CONNECTING CONFLICT CONCEPTS: HYBRID WARFARE AND WARDEN'S RINGS

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Abstract: This article explores connections among existing descriptive concepts of conflict. The focus is on connecting the "five rings" concept of John Warden and hybrid threats in a wider sense. The motivation is three-fold: firstly, to explore, compare and complement old and new concepts; secondly, to contribute to the systematization of numerous modes of security violation; and thirdly, to propose some basics for the creation of a tool for optimal choice of hybrid activities and countermeasures. Contemporary security violations are complex, not always visible, hard to detect, hard to be attributed and very different by nature and characteristics. Systemic analyses of indicated attempts of hybrid security violations through the prism of Warden's rings contribute to better perception and recognition of the real purpose of hybrid attack and even indicate possible initiators. For the defender's side, this approach is useful to analyse and recognize own vulnerabilities, which is a good starting point to prepare defences and countermeasures. For a hybrid attacker, this approach offers good tool for optimal choice of appropriate options from the spectrum of hybrid warfare tools.

Keywords: Warden's rings, hybrid warfare, unrestricted warfare, security, system approach, decision making

Introduction

There have been a lot of discussions on specific forms of warfare and conflicts in general. Paradigm of hybrid warfare is not an exception. It seems that media and political circles have stimulated wide popularity of the terms: hybrid warfare and hybrid treats. Enforced in such a way, the phenomenon comes back like a boomerang to the military circles where it was initially created, while encompassing activities of the wider defence and security establishment. However, many experts agree that there is no unique definition of hybrid warfare, which would be accepted by consensus. Instead, there are several formulations of the term. In its essence, as well as by logical deduction of the term itself, it could be said that hybrid warfare is a mixture or blend of a number of entities, factors and characteristics related to war: something tradi-

tional (already existing), known (regular), and some additional, different or new (ir-regular). One of the existing definitions defines "hybrid warfare" as

> a conflict executed by either state and/or non-state threats that employs multiple modes of warfare to include conventional capabilities, irregular tactics, and criminal disorder.[1]

Hybrid warfare is considered to be intersection of irregular and conventional warfare, plus domain of full spectrum of criminal activities and whole set of cyber warfare. In simple words, hybrid warfare contains all possible activities across a spectrum of various human activities at any level, which are launched by an attacker towards targeted opponent in order to achieve their objectives on efficient and effective way. As an attractive term, hybrid warfare is frequently used in everyday political debates and is sometimes misused as a kind of excuse in the political and media arena.

One of the first public use of the term "Hybrid Warfare" in the contemporary sense was performed by Hoffman[2] and former Marine Corps General James Mattis at the defence forum organised by Naval Institute and Marine Corps Association on September 8, 2005. They have developed the main idea about hybrid warfare in the modern view related to and inspired by conflicts at the beginning of the 21st century. However, there was one earlier[3] promotion of term itself (the following terms were used: "hybrid war," "hybrid force" and "hybrid operations"). The context was a more narrow, with focus on the relations among military services in the United States military. Namely, hybrid warfare was seen as an intersection zone between special operations and conventional operations. The fundamental statement in this early work was that the US Marne Corps has always been a kind of a hybrid force able (trained, equipped, developed, managed) to perform both conventional and special operations. This dual capacity of the US Marine Corps is considered as a main difference compared to other US military services and their special operations units. Another interesting momentum in the Walker's paper[4] is the perception of continuality of hybrid warfare ("Hybrid warfare occurs across a continuum"), containing conventional and unconventional attributes. Today, we can add some other aspects of this continuum as follows: time dimension (time border between war and peace is blurred); terrain determinants (frontlines becomes fuzzy, the area of operation spreads up across communication zone and a whole theatre of operations and reaches even global level); the composition of warring parties becomes dynamic (alliances and coalitions become variable; just like the intensities of their actions, their goals, etc.); the character and contents of hybrid wars spread up and comprise all other fields (economy, transportation, trade, financial market, sport events, social events, media, etc).

The second conflict concept of primary interest in this paper is the Warden's theory of rings.[5] John Warden was an US Air Force colonel who proposed an interesting

theoretical concept of warfare for achieving an overall strategic goal through efficient use of resources in order to make effective and purposeful actions based on previously done systemic and structured analysis of the opponent's side. Warden proposed one hypothesis that the opponent side (enemy) is a system which consists of five sub-structures arranged as concentric rings (similar to the multiple defence rows in the middle-age fortress). The first ring is the "fielded military." As all this discussion is conducted in the context of national defence, the first ring could be perceived as a kind of a shield whose purpose is to protect the whole nation and to respond towards external security threats. Further, in the logic similar to the chess play, are arranged other rings as follows: the second ring is "population," the third ring is "infrastructure," the fourth ring is "system essentials," and in the middle is the "leadership."

Having in mind a general approach to the purpose of conflicts (imposing the own will on the opponent side, and not the necessarily destruction of the opponent's system) and taking into account the "strategic trinity" of "ends-means-ways," Warden's structured approach contributes towards optimal selection of means and ways in order to achieve the declared goal. The contemporary concept of hybrid warfare, in its wider sense, when combined with the structured approach of Warden's rings concept, has the potential to produce synergistic effects. The wide variety of hybrid threats and many modes of hybrid warfare, when filtered through the lens of Wardens' structure, become systematized, recognizable, clustered and more appropriate for analysis and response formulation. On the other hand, Warden's structure (rings) becomes enriched with concrete hybrid events and activities, and that comprehensiveness and detail contribute to forming a wider—and more complete—picture of ongoing security situation. That 'big picture' shows which "ring" (which part of social/ national/ state structure) is under which (kind, size and dynamic) pressure. Finally, good situational awareness (big picture) is a precondition for finding an appropriate response.

Spectra of Conflict Concepts and Names

Interested readers can consult a NATO site[6] for quick introduction into the wide spectra of attractive names which seek to clarify the specificity of conflicts by coming up with 'best' terminology. The list includes terms as: ambiguous warfare, full-spectrum conflict, unconventional warfare, compound warfare, non-linear warfare, asymmetric warfare, irregular warfare, grey wars, political warfare, information warfare, multi-domain battle, hybrid trolling, and hybrid warfare. However, the list does not stop here, and other terms could be found.

In order to better understand contemporary conflicts, researchers offer different views on the topic and suggest similar concepts and terms for modern warfare. There are some other terms similar to hybrid warfare, such as: "chaoplexic"[7] warfare (chaotic + complex = "chaoplexic"), swarming,[8] network-centric warfare,[9] fourth-generation

warfare,[10] unrestricted warfare,[11] war beyond rules,[12] etc. Also, there are a set of war-fare modes which indicate a main domain where it is conducted, as follows: media warfare, trade warfare, economic warfare, regulations warfare, drug warfare, war on terror, smuggling warfare, cyber warfare, etc.

Why all of those terms appear? In its core essence, conflicts did not change too much their very nature since ancient times. Machiavellian postulates on cunning, duplicity and self-interest can explain conflicting behaviour in general. Self-interest of each side in a conflict is usually an initiating motive of the conflict and, at the same time, a limiter which holds conflict escalation below the cost-prohibitive level, particularly below the threshold for full-spectrum warfare. Cunning stimulates creation of alterna-tive ways and use of all available means to achieve the strategic goal. In the modern era of numerous technological and sociological factors, there are many possibilities for creation of inventive combinations. Duplication works as a kind of justification support, which is very important in gaining wider public support (domestic and inter-national, media and political).

Hybrid warfare could be performed by anybody against anybody (a stronger side against a weaker side and vice versa; big country against small country and vice ver-sa; etc). Almost every modern armed conflict could be proofed as a kind of hybrid warfare. Recent and ongoing conflicts in Eastern Europe, the Middle East and North Africa are dominantly recognized as hybrid warfare. However, many other conflicts correspond to the framework of hybrid warfare. For example, with reference to "non-state actors with state patronage"[13] against another state actor, one can imagine actual conflicts in Eastern Europe, while the other[14] can recall the conflict in Afghanistan during the intervention by Soviet Union in the 1970s and 1980s.

Actual knowledge and paradigms as well as ongoing dilemmas on terminology, defi-nitions, classification and other aspects are and will remain a subject of further inter-est for experts and researchers around the globe. However, the subject of this paper is not primarily a discussion on terminological issues related to "hybrid warfare," but rather on some aspects that could be more useful for understanding the phenomenon, recognizing challenges and modalities for exploiting opportunities and preparations to counter hybrid warfare effectively and efficiently.

Special Warfare Perspective in the Western Balkans in the XX century

Military literature[15] from the second half of the Twentieth century in the Western Balkans (primarily in the sense of the territorial area of the former Yugoslavia) con-tains a lot of references related to the many aspects of today's meaning of hybrid war-fare. The then used term was a "special warfare" and it was related not only to the use of special forces but in much wider context. The meaning was related to the wide spectrum of various activities which one subject (one of the conflict parties) under-

takes against the opposite side. The role of a subject was usually attached to states. However, the subject could be also a group of states (multilateral or bilateral alliances), or even non-state actors. As a matter of fact, non-state actors were usually related to the resistance movements (national and ideological) which were actual in that time (the middle of the second half of the Twentieth century). Today, non-state actors are perceived in a much wider sense and could be: national, ideological, religious, related to the organized crime, ecological, commercial, humanitarian, etc.

The spectrum of practical activities in *special warfare* contains all possible actions which could lead to the realization of the goals. Those activities could be of various kind: political, economic, psychological, propaganda, intelligence, subversive, and military. All activities in special warfare are carefully created, planed, organized, coordinated and executed. This is applicable today as well, but with some additional aspect which exist today or became more important compared to the past. For example, propaganda issues from the 1970s evolved in a rich spectra of media influence and issues today (globalised media, social networks, internet, numerous TV and radio stations, news specialised channels, blogs, etc.).

Propaganda and psychology warfare,[16] as old terms used in the context of special warfare, gained huge development, change and enlargement from the decades after WWII up to second decade of XXI century. Today, it becomes important, if not crucial, aspect of hybrid warfare. Old fashioned special warfare terminology distinguished three kinds of propaganda[17]: white, grey and black. Classification criterion was an estimated level of recognizing the main source of information. Identification of the main source of information is crucial because it is obvious that the credibility of presented information will be proportional to the credibility of the source of information. Also, it is logically clear that presented information will be in line with interests and values of the source of information. In case of the white propaganda, it is known who the source of information is. In case of the grey propaganda, the source is not obvious but it could be identified indirectly. And, in case of black propaganda, the source of information is not known, that is, it could not be identified with sufficient level of reliability. In general, liberal relation with the truth, or lying, is much more likely in case of black propaganda because the source, which is hidden, has large freedom of action without the danger of losing credibility as a result of unfair, unethical or illegal behaviour. There is a lot of room for various propaganda activities as follows: biased informing, selective presentation, distortion of facts, parody on values which are respected in a targeted society, belittling of the opponent, spinning and repeating, discrediting the opponent, revision of historical facts, revision of international norms, demonization of opponent, and lying.

The similarity between old (special warfare, propaganda) and new concepts (hybrid warfare, information operations, media warfare) is evident. In the context of modern

hybrid warfare, it is also recognized as very important to have possibility and capacity to make reliable and timely identification of the source of information attack. The identification of the information attack initiator (or source) is not an easy task today. For example, that may require engagement of high-tech digital forensic equipment and highly trained personnel, and/or financial forensic experts.

Unrestricted Warfare

Two Chinese colonels launched the term "unrestricted warfare" in the late 1990s in their book with by the same name. Their work delivered an excellent analytical study with unbiased logical reasoning and strong turn towards empirical evidence extracted from a number of historical examples. One of the main motivating triggers for the study for the authors was the First Gulf War in 1990-1991, when the US-led coalition under UN mandate fought Iraq that had occupied Kuwait. They found that this war was different and new in many aspects. However, that was not the main reason for the global popularity of the book. Their book has become world famous after 9/11 and here is why: more than two years before the events on 9/11 they wrote [18]:

> Whether it be the intrusions of hackers, a major explosion at the World Trade Center, or a bombing attack by bin Laden, all of these greatly exceed the frequency band widths understood by the American military.

This sentence, at the time of its writing, was just one of many abstract logical speculations in the wider context of comprehensive conflict research and analysis. However, when the event really happened, many researchers and analysts started to pay attention on similar low-probability, even fantastic, scenarios. Consequently, the whole book dedicated to the concept of "unrestricted warfare" became well-known, and the concept gained a prominent place among other concepts ant theories of war and conflict.

One of the main ideas behind the concept of unrestricted warfare is much the same as in the hybrid warfare concept. Hybridization of something logically means that some components are combined in order to produce new entity. So, the term 'combine' is inherently connected with term 'hybridization.' At one place in the book the authors state: "He who wants to win today's wars, or those of tomorrow, to have victory firmly in his grasp, must "*combine*" all resources of war which he has at his disposal and use them as means to prosecute the war." [19]

The concept of unrestricted warfare is very important for development of the basic idea of this paper. Attempting to concretize and systemize the wide variety of forms and models of unrestricted warfare, the authors propose more than twenty "models of warfare" clustered in three general categories is presented in Table 1.

Table 1: Spectra of Unrestricted Warfare. [20]

Military	Trans-military	Non-military
Atomic warfare	Diplomatic warfare	Financial warfare
Conventional warfare	Network warfare	Trade warfare
Bio-chemical warfare	Intelligence warfare	Resources warfare
Ecological warfare	Psychological warfare	Economic aid warfare
Space warfare	Tactical warfare	Regulatory warfare
Electronic warfare	Smuggling warfare	Sanction warfare
Guerrilla warfare	Drug warfare	Media warfare
Terrorist warfare	Virtual warfare	Ideological warfare
Combination of various forms of military warfare	Combination of various forms of trans-military warfare	Combination of various forms of non-military warfare
Combination of various forms of military and trans-military warfare		
Combination of various forms of trans-military and non-military warfare		
Combination of various forms of military and non-military warfare		
Combination of various forms of military, trans-military and non-military warfare		

Note: In a case of any *combination* of warfare *modes*, when those modes are *applied at the same time* (all together, in parallel), and are oriented not only towards one entity (like the military, or population, or leadership, or infrastructure), we have a case which is known as '*parallel war*' (in term and meaning used by John Warden).

The concept of unrestricted warfare offers 24 basic models of warfare and much more different combinations of the basic models. In the widest sense of perception of the hybrid warfare concept, any combination of partial models of warfare from the spectra of the unrestricted warfare, could be considered and named as hybrid warfare. Which combination of modes will be applied in some concrete conflict? It depends on many parameters. Smart initiator of hybrid conflict will explore in details his target and find vulnerabilities. Also, he will take into account his resources, possibilities, limitations, and goals. Then, he will make optimal choice and engage appropriate combination of warfare modes.

Depending on his goals, resources and limitations, as well as on vulnerabilities of the target country, the attacker will choose the concrete object, or "ring," of hybrid attack: "fielded military," "population," "infrastructure," "system essential," or "leadership." Vulnerability analysis may start with PESTLE analysis which is a qualitative tool allowing to obtain comprehension and wider picture of the target. This analysis

should be supported with data from relevant and trustworthy sources. Various UN programs and sub-organisations offer data on many countries (on economy, human rights, poverty, crime level, level of democracy, etc.) collected, analysed and presented via unified methodology. The use of unified methodology allows comparability among different countries and facilitates research work and conclusions. Rough data sets and country reports produced by other relevant organisations at international scene (e.g. by the World Bank, IMF, CIA, SIPRI, Transparency International, etc.) can also be very useful. Next useful set of tools are specific methodologies developed for forecasting state instability.[21] However, the question of state's instability is highly stochastic, complex and very hard to forecast. Or, as some intelligence experts state: "The probability of a state's falling into instability is a function of "trends" (which measure broad patterns in authority, resilience, and legitimacy over time) and "triggers" (events likely to precipitate state instability)."[22]

John Warden's rings

In the mid-nineties of twenty century Air War College arranged expert meetings on the "Battlefield of the future - 21st Century Warfare Issues." Among the more interesting views and analyses was the paper by the US Air Force Colonel John Warden. In his work dedicated to the theory of air warfare for the 21st century, he proposed an interesting concept of warfare for achieving general strategic goal by efficient exploitation of available capabilities through effective and purposeful actions previously prepared through systemic and structured analysis of the opponent side.[23]

Warden outlined a hypothesis that the opponent side (enemy) could be perceived as one system. Further, as it is a case for many other systems, it consists of five general components (in the brackets are terms by analogy for general production system): "leadership" (decision making unit); "system essentials" (unit for self-sustainment and support); "infrastructure" (materiel resources unit); "population" (unit for a core system function - grow, living, production); "fielded military" (unit for self-protection of the system).

These five system entities could be arranged as concentric rings with the decision-making unit in the very centre ("leadership"). The outer ring is "fielded military" as it has system protection role. Arrangement of priorities of other rings has the same logic. Next to the "leadership" ring is the "system essentials" ring. Next to the "fielded military" ring is the "population" ring, with the "infrastructure" ring in between.

The context from which arose the concept of five rings is very important for appropriate understanding and its further use. In a few places Warden mentioned the general strategic goal: "The object of war is to convince the enemy leadership to do what

you want it to do."[24] So, the goal is not a destruction of any of the rings just because of destruction.

Related Concepts

What forms of hybrid warfare will be used in a conflict depends on some preconditions related to various factors which could be more precisely specified through PESTLE (Political, Economic, Societal, Technological, Legal, Environmental factors) analysis. Societal circumstances may include religious, ethnical, ideological and cultural questions, as well as corruption issues. Economic issues, unemployment and level of poverty are of crucial importance. State-structural factors may be interested in regard to division and balance of power, regional and territorial organization, central government's position, etc. Possibilities for effective engagement of non-state actors may also be available, along with a potential for criminality, erosion and subversion of established institutions of governance, and consolidated actions of regulars, irregulars and non-state actors.[25]

Skilfully choosing options and masterfully crafting multi-modal activities, together with appropriate timing of a set of events, may produce effectiveness and efficiency. Effectiveness of hybrid war lies in internal subversion, according to Kumar,[26] and that phenomenon is considered as a major factor of destabilisation. Subversive activities are not only very effective, but also a rather efficient tool. With a relatively small investment of outside resources and by stimulating internal antagonisms, disproportionally large effect could be produced. Those internal antagonisms could be various: endemic corruption, long-term nepotism, cronyism and tribal protectionism, hard exploitation of population, deep poverty, lack of religious, ethnic or minority rights, etc.

Matrix Approach

The first approach towards connecting Warden's rings and hybrid warfare's modes of operation (as well as unrestricted warfare) is to assign one particular ring to one particular mode of hybrid war, or vice versa. This step should be replicated as many times as we can in order to generate different options. In order to achieve transparency, this could be presented in a table view.

Following a practical procedure can be useful in connecting conflict concepts. In order to fulfil the table of connecting relationships, a set of answers should be generated about the following questions: "What action/operation/mode of warfare should be undertaken in order to efficiently and effectively achieve the goal declared as XY in regard of making impact on the "leadership" (and/or "fielded military," and/or "population," and/or "infrastructure," and/or "system essential") of the adversary?" In the case of limited resources, the second type of question may have following structure:

"With existing resources and capabilities, the optimal action/ operation/ mode of warfare is: ZY."

Tables 2 and 3 present examples of connecting the concept of Warden's rings and concepts of hybrid warfare (two variations: original/base/narrow approach and a perception of hybrid warfare by some bodies of European Union). While Table 4 explores the relationship between Warden's rings and modes of unrestricted warfare (or hybrid warfare in its widest sense).

Table 2: Connecting Warden's Rings and Hybrid Warfare Basic Modes.

Legend: DI – Direct Influence II - Indirect Influence	WARDEN'S RINGS				
	Fielded Military	*Popu-lation*	*Infra-structure*	*System Essentials*	*Leader-ship*
Hybrid Warfare Modes (from basic definitions)	*Ring 1*	*Ring 2*	*Ring 3*	*Ring 4*	*Ring 5*
Conventional activities	DI	II	DI	II	II
Irregular activities	DI	DI	DI	DI	II
Terrorism	DI	DI	DI	DI	II
Criminal activities	II	DI	DI	DI	DI

Note: Estimations of influence in the table are just a scholarly example and do not relate to any real country or organization.

Table 3: Connecting Warden's Rings and EU's Perception of Hybrid Warfare.

Legend: DI – Direct Influence II – Indirect Influence	WARDEN'S RINGS				
	Fielded Military	*Popu-lation*	*Infra-structure*	*System Essentials*	*Leader-ship*
Hybrid Warfare Modes (as in the EU perception)	*Ring 1*	*Ring 2*	*Ring 3*	*Ring 4*	*Ring 5*
Economic means	II	DI	DI	II	II
Political means	II	II	II	II	DI
Diplomatic means	II	II	II	II	DI
Technological means	DI	II	II	DI	DI
Violence (ethnic conflicts, terrorism, migration, weak institution, criminal and irregular groups)	DI	DI	DI	DI	II
Military intimidation	DI	II	II	II	DI
Covert military actions	DI	II	II	DI	II

NOTE: Estimations of influence given in the table are just a scholarly example and do not relate to any real country or organization.

Table 4: Connecting Warden's Rings and Unrestricted Warfare Modes.

Legend*: DI – Direct Influence II – Indirect Influence	WARDEN'S RINGS				
	Fielded Military	*Popu-lation*	*Infra-structure*	*System Essentials*	*Leader-ship*
Unrestricted Warfare Modes (according to original definition [27])	*Ring 1*	*Ring 2*	*Ring 3*	*Ring 4*	*Ring 5*
Atomic warfare	DI	DI	DI	DI	II
Conventional warfare	DI	II	DI	II	II
Bio-chemical warfare	DI	DI	II	DI	II
Ecological warfare	II	II	DI	II	II
Space warfare	DI	II	II	II	II
Electronic warfare	DI	II	II	DI	DI
Guerrilla warfare	DI	II	DI	DI	II
Terrorist warfare	DI	DI	DI	DI	II
Diplomatic warfare	II	II	II	II	DI
Network warfare	II	II	II	II	II
Intelligence warfare	II	II	II	DI	DI
Psychological warfare	DI	DI	II	II	II
Tactical warfare	DI	II	II	II	II
Smuggling warfare	II	II	II	II	II
Drug warfare	II	II	II	II	II
Virtual warfare	II	II	II	II	II
Financial warfare	II	DI	II	II	II
Trade warfare	II	DI	DI	II	II
Resources warfare	II	DI	DI	DI	II
Economic aid warfare	II	DI	II	II	II
Regulatory warfare	II	DI	DI	II	II
Sanction warfare	II	DI	DI	DI	II
Media warfare	II	DI	II	II	DI
Ideological warfare	II	DI	II	II	II

*Notes:

Estimation of values of potential influence of a particular mode of warfare on the selected ring entity is conditional. Instead of binary choice (DI or II) it could be applied expanded scale (for example from 1 (the weakest influence) up to 5 (the strongest influence).

Estimated values are not universal and may differ for various countries and various situations, time (historical age) and strategic goals.

Estimations of influence given in a table are just an scholar example and do not relate to any real country or organization.

A recent analysis shows some findings about actual hybrid threats in the case of India,[28] which may have validity for other countries (like, for example, European countries):

- long-term character of hybrid war;
- prevention is the best way of defence (relax antagonisms in own society in order to prevent inner collapse);
- timely and reliable situation assessment to indicate and identify threats (first line of defence to hybrid threat are intelligence organizations due to complexity of the identification of hybrid threats);
- in spite of the diversity of hybrid threats and, consequently, non-militarisation of hybrid defence, conventional military is still needed (in spite of all varieties and modes of non-military aspects of hybrid warfare, conventional military capabilities have to be maintained and improved because, if that is not the case, ongoing hybrid warfare modes tend to transcend towards more conventional use of the military – power demonstration, border violation, proxy-force empowerment, and even invasion);
- a "whole-of-government" approach is needed for countering hybrid warfare, i.e. to provide efficiency and effectiveness in building a successful response to the variety of hybrid threats, requiring an integrated, coordinated, synchronized, joint counter-actions;
- hybrid warfare is practically considered as a new phenomenon and should be treated in a single set of strategic and doctrinal documents, related to the national defence and security, providing the foundation for establishing and developing inter-organisational, inter-agency and inter-departmental relationship, coordination and cooperation.

Conclusion

The main idea explored here is about finding ways of connecting existing concepts and theories of warfare, and conflict in general. The specific focus in this article is on interconnecting hybrid warfare, unrestricted warfare and Warden's rings concept. One former regional view on special warfare is explored as well, since it fits very well local perception of hybrid warfare. Proposed matrix arrangement between various modes of warfare and structural presentation with the system's rings, with suggested questions for interlinking, are the core feature of the idea expressed here. Concretization through table examples can facilitate the development of practical and even more detailed procedures.

Future research could be multidirectional: towards further concretization of selected or preferred options of warfare modes or rings; towards involvement of quantitative and qualitative methods for estimation of state stability/instability; towards exploring reliable data sources related to the topic; towards exploring relationships among other concepts and theories related to warfare and conflicts; and finally towards developing concepts for reliable scanning of vulnerabilities of the state and societies in order to prevent hybrid violation of security in an efficient and effective manner.

Acknowledgement

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