum combat power in the area of operations. Such a superior combat power can only be generated by synergised application of various elements of armed forces of the country in time and space to deliver decisive and swift victory at lesser cost.

Joint warfare is a military doctrine that places priority on the integration of the various branches of a country's armed forces into the unified command to achieve a unified objective. This concept emphasises on coordination, interoperability and synchronisation across various branches to maximise combat effectiveness. It can also be described as 'team warfare' requiring integrated and synchronised application of all appropriate capabilities and the synergy that results in maximised combat capability for a unified action. Hence practitioners of joint warfare must acknowledge the importance of the inter arm/services processes as well as non-military agencies in military planning.

While the nature of war is immutable, its conduct and methodology continue to evolve following the principles of war. The principles of warfighting are required to be ensured during every stage of planning as well as execution. The delicate balance of forces in joint campaign or operation[7] and its effect are directly proportional to the ability of a practitioner to protect the principles of joint warfighting at all times. However, heavy reliance of joint forces on C2, sensors, data and synchronised application of forces also offer opportunities to IW to sabotage these principles and defeat the practitioner of joint warfighting

in time and space. In order to make joint warfighting more resilient and lethal, there is need to understand impact of IW on principles of joint warfighting. Impact of IW, positive or negative, on some of the major joint warfighting principles is as given below[8]:

- **Maneuverability.** The IW with its components has enhanced intelligence gathering speed and Battle Field Transparency (BFT) shortening OODA loop and increasing maneuverability in decision making as well as movement of troops by avoiding unwanted deployments or lifts increasing speed of operations. On the other hand, the compromised information and deception by enemy will also surely lead to reduction in maneuverability of joint forces impeding speed of operations.
- **Economy of Force.** IW provides a cheap option to strike enemy at every stage of battle and time-space matrix of the enemy with plethora of targets without any bloodshed preserving forces for use of them at somewhere else ensuring economy of force.
- **Unity of Command.** The purpose of unity of command is to ensure unity of efforts under one responsible commander for every objective. IW can be used to maintain as well as destroy this principle with offensive and defensive elements either maintaining or breaking the unity of command.
- **Surprise.** The principle of surprise is to strike swiftly at a time or place where the enemy is unprepared increasing tempo of operations and creating series of opportunities to attacker resulting from sudden collapse of the defender. Surprise is one of the important principles of joint warfighting which has been largely compromised by IW due to enhanced BFT, information sharing and deception abilities hiding true nature of situation.
- **Restraint.** The principle of restraint is to use only the amount of force necessary to influence the adversary. IW largely contributes to this principle due to its ability to reduce requirement of troops to execute any operation ultimately ensuring restraint of force and reducing collateral damage.

- **Legitimacy.** The perception of legitimacy maintains legal and moral authority at both national and international levels. This perception can either be maintained or sabotaged by IW by using various tools available in IW with their ability to reach to masses and shape their opinions.

- **Interoperability.** To ensure seamless and synergised application of joint forces, arms and agencies participating in operations are required to have interoperability amongst themselves and equipments being operated. This interoperability is ensured using seamless communication and timely data sharing which can be protected as well as sabotaged by IW.

- **Unity of Effort.** To ensure maximum combat power at target, integration of combat power of the three services and their activities is a must. Forces being applied should be united in time, space and purpose. The IW with its defensive and offensive capabilities can either ensure timely unification of forces or delay in unification of forces in projection areas providing big target to the opponent and opportunity to destroy forces piece meal.

- **Command and Control (C2).** C2 is very important aspect of joint warfighting which provides it with necessary direction and flexibility to carry out mission and exploit fleeting opportunities to enhance tempo of operations. The nerve centre of joint warfighting can be completely sabotaged or protected using components of IW.

The IW can impact joint warfighting in both ways, either by ensuring successful completion of a mission or a catastrophe. The capabilities of joint forces can be enhanced by IW but same can also be degraded by IW. The effects of IW are varied which are often dependent upon technological threshold of both the parties involved in conflict, targets available and fault lines existing or ready to brew. The principles mentioned above cannot be overlooked while planning or executing MDO or joint operations as it will render entire joint campaign untenable. Hence, the practitioners of joint warfighting must employ all means to safeguard these principles from any negative impact at all times while targeting the weaknesses of an enemy in pursuit of a swift win.

IMPACT OF IW ON JOINT WARFIGHTING AND WAY AHEAD

Though IW has great potential but need for on ground hold of strategic areas and IB for sovereignty of a nation cannot be ruled out. IW cannot replace joint warfighting in any scenario as it is unable to ensure complete destruction of enemy. Though IW has a great ability to influence joint warfighting but it cannot produce results by itself alone since IW relies on human cognition for achieving victory but not physical destruction of human. The need of keeping boots on the ground can never be obviated whatever advances IW makes. So, rather than employing IW alone it would be prudent to infuse IW in joint warfighting or MDO to enhance its capability and ensure victory at a lesser cost and in lesser time.

In the Indian scenario, keeping the geo political situation and threat of two and half front war in mind, the use of IW is a must to counter the shortfall of manpower and to bridge technological gap to pursue own geo political interests as there is no other warfighting technique available which can produce an impact as that of IW with lesser cost. India has also been facing issue of fake propaganda and exploitation of fault lines by adversaries since evolution of communication technology. In such situations, India won its wars due to the resilient mind set of the soldiers and population which can now be targeted by IW in present day scenario disbalancing force equation in subcontinent.

Due to the intense geo political situation and threat of a two and half front war, India needs to ensure fast paced and localised campaigns in future which is only possible with joint warfighting or MDO. Keeping this in mind, suggested warfighting strategies in Indian scenario in the domain of joint warfighting are as given below:

- **Network Centric Warfare (NCW)**. Integrates sensors, shooters and decision makers across services.
- **Effect Based Operations (EBO).** Focuses on achieving specific effects rather than just destroying enemy forces.
- **Rapid Decisive Operations (RDO).** Aims at swift and decisive actions to disrupt enemy operations.

- **Adaptive Planning and Execution (APEX).** Emphasises on flexibility and rapid adaptation.

The strategies mentioned above have a common requirement of enhanced tempo of operations in conduct of operations. Employment of IW in warfighting will not only enhance tempo of operations but also protect own vulnerabilities with minimum troops meeting troop deficit in two and half front war scenario. Further, human cognition can only be won by shaping opinions and building narratives which is only possible by extensive employment of IW. There is no other option available other than IW to target human cognition. Hence, it can be inferred that IW has deep impacts on warfighting techniques and especially joint warfighting or MDO owing to its reliance on C2, sensors data and synergy in application of forces. The following are some of the major impacts of IW on joint warfighting:

- **Tempo of Operations.** IW with its effect on maneuverability, speed, C2, sensors and surprise can enhance or impede tempo of operations. In joint warfighting, tempo of operations is very important as it allows exploitation of fleeting opportunities crippling defences of opponent.

- **Grey Zone.** The ability to sabotage data and deception capabilities of IW increases Grey Zone in spectrum of warfighting imposing decision dilemmas at every level. The created Grey Zone can further be exploited by adversary to wrest initiative from opponent and further impede speed of operations.

- **Global View and Human Cognition.** Any war requires legitimacy from its own countrymen and global forums for its sustenance and to achieve the end state. The ability of IW to affect the human cognition is phenomenal and with its long reach and ability to influence masses can either bring all in support or against. The global support can assist to procure latest military hardware required to counter ever changing battlefield and sustain economy of the country.

- **Synergy.** Offensive component of IW can reduce synergy amongst enemy troops while defensive component as well as BFT enhances own synergy manifolds which in turn contribute to tempo of operations.

- **Simultaneity.** IW due to its huge reach and speed can ensure simultaneity in operations which further contribute to tempo of operations in positive as well as adverse ways.

- **Force Ratio.** IW with its tool has ability to reach to masses and influence them through technical gadgets in seconds and since whole process is highly dependent on machines, it reduces number of troops involved war. This characteristic of IW offsets disadvantage of numerically inferior military. As the IW targets human cognition it produces huge impact over its opponent degrading the ability to fight. IW produces huge impact with lesser force making it more economical and cost effective tool of warfighting. Some of them have been discussed in the following paragraphs:

  - **Reduced Cost of Warfighting.** IW reduces manpower requirements of the country allowing it to use those troops fight somewhere else overwhelming area of operations. Further, the cheap technology available coupled with high tech military IW gadgets provide create huge and bigger impact than ordinance with less bloodshed making IW a cheaper tool of war.

  - **BFT.** The high tech gadgets of IW enhance BFT providing better decision making ability or increase dilemma by sabotaging sensors and reducing BFT which in turn affects the tempo of operations impacting OODA.

  - **Intelligence and Counter Intelligence.** This includes actions of adversary to gather own intelligence including human intelligence, signal intelligence and open source intelligence and detecting as well as countering our intelligence efforts. The modern day technology provides plenty of gadgets to carryout task which are cheap and have very huge impact on joint operations.

Tactics, Techniques and Procedures (TTPs). The availability of much efficient and less manpower intensive technology in IW has offered an opportunity to change TTPs of traditional battle fighting at every level which can enhance tempo of operations and survivability by obviating

certain steps in battlefield procedures by allowing machines to do those risky procedure which needed human to perform them.

With technological advancements, IW is going to be more and more lethal and cost effective which will change tomorrow's battlefield completely. The availability of plethora of targets, cost effective ways, facelessness and adaptiveness are the facets of IW which makes it different from other warfighting tools. Impact of IW is so much that it can tilt balance of power towards the numerically weak but technologically superior military without firing any bullet, capability which no other warfighting technique has in present day scenario. Glimpses of IW and its potential threat have been witnessed by the world in ongoing conflicts wherein lot of deep fakes were used and sensors as well as communication systems were targeted to break the will of soldiers fighting and eliminate high value targets. Keeping this in mind, to meet the parity in forces in case of a two and half front war as well as to bridge technological gap, India will have to infuse IW in its joint warfighting techniques mentioned above for swift and decisive victory at lesser cost.

The effects caused by IW can only be mitigated by IW since human cognition can only be shaped by IW. Further, non-employment of IW will increase the requirements of manpower and cost for fighting manifolds as no other warfighting technique produces effects as that of IW at similar cost. To infuse IW in joint warfighting India has to ensure following during infusion process besides creation of joint structures, Integrated Theatre Commands (ITCs) to enhance joint warfighting capabilities for effective conduct of IW for enhanced joint warfighting abilities:

- **Infusion of IW in Warfighting Doctrine.** To ensure coordinated orchestration of IW in time and space with better effects, IW is required to be included in warfighting Standard Operating Procedures (SOPs) and doctrines with timelines as well as end state. This will not only help in implementation of IW but also provide direction to develop home grown technology required to be focused for upgradation of IW capabilities. Also, inclusion of civil infra and concerned departments in fighting IW will only boost capabilities of armed forces and help to ensure synergy in implementation of IW enhancing effectiveness of IW.

- **Effect Based Development of IW Technology.** Technology evolution is a vast sea of opportunities and is time consuming considering technology availability in India. In order to bridge parity in technological superiority, India will have to focus on developing technology that will counter technology of its adversary in its vicinity rather than looking at all round development as this will seize initiative from adversary providing India much needed time and budget for implementation of technology tying down opponent's resources. So initially the focus of India should be on development of effect based technology and later it can shift to all round technology development.

- **Inclusion of AI and Space Technology in IW.** India is trying to make substantial developments in field of semiconductors, AI and space industries. These technologies will provide tremendous boost to India as adversaries of India are also yet to master them. Already existing edge in space technology and information technology will provide necessary platform for development of home grown technologies and their further infusion in IW. Hence, government of India has to ramp up its efforts to develop the technology in these fields as bridging the gap in these fields is important for India keeping existing platforms in mind. Use of AI and space technology in IW will provide technological edge over the adversary by enhancing lethality of IW and reducing manpower requirements to fight.

- **Inclusion of IW in Training of Armed Forces.** Prepare personnel and organisation to understand, anticipate and counter the evolving tactics of IW. Build resilience against misinformation and train troops in the cognitive, cultural and operational dimensions of IW. Regularly update training programs, integrate new lessons from recent conflicts and develop a flexible doctrine that can address emerging threats in the information domain.

- **Induction of IW as Separate Arm.** India has ramped up its efforts to increase jointness in joint warfighting by introducing of ITCs and CDS but infusion of IW still remains less explored area. Creation of IW branch at Army Headquarter is a welcome step but there is a dire requirement to expand this branch right upto formation levels to

ensure well-coordinated response. The idea revolves around creation of a separate IW arm keeping its importance in today's warfighting in mind which will not only boost IW capabilities including cyber security but also ensure better management of IW assets and much coordinated as well as effective IW capabilities. The IW unit can be allocated to a corps with its sub unit affiliated right upto brigades. The implementation of this step will also enhance cyber security issues of the armed forces keeping the increasing number of cyberattacks in mind by adversaries. As per the article of Hindu published on 30 Oct 2024, India received over 79 million cyberattacks in 2023, ranking it third globally in terms of the number of such incidents which had increased by 15% as compared to previous year.[9] Globally, cyberattacks increased by 76% in first quarter of 2024, with India among the most affected countries. A study of PRAHAR nonprofit organisation (Public Response against Helplessness and Action for Redressal) indicates that cyberattacks on India are projected to rise to a staggering 1 trillion per annum by 2033, reaching 17 trillion by 2047, when the country turns 100.

- **Change in TTPs.** This is a sequential step after development of certain degree of IW capabilities, Indian Armed Forces should change its TTPs allowing smooth induction of IW at every level and obviating requirement of physical presence in certain risky missions.

- **Directive Style of Command.** Armed forces are required to practice directive style of command which will ensure success of operations even in absence of directions from hierarchy. The decision dilemmas created due to IW can be mitigated to a certain extent by practicing directive style of command on ground.

- **Increased Officer Men Interactions.** In the age of deep fakes, false propaganda can only be countered by passing direct orders to men with logical explanations to counter misinformation campaign of enemy and to avoid misunderstandings amongst troops leading to reduced trust of men in their leadership jeopardizing the safety of mission.

- **Enhanced Coordination Between Ministry of Electronics and Information Technology (MeitY), Ministry of External Affairs (MEA) and Ministry of Defence (MoD).** In today's scenario where geo politics is bounded by interests of the country in the complex multi polar world, IW needs to be orchestrated right from the global platform to ensure continued global support to own actions. The parallel channels between MoD, MeitY and MEA will ensure integration of three key ministries in orchestrating IW and help in countering fake propaganda as well as asserting in point of view. The parallel channels are required to be established upto command level through nodal officers of Indian Armed Forces.

- **Enhance Technological Threshold.** India missed industrial revolution but now making every effort to bridge this gap. The better policies launched by government of India and improved ease of doing business ranking have attracted attention of many foreign companies providing much needed technological knowledge. Plus the push through 'Aatmanirbhar Bharat' has also provided much needed platform for home grown defence technology which has been evident from defence export as well as defence equipment production in the country. Yet there exists a requirement to enhance the technological threshold which can only be made possible by constructing more Research and Development (R&D) facilities with more budgetary allocations. This will not only provide home grown technology to armed forces but also ensure complete security of missions by providing robust C2.

IW has impacted significantly to any form of warfare with its abilities to fight much before commencement of hostilities and meeting ends at lesser costs. The dependency of joint forces on sensors, C2 and communication systems including network spectrums exposes joint forces to IW and allows complete manifestation of IW in every stage of battlefield. In initial stages of battle, IW can be employed to shape battlefield and divide opinion of civil population to discredit the leadership of the country and armed forces with fake propaganda. In later stages of battle, IW can be manifested to sabotage sensors, C2, human cognition and data breaking the cohesion of troops and isolating them by broadening Grey Zone.

CONCLUSION

The IW is going to be the mainstay of tomorrow's battlefield due to sheer availability of plethora of targets in every domain, cheap cost and its ability to meet ends with limited resources creating huge impacts without any bloodshed. The facelessness, adaptivity and continuity are the basic nature of IW which make IW more flexible and lethal. The ability of IW to fit into every space time matrix of any form of conflict at any stage is unique making IW an all-time weapon. The continuous evolving technology is making IW more and more lethal which can dislocate enemy without even firing a bullet much before commencement of active hostilities. The reach of IW has increased with advancement in communication sector threatening to involve innocent civilians in conflict undermining their security and destabilizing governments.

The joint warfighting which is highly dependent on synergised application of forces has huge threat from IW as it directly targets various principles of joint warfighting degrading the capability of joint forces. Though IW poses significant threat in the realms of joint warfighting but requirement to orchestrate joint operations or MDO can't be ruled out in any scenarios in Indian context due to the requirements of adversaries of India to control geographical features in region to ensure their own interests. Hence, the requirement to physically hold the area to control it cannot be ruled out as sensors and surveillance devices can be hacked and manipulated. In such intense scenario, the effective and timely orchestration of IW by Indian Armed Forces in conjunction with joint operations will not only enhance the ability of joint forces but also enhance the tempo of operations providing swift and decisive victory in ever changing geo political environment in Indian sub-continent by breaking the will of opponent to fight in fog of war and segmented battlefield. The infusion of IW in joint warfighting will reduce the bloodshed and cost of warfighting reinforcing the fact, 'IW can only be fought by IW'.

"The country that masters emerging technologies, combines them with doctrine, and develops the leadership to take advantage of it...the side that does that best is going to have...advantage at the start of the next war."

General Mark Milley, United States Army
20th Chairman of the Joint Chiefs of Staff

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NOTES

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