

THE SIXTH DIMENSION HAS TAKEN OFF

The next Revolution in Military Affairs (RMA) will consist of C6ISR formations, argues Brig. Gen. (Res.) Gal Hirsch in a unique, ground-breaking article. The sixth C stands for Commando - how is this associated with new age warfare?

By Brig. Gen. (Res.) Gal Hirsch Photo: Ziv Koren

Much has been written about the fact that since the end of World War II, we have been witnessing a reduction in the scope of "classic" warfare: low intensity conflicts, Operations Other Than War (OOTW), asymmetric warfare and a host of other terms have evolved in an attempt to characterize the nature of the new conflicts. Apparently, the abundance of terms mainly reflects confusion and gaps in understanding, interpretation and the development of ways to cope with the problem. Ahead of us is a generations-long journey along the way to "classicizing" the phenomenon of war as it seems today.

The opponent has changed. He has become sophisticated, agile and diversified and has a faint intelligence signature. He utilizes the state-of-the-art infrastructure developed by the free, enlightened world, the world that aspires for prosperity and progress. He uses the instruments and the restrictions of the state as a legitimate mechanism for attacking the state and its citizens. He 'innocently' infiltrates through official state passages, converts civilian resources into lethal weapons (passenger aircraft, for example), maintains a high affinity to criminal activity and organizations, and makes it extremely difficult for state security organizations to stay informed of the rate of his learning and evolution process. State security organizations are based on procedures, on legislation and on hierarchical management and administration and are inherently 'heavy'; this is particularly characteristic of state military organizations, whose primary mission is to defend the national borders against threats imposed by other countries.

The world has switched from coping with an enemy that has an address and whose signature is clear and solid to a conflict against cells, organizations and organizational fragments – an opponent that has numerous addresses, most of which are 'straw addresses'. This opponent has a blurred signature and a complex identity, and it operates in multidimensional realms under the cover of the civilian population. Additionally, even opponent states have begun using such methods for a while now, and by employing 'organized' state-sponsored terrorism by proxy, they strive for asymmetry and prefer a toolbox which contains non-standard, unconventional and not purely-military capabilities.

The national security challenges of states should be properly categorized and divided into



● security challenges, homeland security (HLS) challenges and military defense challenges. Each one of these categories is further divided into tactical, operational and strategic aspects. Accordingly, we have assembled a matrix of different realms, each possessing its own unique characteristics and presenting its own specific requirements.

Security is provided to the citizens of the state by civilian security elements and law enforcement agencies (such as the police). HLS requires multiple organizations and integration between security services and other state authorities. Military defense requires that the military organizations cope with an invader or some other threat that compels the military to maneuver within a given space using the various modes of battle.

The need to cope with the various challenges outlined above necessitates a supreme leadership, high-standard management-command, close connectivity, coordination, conceptual-doctrinal practicing and consolidation between security and law enforcement agencies, government ministries, military organizations, secret services and other elements. Any state wishing to build an effective wall against terrorism and subversion must advance from a collection of bricks to a defensive wall, and this necessitates leadership and advanced integration capabilities. The state should set up a mechanism that is similar to a multiple-socket electrical panel, into which each government ministry and each security, law enforcement and emergency organization or service should plug, thereby immediately

becoming a player in an orchestra.

The fact that the opponent is unique and different constitutes a trend which turns out to be stable and on-going in various confrontation focal points. To counter this phenomenon, states should develop a dedicated solution encompassing all of the categories: security, HLS and defending against an external threat – military defense. This dedicated solution should be so special as to be revolutionary. The Revolution in Military Affairs (RMA) has been regarded mainly as a technological process in the last few decades. However, this is not enough, as we don't have a choice anymore; at the moment, we are facing the next revolution. To handle the challenges presented by the kind of opponent described above, a national conceptual-organizational revolution, combined with technology, is required. The all-too-familiar formula of C4ISR (Command, Control, Computing, Communication, Intelligence, Surveillance & Reconnaissance) is currently lacking a key element.

The Sixth C

In their books, futurists Alvin and Heidi Toffler divided the evolution of warfare into waves. The first wave was associated with agricultural tools, the second wave was associated with the industrial revolution, and the third wave was influenced by computing and the information warfare. In the 1980s, technology and the needs of the hour facilitated the Revolution in Military Affairs (RMA), whose categories and characteristics evolved into the C4ISR formula.



Israeli Special Forces (Photo: Meir Azulay)



Brig. Gen. (Res.) Gal Hirsch (Photo: Meir Azulay)

Recently, many have accepted the fact that the fifth C in the formula stands for Cyber. However, facing the security challenges I have outlined in the fields of security, HLS and defense, I believe that this is not enough.

In order to harness all of the technological opportunities currently available into an effective response to the present-day opponent, we must bring about the next Revolution in Military Affairs, regard it primarily as a conceptual-organizational revolution and develop military-security organizations that would match the unique challenge we are facing. We do not need organizational changes such as "adjustments" and "capability development" – but rather a diversion of the force build-up center of gravity and a structural-organizational-technological revision of state security organizations.

Systems always strive for symmetry, and in the face of asymmetrical threats we develop capabilities that offset the difference (refer, for example, to the Iron Dome system developed to cope with the steep trajectory threat). In his book "The Pursuit of WOW", Tom Peters argues that "Crazy times call for crazy organizations," and we must, indeed, adapt ourselves ●

● promptly and rebuild symmetry opposite the asymmetry facing us. In the face of our unique, irregular opponent we should develop unique, irregular organizations and regard them as our main force for these times – 'formations' based primarily on a proper balance between technology and three types of forces: commando, special forces and secret services. While different, they complement one another and ensure the optimal utilization of the concept of an inter-organizational force. Since we have grown accustomed to using the letter C, we should continue to use in order to represent this pattern as a whole. Accordingly, the the sixth C to be added to the standard formula stands for Commando.

C6ISR

Democratic, law-abiding states cannot employ terrorism and subversion. States that do so as a matter of policy are regarded as members of the 'Axis of Evil'. In coming to fight back, the state should employ a solution that would offset this asymmetry and even gain an advantage. The official-state-military version of terrorism

and subversion - as far as flexibility and effectiveness are concerned - is provided by special forces, commando units and secret services (the sixth C forces). They rely primarily on state of mind, a different approach, agility and on being prepared for and capable of taking calculated risks responsibly.

These forces may operate under their own legislation and procedures. They are educated to improvise, to develop relevant knowledge, to initiate and to evolve constantly. They possess the ability to develop – in the relevant context – methods, advanced weapon systems and creative operational ideas while conducting their instruction and training activities under the most realistic conditions possible. These forces must have stringent selection, the best personnel, the highest standards of command and control and a responsible leadership. Apparently, they are the only ones capable of coping effectively with the opponent's nature and rate of learning and evolution, as outlined above.

If, air forces, intelligence layouts, naval and armored forces enjoyed the benefits of RMA in the past, then state-of-the-art technologies (miniaturization, for example) and demands

'from the field' will make it possible to provide the 'sixth C formations' with new, innovative capabilities. Over the years, commando and special forces have been employed as 'spices' sprinkled over the primary maneuvering plan. The bulk of the task is based on a dominant ground maneuver, on intelligence or on fire strikes from the air, sea or land. Military history has shown that the special force is normally committed to battle in order to support the ground maneuver, bridge over or fill gaps and sometimes for strategic missions. I believe that we are ready to move on to the next phase.

The next RMA can bring a new concept into the arena that offers new operational patterns, in the context of which special maneuvers will be executed, complete operational moves will be based primarily on commando forces and tactics, and the operational manifestations of the modes of battle, combat doctrines and combat techniques will be revised.

If the base of the pyramid consisted of the standard forces in the past and 'commando spices' were added to its tip, then currently available technology and the way the opponent conducts himself could and even compel us ●

 Strategic  Operational  Tactical	SECURITY The field of Security embodies the police deployment and the various security alignments. This field tackles all levels of crime, provides response to terrorist threats inside the country and protects the symbols and institutions of the governance in the country.
 Strategic  Operational  Tactical	HOMELAND SECURITY The field of Homeland Security incorporates a wide variety of activities. Securing borders (sea, air and land), securing traffic hubs and routes in the country, securing critical infrastructures, managing crisis situations and large-scale events and coping with the forces of nature and mega-attacks are just some of the elements Home Land Security contends with.
 Strategic  Operational  Tactical	DEFENSE The field of Defense incorporates the country's military deployment and provides response to threats of foreign armies, terrorist organizations, both inside and outside of the country. The array of threats requires adaptation of the military system to cope with it.

to invert the pyramid so it stands on its head. The special force can constitute the basis for the maneuver and bring into the campaign, it its backpacks, the full capabilities of the standard military and even more.

Thus, the 'little one' (the sixth C forces) becomes very big, and the 'big one' (the standard military), becomes very small when dealing with a challenging opponent. The established concepts of operational-organizational elements – battalion, brigade, division and so forth – may also attain a different meaning if we fuse them with the concept 'special' and with the latest technology, with everything it has to offer.

The 'C6ISR Formation' can bring into the battlefield the strength of a division, and even more, but its force make-up will be completely different. Such a special formation will deliver, through a very small ORBAT of fighters, substantial capabilities and strengths, including everything required of a ground force with regard to the aspect of capturing and maintaining territory, using a smaller but more effective ORBAT. These versatile formations will be adapted to the type of conflict and to the battlefield, be they a large-scale war, a limited-scale war or an attack on bases of a criminal/terrorist/subversive/guerrilla organization.

Apparently, the concept outlined above is not new, as decentralized/diffused warfare and the potential strength of small, lethal forces has been discussed for years. We are aware, for example, of the approach formulated by Maj. Gen. (Res.) Yedidya Ya'ari and Haim Assa in their book "Diffused Warfare: War in the Twenty-First Century." However, the opponent is growing increasingly more sophisticated, technology is advancing, and even now, it would be appropriate



Israeli special forces (Photo: Meir Azulay)

to initiate and set one foot in the future, precede the opponent and bring about a change. Our objective is to break the symmetry, introduce a 'tiebreaker' and change the rules of the game.

In order to change the rules of the game, we need new players and new game boards. Consequently, we require new force patterns and different maneuvering modes, as well as new research, development and technology trends.

R&D for the Sixth C

A conceptual-organizational change on such a scale is a matter for the supreme leadership and necessitates a farsighted leadership. Directing the build-up of the concept and the R&D activity requires that abstract concepts and ideas be connected to practice and that dramatic organizational changes, in inter-arm and inter-organizational terms, be put to the test. We primarily need the courage to enter 'new playgrounds', step into 'dark realms' and venture into conceptual no-man's lands.

The leader is also required to retain the different, nonconformist (even eccentric) individuals in his organization – there are many of those within the ranks of the special forces, and they could constitute an important asset in the staging of a breakthrough. Breakthroughs are normally the outcome of hardship! Indeed, conceptual fixation and restrictive paradigms are definitely the sources of hardship, provided one is aware of them.

Instead of responding to the harsh results of fixation, we should prefer to design, revise and develop an alternative paradigmatic format that is relevant to the context, even if we have to challenge phenomena regarded as *force majeure* in the realms of war.

One example, friction, which Carl von Clausewitz defines as a primary phenomenon of war - the one that generates uncertainty and randomness - will not disappear. However, it may be countered and much can be done in order to ensure that the force undertakes its missions under low friction, just like a knife cutting through butter. Friction is important and necessary in order to study the opponent and the battlefield, but friction that leads to delays can be minimized.

Another is the fact that the asymmetrical opponent is agile and has a faint intelligence signature. This has imposed on us the predestination known as short target life cycle, along with the difficulty of connecting the sensor with the shooter within a relevant time interval. The short target life cycle phenomenon is



Special forces in the field (Photo: Meir Azulay)

regarded as a *force majeure*, and this must be challenged – we should strive for immediate closure of the kill chain.

A third example is the phenomenon of frontier areas. These are no-man's lands allegedly under state sovereignty, yet that sovereignty is not being enforced. This necessitates an operational solution that would enable us to operate within those areas highly effectively and without generating a signature.

Lastly, we would like to reduce the probability of disastrous surprises to an absolute minimum in the context of missions generally and routine security missions in particular.

Apparently, there are numerous challenges and the response is partial. Relevance and a revision of the response formula are required. We no longer need a military that adapts itself, but a complete layout developed to deal with the missions of the new era – an organization of organizations that are just as crazy as the times. For the examples I have presented and for other challenges, I suggest the C6ISR formula. In order to advance this revised formula to the point of operational implementation, a significant, concentrated effort must be made with regard to R&D and the characterization of resources for the commando/special forces/secret service element, so that it may be able to come into its own on the battlefield. I would expect the special force to carry in its backpacks the very best of the technological potential currently available, with regard to every possible aspect: fire, C2, mobility, lethality, logistics, intelligence and more. This will enable

it to change, improvise, adapt, develop a prompt response in a concrete context and, using a metaphor from Bill Gates' book – to carry out operations at the speed of thought. Even today, the elite units of the world's military organizations are the leaders in technology and in a creative approach. This is true, but not enough. The specialist units currently constitute a 'boutique capability', and are not the main element of the national response potential. The sixth C formations should bring a critical mass into the battlefield and decide the outcome of campaigns on their own.

The classic ground maneuver, organized in columns and rows, is intended for a symmetrical collision between simple, mass-based 'geometrical shapes', on a clearly defined 'playground'. This primarily bi-dimensional maneuver reflects the peak of the second wave, the industrial wave. The emergence of the third wave has brought the RMA into play – command, control, computing, communication, intelligence, surveillance and reconnaissance capabilities (C4ISR). All of these elements created the conditions for the development of a campaign encounter between complex, network-interconnected 'geometrical shapes', based on the development and control of the 'playgrounds'. Therefore, maneuvering has become tridimensional, and the opponent should cope with a combined presence – ground, sea, air, space and cyberspace.

While standard military forces operate according to structured patterns, using standard weapon systems and through combat doctrines and

procedures "strictly along the lines", the C6ISR formations will operate between the lines. They operate away from the highway, not in line with what can be expected from a military force and not even within the framework. In fact, the special maneuver and the special organization expand the playground, and conceptually, it operates in a different realm and in a different dimension that are not familiar to the opponent. The legality is new and current, the rules of the game are surprising and dictated by the Sixth C, and the asymmetry is revoked.

The advanced capabilities of C4ISR will be augmented by two capabilities that add depth to the fighting potential – cybernetic depth and the conceptual depth of operating outside the concept/box and according to new rules.

In his book, "The Black Swan: The Impact of the Highly Improbable", Nassim Nicholas Taleb analyzes the phenomenon of the unexpected surprise primarily with regard to economic activities. This surprise is called a 'Black Swan', as it was once the prevailing belief that only white swans existed, until black swans were discovered in Australia.

In an analogy to the world of security, if terrorist and subversive organizations presented us with 'Black Swans' and shocking surprises in the past (refer, for example, to the terrorist attacks in Manhattan, Madrid, London, and so on), the state may now present them with a lethal 'Black Swan' of its own. This would be the C6ISR formations - using a 4-dimensional maneuver or a unique, creative and different maneuver in the fourth dimension only, the conceptual dimension of uncertainty, illegality and disorder, far away from the expected and from the accepted conceptual pattern. ☪



Brig. Gen. (Res.) Gal Hirsch is the owner and CEO of Defensive Shield. In the past, he served, among other positions, as commander of the IAF Shaldag Unit, as commandant of the IDF Officer Training School and as commander of the IDF Galilee Formation (91st Division) during the Second Lebanon War. As a reservist, he serves as deputy commander of the IDF Depth Corps HQ

Ministry of Transport	Airport Authorities	Railroad Authorities	Prison Service	Fire Brigades
National Infrastructures	Seaport Authorities	Social Security	Tax Authority	Legal system
First Aid Agencies	Witness Protection	Police	Search & Rescue Services	Municipal Authorities
Ministry of Health	MOI	Military	Intelligence service	HLS Department
Welfare Authority	Secret Services	Financial Crime Authority	Border Control Service	Education Authorities
Customs	MFA	MOD	Coast Guard	Broadcast Agencies