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# Kautilya's Arthashastra, Hybrid Warfare and the Fractal Nature of Military Thinking

## Abstract

*This article claims that addressing the hybrid nature of conflict, there is scope for new definitions, concepts, assumptions and generalisations at various levels of abstraction. By establishing connections to prior classics, each method contributes to the meaningful synthesis or combination of vast volumes of knowledge to enhance comprehension of real-world events. As a philosophy of warfare, hybrid warfare is successful, enhances research value, and creates maturity of a corpus of war knowledge. Still, every theory of war entails theorising about irregular, fragmented patterns with different levels of intricacy. The Arthashastra, an epic work by Kautilya, clarifies that any such allusion could compromise a solid comprehension of the message and theoretical implications of hybrid warfare. It detaches theory from its practical relevance and forbids decoding particular historical circumstances.*

*Keywords: fractals, theory, Arthashastra, Gerasimov, hybrid war*

## Introduction

Benoit B. Mandelbrot once said that a large portion of geometry is cold and dry. This is reflected in most theories of social science research, particularly military ones.<sup>2</sup> Interestingly, scholars have bifurcated opinions about using theory in social science research. While some argue that undertaking social science research requires particular abstraction in the form of theories, others counter that the nature of research determines whether or not theories should be applied. Bifurcation illustrates how most theoretical explanations of real-world phenomena in social science research lack a strong empirical component. This remains true even though theories can be crucial to scientific research on various social phenomena by providing the

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<sup>2</sup> MANDELBROT 1983: 1.

strongest foundation, defining and combining ontology, epistemology, methodology and technique.<sup>3</sup> Theories are helpful for social science investigation because they encompass assumptions, definitions, concepts and generalisations to elaborate and explain real-world phenomena, even with the seeming bifurcation. Theories of social science research are heuristic because they direct and encourage the expansion of relevant knowledge at various abstraction levels. They help in the meaningful synthesis or combining of vast amounts of information to improve the understanding of real-world events. In social science research, theories play a vital role by enhancing research value and contributing to developing a sound corpus of knowledge.<sup>4</sup> Theories are formal generalisations, often lacking depth, generating caricature-like ontologies and nearly pointless epistemologies. The result is loss of true meaning and diminishing value. Therefore, theorising about conflict and war entails theorising about erratic and fragmented patterns that exhibit entirely dissimilar levels of intricacy and explain why certain aspects of battle endure for ages, only to be met with repeated rediscovery. According to Clausewitz, the renowned Prussian war theorist, the most beneficial aspects of battle are statistical and chance elements, which he called *friction*. It is crucial to note that all social science research theories, encompassing theories of war, always serve as frameworks; thus, they remain unaffected by scale and size of conflict, a medium that holds it, methods of conflict it employs, and extent of violence it encompasses. Hence, the erratic and disjointed pattern of war reflects universal or general premises.<sup>5</sup>

## War as natural form

Since the demise of the bipolar world order, many ideas about how to properly wage war have surfaced. Much ink has been poured on filling various expressions such as Revolution in Military Affairs, Shock and Awe, Network-Centric Warfare, Rapid Decisive Operations, Effects-Based Operations, Unrestricted Warfare and Hybrid Warfare with meaningful content. This is supported historically by a versatility of influential theorists of war just to name Sun Tzu, Kautilya, Machiavelli, Clausewitz, Jomini, Liddell Hart, Triandafilov and Gerasimov. The reason for the abundance of theories and theorists comes from the attempt to apply theories within social science research, including military science research to explain the discrepancies between empirical observations and theoretical explanations stemming from deterministic or indeterminate structures. This becomes increasingly evident because a heuristic understanding of irregularities typically does not conflict with determinism, unless there are no conditions that determine its occurrence.<sup>6</sup> Knowing the conditions for an irregularity to occur precisely is impossible; however, one can feel assured about those conditions. This sureness, for example, is reflected both in Kautilya's Arthashastra and

<sup>3</sup> VAN DER WALDT 2021: 1.

<sup>4</sup> VAN DER WALDT 2021: 3–4, 9.

<sup>5</sup> MANDELBROT 1983: 1–5; CLAUSEWITZ 1993: 138–142; BRODIE 1949: 471–475; CREVELD 1991: 157, 218; ROBBINS 1987: 25–49; HOOKER 2011: 4.

<sup>6</sup> LORENZ 1993: 157–160.

the so-called Gerasimov Doctrine that are the heart of this article because one can create correlations between statistical qualities, but has less success with individual events and their properties. The capacity to consider statistical traits of elements associated with events is reflected in various statistical variables. Therefore, since both possibilities are compatible with real-life, whether events occur in a deterministic or heuristic form is irrelevant. Thus, the debate about whether structures are deterministic or heuristic in warfare amounts to little more than inconclusive controversy, as both suggest unpredictability. Natural forms are referred to as deterministic and heuristic structures since they reflect events and phenomena that are visible to us. They are isomorphic structures found in many areas of human study, including economic societies, biological cells, organism populations, and, in our instance, war. One way to conceptualise natural forms is as a *natural system* or a *natural complex*. They have different attributes even though they both relate to the same thing. In contrast to a natural complex that exhibits intentional shapes and harmonious interactions among its components, a natural system reflects random shapes and topographic relationships among its elements and components.<sup>7</sup> Therefore, each particular natural form can be analysed as natural system or complex. While both constructs represent unpredictability, their distinction lies in subjective interest. A natural complex comprises interdependent constituents that cannot be separated without altering its identity. In such a well-organised division of labour, one constituent's specific function naturally complements others' roles. Since a natural complex responds differently to the same stimuli, non-determinism is the cause of its unpredictability. The fact that the constituents of a natural system are distinct but not independent of one another suggests that they function as arbitrary and exogenous impetuses. Despite their separation, they share an unbreakable chain-like integrity. Therefore, human ignorance of all the variables at work leads to the unpredictability of a natural system, and one comes across determinism where topographic interactions are efficient causation.<sup>8</sup> It is possible to view war as a natural form and subject of social science investigation as both a deterministic and a heuristic phenomenon, with the distinction arising from the respective inquiry rather than the underlying characteristics. Like systems such as rainforests or the weather that can be practical and heuristic in real-world occurrences, war is a natural phenomenon characterised by irregular and fragmented patterns that can be modelled and explained by mathematically deterministic chaos models.

## Arthashastra of Kautilya

War as natural form is also reflected in the many similar concepts in Kautilya's epic work, the *Arthashastra* that discusses erratic and disjointed patterns of war to develop a useful theory. The book is a historical Indian text concentrating on military tactics, economic policy and governance. It was primarily written in Sanskrit around 2,300 years ago and dedicates an entire chapter to war and defence. In this chapter just

<sup>7</sup> NAGEL 1979: 317–335; KHALIL 1990: 11–20.

<sup>8</sup> KHALIL 1990: 21–31; BUCHLER 1966: 1–51.

mentioned, Kautilya focuses on four different battles relevant to national security and modern warfare. Kautilya also contends that battling an opponent involves more than just combat. He asserts that, while *Prakasayuddha* represents open warfare or legitimate war, it appears as a set-piece fight, whereas *Mantrayuddha* represents the exercise of diplomacy. While *Gudayuddha* is a clandestine war that employs covert approaches to achieve a goal without direct combat, *Kutayuddha* denotes a hidden conflict centred on psychological warfare, encompassing treachery.<sup>9</sup> "Covert activities" encompass agents, secret spies, services, as well as illegal operations, as explained in the Arthashastra. In particular, it says: "Miraculous results can be achieved by practising the methods of subversion."<sup>10</sup> This includes induced propaganda that uses advertising and other means to release negative impacts on the opposing soldiers' cognitive areas.<sup>11</sup> Many of these tools might make victory very easy, comparable to most wars in the contemporary world. On the other hand, modern weapons have evolved significantly and do not require the adversary to be physically present in targeted areas. Kautilya recommended four *Upayas* (solutions): *bheda*, *dana*, *danda*, and *sama*, which refer to using every method at one's disposal to accomplish one's goals.<sup>12</sup> *Bheda* is for dissension, discontent, rupture, influence operations, or information; *danda* for using force and punishment; *dana* for economic gratification, compensation, gifts, and *sama* for diplomacy and conciliation. It becomes evident that identical structures that were discussed in Kautilya's epic volume millennia ago are present in today's non-linear, unrestrained, grey zone and irregular battle. In essence Kautilya treated the fractal nature and hybrid attributes of war as natural form millennia ago. Covert operations, information warfare, deception, propaganda, subversion, sabotage, conventional and nonconventional conflict, and other ideas are similar to the ones stated above. He distinguishes between six categories of troops, each with unique traits. *Maula* refers to the regular standing army that comprises the nation's indigenous people who support and rely on the monarch. These soldiers receive ongoing training because of their inherited allegiance to royal family, which the king honours. *Bhrita* is a regional army mobilised from the nation's respected citizens for a specific campaign. *Sreni* stands for organised native militias that work together because they share the king's interests. *Mitra* describes troops appointed or hired from other monarchs by agreement, or friendly troops of an ally. The king can use these forces whenever he wants, wherever, and for purposes that align with his own. *Amrita* describes alien forces that end up fighting for the monarch for their own resolutions. *Atavi* is a tribal force from the jungle who fight for the king under the leadership of their chiefs. Given the six different sorts of troops, Kautilya suggests that it is better to mobilise forces at the initiative's beginning rather than later.<sup>13</sup> Kautilya distinguished between two types of fights. When the king's army is superior, provoking the enemy's camp is successful, all safety protections were taken, and the terrain suits him, an *open battle* should be fought. If following requirements are unmet, *deceptive wars* should be fought. In this

<sup>9</sup> KAUTILYA 1992: 676.

<sup>10</sup> KAUTILYA 1992: 462–464.

<sup>11</sup> KAUTILYA 1992: 689–690.

<sup>12</sup> GAUTAM 2013.

<sup>13</sup> KAUTILYA 1992: 683–684.

scenario, the monarch will strike when enemy soldiers are unprotected, suffering from calamity, or on less appropriate terrain than the enemy.<sup>14</sup> Kautilya recommends that the best elements of the army be separated and kept out of the enemy's line of sight before forming the battle formation. Better terrain, timing and training determine the outcome when the fighting formations are evenly matched.<sup>15</sup> In regards to the siege, he claims that psychological warfare can be used to frighten the people, raise the spirits of their own soldiers, undermine the enemy's high officials, or depopulate the enemy's territory before the siege is established. Another strategy would be to kill the enemy after drawing him away from the fort's defences using various clandestine techniques. Another approach could involve secretly embedding your troops inside a fort and capturing it from within. Another alternative is to cut off the enemy's supplies so they cannot survive the siege. He also promotes using four strategies of gifts, sowing dissension, conciliation and force to persuade the opponent to surrender. By faking the withdrawal of the siege and using various kinds of individuals to persuade the enemy that it is safe for him to exit, only to face death, it is possible to fool him into leaving the fort. Overall, Kautilya lists five strategies for capturing a fort: psychological warfare, enticing the enemy away, causing him to become weak, besieging him and attacking the fort directly. Therefore, the last option would be to lay siege and attack the fort directly. Regarding psychological warfare, Kautilya lists techniques including bribing enemy chiefs, demonstrating omniscience and connecting to gods.<sup>16</sup>

## The Gerasimov Doctrine

Millenia later in a February 2013 article in the Russian *Military-Industrial Kurier*, General Valery Gerasimov, Chief of the General Staff of the Russian Federation Armed Forces, stated that new difficulties necessitate reconsidering how combat operations should be conducted.<sup>17</sup> According to him, the distinctions between peace and war became increasingly unclear and show an unusual pattern. The regulations have evolved as the significance of non-military strategies and tactics for accomplishing strategic and political objectives has increased. He asserts that non-military means, including economic, political, humanitarian and informational, are taking centre stage in the 21<sup>st</sup> century. Due to their covert nature, traditional military tools and techniques, such as information operations and application of special forces play a somewhat supplemental role. Only if the conflict is ultimately won may the conventional, open, head-on use of force be employed. This deadly blend makes it possible to eliminate the enemy's benefits and establishes a front that is always in operation across the enemy state's entire territory.<sup>18</sup> Mark Galeotti inadvertently created the term *Gerasimov Doctrine*,<sup>19</sup> which is a pseudo-military concept as a result of Russia's occupation of

<sup>14</sup> KAUTILYA 1992: 711.

<sup>15</sup> KAUTILYA 1992: 721–722.

<sup>16</sup> KAUTILYA 1992: 728–729.

<sup>17</sup> GERASIMOV 2016: 23–29.

<sup>18</sup> GERASIMOV 2016: 23–25.

<sup>19</sup> GALEOTTI 2014; GALEOTTI 2018.

Crimea, conflict in eastern Ukraine and conversion of his article into English, and the resurgence of the phrase *Hybrid War*, which was initially used ten years ago by Frank G. Hoffman.<sup>20</sup> Seeing war as a natural form and attempting to better understand its fractal-like attributes, the concept of hybrid warfare is more concerned with the human element than defence, changes primarily driven by technological superiority. The explanation is that enemies are imaginative people who do not follow the rules. Although revolutionary and evolutionary developments certainly affect how war is fought, they do not alter the essence of the conflict. Traditional fighting capabilities in key conflicts represent conventional superiority. Opponents would consider it logical to abandon the traditional approach to warfare and look for novel regulations, strategies and capabilities to obtain the upper hand. Hoffman pointed out that the United States' 2005 National Defense Strategy identified four novel risks or challenges: the disruptive, the irregular, the catastrophic and the traditional. These are not distinct; instead, they combine several means and modes, and precisely this synthesis creates the hybrid of conflicts. This kind of warfare demands approaches beyond technology, acknowledging a complex setting. Waging hybrid conflict is a battle of concepts that emphasises the psychological and informational elements of open communication. Understanding civilian population, gaining intellectual firepower, and developing cultural awareness are paramount for this to happen.<sup>21</sup> Hybrid war does not replace conventional modes of war but requires capabilities to counter innovative and agile enemies with tremendous reach and lethality. These enemies do not want to prolong the conflict but seek a decision by disrupting freedom of action, driving up involvement costs, and denying friendly forces their purposes. It takes creative thinking, unrestricted by cultural barriers, conservative blinders, and traditional institutional and intellectual methods, to defeat such adversaries. Expanding one's view on the range of conflict and moving beyond the conventional boundaries of state-to-state interaction are necessary to comprehend hybrid warfare. It necessitates shifting the emphasis from warfare to a more comprehensive understanding that transcends the traditional ethnocentric and triumphalist model. A greater degree of specialisation or even bifurcation is necessary in place of single-mission forces to strengthen the ability to wage hybrid war, which combines former separate types of warfare into one in which performance of one impacts the success of other. In a long and subtle mission, phases of activity or successive stages may merge in time and space, presenting forces involved with problematic situations. The intelligence community will undoubtedly be impacted by hybrid warfare in terms of using the information that is now accessible and obtaining the required combination of data from several sources. Due to the contested and convergent character of hybrid wars, an interagency strategy is necessary to unite all facets of national power so that they can surge without taking unnecessary risks.<sup>22</sup> Most characteristics of war as described by Kautilya, the concept of hybrid warfare and Gerasimov's understanding of war are comparable to imperial policing as coined by some British theorists. Concerning fundamental principles, it is clear that 1. policy should stay in hands of civil administration; 2. military force should be used

<sup>20</sup> HOFFMAN 2007.

<sup>21</sup> MATTIS-HOFFMAN 2005.

<sup>22</sup> HOFFMAN 2007: 43–48.

to a minimum; 3. prompt and decisive action must be taken without hesitation; and 4. all parties concerned must continue cooperating.<sup>23</sup> Kautilya, Hoffman, Gerasimov and Gwynn are the proof that war throughout the ages displays self-similarity, hence fractal-like characteristics.

## Fostering NATO–EU cooperation

Regardless of whether hybrid war as a paradigm is accurate or practical, the term gradually became ingrained in official political-military vocabulary and ultimately served as a means of advancing NATO–EU security and defence cooperation. NATO began creating a set of instruments to prevent and protect against hybrid warfare as a result of the 2014 conflict in Ukraine. Henceforth, the Alliance faced an institutional dilemma and had to improve its collaboration with the EU. To properly address challenges posed by hybrid warfare, cooperation with the EU can aid in expanding current tools. It provides a range of tools that can support NATO's crisis management initiatives. With various political and military tools, NATO and the EU might form a productive institutional tandem. During the 2014 NATO Summit in Wales, the Alliance formally recognised the EU as a strategic partner to make this possible. NATO and the EU will be able to use a wide range of different weapons to address new conflicts within the scope of the comprehensive strategy.<sup>24</sup> The dynamics of the Russian operation in Ukraine demonstrated how hybrid warfare combines information and cyber warfare, regular and irregular warfare, and conventional and unconventional warfare. In other words, hybrid conflict represents a complicated web of interrelated threats and political objectives, which is precisely why NATO and the EU should work together more closely.<sup>25</sup> Observing how military force can be employed in Ukraine below the legal limit of conflict, NATO and the EU have made fighting hybrid risks a priority for cooperation since 2016. Fake social media profiles, advanced cyberattacks, blatant deployment of military force, and everything in between are examples of weapons employed in hybrid warfare. To stay on top of changes and anticipate where the focus will shift next, countering these technologies needs to be just as dynamic and flexible.<sup>26</sup> In 2015, NATO Secretary General Jens Stoltenberg and Federica Mogherini, the EU High Representative for Foreign Affairs and Security Policy, released a press statement after the NATO Summit in Wales. Stoltenberg identified three specific areas during the news conference where NATO–EU cooperation should be further developed. The first topic covered was NATO's plans to combat hybrid threats. A closer partnership with the European Union can help focus and increase the battle's effectiveness. Additionally, Mogherini outlined three specific areas of cooperation where preparations for joint effort had already begun. She began by mentioning hybrid dangers, for which a collaborative framework was created in collaboration with the European Commission and the European Defence Agency to provide specific recommendations

<sup>23</sup> GWYNN 1934: 10–33.

<sup>24</sup> PINDJÁK 2014.

<sup>25</sup> PUYVELDE 2015.

<sup>26</sup> HAGELSTAM 2018.

to European Union Member States. She emphasised that engagement and collaboration with NATO are essential components of planned activities, such as awareness and analysis.<sup>27</sup> As noted previously, several EU and NATO Member States formally agreed upon the formation of the European Centre of Excellence for Countering Hybrid Threats in Helsinki, Finland, on 11 April 2017. 9 countries, including 7 NATO members, signed a Memorandum of Understanding. This highlights NATO's focus on countering hybrid threats that blur lines and conflate war and peace by integrating military aggression with cyber, disinformation, economic, political and diplomatic strategies. NATO created a new Intelligence Division, increased drills and training, and aggressively disputed misinformation with facts to combat hybrid threats. It also improved coordination with the EU.<sup>28</sup> In October of that year, Stoltenberg and Mogherini visited Helsinki as guests of Prime Minister Juha Sipilä and President Sauli Niinistö to attend the Centre of Excellence for Countering Hybrid Threats opening. Stoltenberg stated that the centre might assist countries and global organisations to better comprehend contemporary, complex challenges and fortify society against them.<sup>29</sup> In an interview entitled *What is NATO Doing to Address Hybrid Threats?* David Cattler, Assistant Secretary General for Intelligence and Security, asserted that hybrid warfare, encompassing the entire range of conventional and non-conventional threats, is a growing concern to governments and populations. To assist governments and societies in becoming more resilient to such threats, NATO should collaborate through the political, intelligence and military domains.<sup>30</sup> Numerous civilian and military research institutions, alongside higher education establishments, are undertaking a project entitled Interdisciplinary Education and Training on Hybrid Warfare (Project ID: 2021-1-HU01-KA220-HED-000032179).<sup>31</sup> A dedicated international team of experts has developed a Hybrid Warfare Reference Curriculum with funding from the European Union. It will be translated into a condensed form for high school students and enhanced with cutting-edge blended learning techniques. University students are the next generation of decision-makers and intellectuals, and the reference curriculum has the power to create a connection in their minds and hearts. Making hybrid warfare education available to students and lecturers, the reference curriculum provides a thorough and interdisciplinary approach in the widest sense. It includes descriptions and definitions, explores the hard and soft dimensions of hybrid warfare, and outlines relevant subjects and disciplines. Since the project generates new information that the writing partner institutions institutionalise and spread over time through various social activities, it represents a shift in their institutional portfolio. It offers the participating partners and the larger EU community something fresh and innovative. The collaboration promotes excellence and creativity by investigating and considering novel ideas like hybrid warfare and by providing instructors, researchers and students

<sup>27</sup> NATO 2015.

<sup>28</sup> NATO 2017a.

<sup>29</sup> NATO 2017b.

<sup>30</sup> NATO 2021.

<sup>31</sup> See also CAMBRIA et al. 2023: 9433–9440; CİRDEI 2023: 11–19; CİRDEI et al. 2023: 27–33; RAȚIU et al. 2023: 78–85; TUDORACHE et al. 2022: 128–133; TUDORACHE et al. 2023: 234–250.

with valuable new materials and techniques. The curriculum/materials can be viewed as a descriptive, introspective and illustrative analysis of hybrid warfare from various perspectives. In that it portrays hybrid warfare as a complicated phenomenon that poses grave risks to stability of any political union, it is descriptive. It is also reflected in considering hybrid conflict as a multifaceted and inherently complex phenomenon, and it uses the relevant scientific literature, particularly Clausewitz's seminal work *On War (Vom Kriege)*, to give coherence and consistency. Since discrepancies are found, the authors pinpoint and thoroughly describe the contributing elements, making it explanatory. By describing the fundamental characteristics from several angles, the reference curriculum creates a logical framework that presents a fresh approach to hybrid warfare.<sup>32</sup> Since the majority of wars throughout human history have had traits that readily qualify them as hybrid, general characteristics of hybrid war, its role in promoting NATO–EU cooperation, along with Hoffman's assertion that it does not alter the nature of war, may lead one to perceive that this war paradigm remains distant from new. As with the former term effects-based operations, one can easily presume that astute politicians and commanders consistently battled hybrid wars.<sup>33</sup> This is undoubtedly oversimplified, and it has the drawback that any such assertion may lead to flimsy generalisations that downplay the particular political, social, economic and cultural elements that have always played a significant role in how war is fought. Since manifestations of war are outcomes of society's evolution and reflect social conditions, all phenomena that sustain war, including organisations and norms, rely on a mix of historical circumstances.<sup>34</sup>

## Conclusion

Emphasising the hybrid nature of conflict in theory opens new definitions, concepts, assumptions and generalisations at various levels of abstraction. By drawing connections to earlier classics, each method aids in the meaningful synthesis or combination of vast volumes of knowledge to enhance comprehension of real-world events. Even if any theory of war involves theorising on fragmented and irregular patterns with varying degrees of complexity, hybrid warfare as a theory of war adds to the value of study and builds the maturity of the corpus of information surrounding conflict. This also explains why Gerasimov and Hoffman's methods and Kautilya's thesis on war are essentially the same. As a paradigm in theory of war, hybrid warfare advocates the idea that war is more of an art than science, and that the more adept a commander is at it, the more successful they will be. Both art and science of battle require a specific level of understanding and a specific approach, for which authority is needed, as the Indian classic made it evident. Although authority is mostly an artistic phenomenon and is mainly unscientific, knowledge is largely grounded in science, and both require thinking persons. One approach to analysing war is based on independent investigation, which results in independent thought and the recognition that conflict exhibits facts,

<sup>32</sup> JOBBÁGY–ZSIGMOND 2025: 7–12.

<sup>33</sup> CONRAD 2001; MCNICOLL 2003: 38.

<sup>34</sup> TOFFLER–TOFFLER 1993: 1–18; CREVELD 1991: 112–122.

fears, terror, novelty and invention.<sup>35</sup> Since science represents a collection of organised understanding based on facts, structured according to its respective values, it enables establishing the highest authority through well-defined procedure. Thus, according to the methodology used to seek knowledge, the study of conflict, including hybrid war as a paradigm, must be categorised as scientific. Since it deals with the human element – that is, people and their collaboration – science of conflict, also known as military science, lacks precision. Human contact during conflict results from adaptability to countless circumstances, some constant while others are unstable. Since all information comes from experience, a scientific approach to studying war necessitates experience. Like sensation, observation, introspection and decision-making, reasoning and imagination are rooted in experience. At the heart of science ultimately lies this evident causal sequence: sensations or observations prompt reflection and reasoning, culminating in decisions, either one way or another. This causal chain is an example of logic, which is composed of logical reasoning that might be deductive, inductive, or analogous. Inferences from particular to particular are analogical, inferences from particular to universal and general are inductive, and inferences from universal/general to particular are deductive in rational thought. All approaches apply to military science, as there is so much data that most causes and effects cannot be logically connected and are typically unknown.<sup>36</sup> By applying specific laws or principles with universal inference, the scientific method enables knowledge to be derived from the unknown. Though it is strongly advised to consider them in harmony, none of these laws or principles is more significant or valuable than the others.<sup>37</sup> The fundamental idea behind a sequence of deductive if/then statements is the representation of linear relationships where a specific cause leads to a specific outcome. Clausewitz cautioned that during war, “there is a gap between principles and actual events that cannot always be bridged by a succession of logical deductions”.<sup>38</sup> The existence of hybrid war as a longstanding phenomenon implies that there was not an initial hybrid war, but instead, combat was defined in broader terms. This simultaneously explains everything and nothing. The terminology of Kautilya, a prominent but little-quoted Indian war theorist, was thus worth closely examining.

The author of this article provided a comparative study, but had no intention of giving the reader a comprehensive review of history, philosophy, culture, or even language. Since each author represents a distinct era, the goal was to let them speak for themselves. It is tempting to justify current strategic thinking by citing earlier theories and drawing arbitrary connections. It gives greater prospects and stronger reasons for selling ideas to achieve influence and helpful tools for validating one's arguments in light of the classics. Any such allusion, therefore, runs the risk of undermining a solid comprehension of the message and theoretical ramifications of hybrid warfare. It separates theory from real-world application and forbids understanding of particular historical circumstances. It provides contextual forest and theoretical trees, which are

<sup>35</sup> FULLER 1937: 33–35.

<sup>36</sup> FULLER 1937: 36–47; FULLER 1923: 24.

<sup>37</sup> FULLER 1923: 27–28.

<sup>38</sup> CLAUSEWITZ 1993: 125.

superficial, deceptive and risky, rather than allowing one to perceive both theoretical and contextual trees.<sup>39</sup> For Clausewitz, it has been obvious that

“every age had its own kind of war, its own limiting conditions, and its own peculiar preconceptions. Each period [...] would have held to its own theory of war, even if the urge had always and universally existed to work things out on scientific principles. It follows that the events of every age must be judged in the light of its peculiarities”.<sup>40</sup>

The author takes his guidance and comes to the conclusion that hybrid war must have its roots considerably closer to the present.

## References

- BRODIE, Bernard (1949): Strategy as a Science. *World Politics*, 1(4), 467–488. Online: <https://doi.org/10.2307/2008833>
- BUCHLER, Justus (1966): *Metaphysics of Natural Complexes*. New York – London: Columbia University Press.
- CAMBRIA, Antonio – FISSORE, Cecilia – MARCHISIO, Marina – SACCHET, Matteo – SPINELLO, Enrico (2023): Educational Innovation in Hybrid Warfare. *ICERI 2023 Proceedings*, 9433–9440. Online: <https://doi.org/10.21125/iceri.2023.2432>
- CÎRDEI, Ionuț A. (2023): Training of the Forces for Carrying Out Military Actions in Operational Environments Characterized by the Existence of Hybrid Threats. *Land Forces Academy Review*, 28(1), 11–19. Online: <https://doi.org/10.2478/raft-2023-0002>
- CÎRDEI, Ionuț A. – TUDORACHE, Paul – ISPAS, Lucian (2023): Functional Models of the Sponsor–Agent Relationship in Proxy Warfare. *International Conference. Knowledge-Based Organization*, 29(1), 27–33. Online: <https://doi.org/10.2478/kbo-2023-0005>
- CLAUSEWITZ, Carl von (1993): *On War*. London: Everyman's Library. Edited and translated by Michael Howard and Peter Paret.
- CRANE, Conrad (2001): Effects-Based Operations: A Blast from the Past. *Defense Week*, 14 May 2001.
- CREVELD, Martin van (1991): *The Transformation of War. The Most Radical Reinterpretation of Armed Conflict Since Clausewitz*. New York: The Free Press.
- FULLER, John Frederick Charles (1923): *The Reformation of War*. London: Hutchinson and Co.
- FULLER, John Frederick Charles (1937): *The Foundations of the Science of War*. London: Hutchinson and Co.
- GALEOTTI, Mark (2014): *The 'Gerasimov Doctrine' and Russian Non-Linear War*. Online: <https://inmoscowsshadows.wordpress.com/2014/07/06/the-gerasimov-doctrine-and-russian-non-linear-war/>

<sup>39</sup> MEYER–WILSON 2003; CLAUSEWITZ 1993: 717.

<sup>40</sup> CLAUSEWITZ 1993: 717.

- GALEOTTI, Mark (2018): I'm Sorry for Creating the 'Gerasimov Doctrine'. *Foreign Policy*, 5 March 2018. Online: <https://foreignpolicy.com/2018/03/05/im-sorry-for-creating-the-gerasimov-doctrine/>
- GALEOTTI, Mark (2019): The Mythical 'Gerasimov Doctrine' and the Language of Threat. *Critical Studies on Security*, 7(2), 157–161. Online: <https://doi.org/10.1080/021624887.2018.1441623>
- GAUTAM, Pradeep K. (2013): *Understanding Kautilya's Four Upayas*. Online: <https://idsa.in/publisher/comments/understanding-kautilyas-four-upayas>
- GERASIMOV, Valery (2016): The Value of Science Is in the Foresight. New Challenges Demand Rethinking the Forms and Methods of Carrying out Combat Operations. *Military Review*, 96(1), 23–29. Translated by Robert Coalson.
- GWYNN, Charles W. (1934): *Imperial Policing*. London: Macmillan.
- HAGELSTAM, Axel (2018): *Cooperating to Counter Hybrid Threats*. Online: <https://www.nato.int/docu/review/articles/2018/11/23/cooperating-to-counter-hybrid-threats/index.html>
- HOFFMAN, Frank G. (2007): *Conflict in the 21<sup>st</sup> Century: The Rise of Hybrid Wars*. Arlington: Potomac Institute for Policy Studies.
- HOOKE, Richard D. Jr. (2011): Beyond "Vom Kriege": The Character and Conduct of Modern War. *Parameters*, 41(4), 1–13. Online: <https://doi.org/10.55540/0031-1723.2609>
- JOBBÁGY, Zoltán – ZSIGMOND, Edina eds. (2025): *Hybrid Warfare Reference Curriculum, Volume I, Compulsory Lectures*. Budapest: Ludovika University Press. Online: [https://doi.org/10.36250/01195\\_00](https://doi.org/10.36250/01195_00)
- KAUTILYA (1992): *The Arthashastra*. India Penguin Classics.
- KHALIL, Elias L. (1990): Natural Complex vs. Natural System. *Journal of Social and Biological Structures*, 13(1), 11–31. Online: [https://doi.org/10.1016/0140-1750\(90\)90031-Z](https://doi.org/10.1016/0140-1750(90)90031-Z)
- LORENZ, Edward N. (1993): *The Essence of Chaos*. Seattle: University of Washington Press.
- MANDELBROT, Benoit B. (1983): *The Fractal Geometry of Nature*. San Francisco: W. H. Freeman and Company.
- MATTIS, James N. – HOFFMAN, Frank (2005): *Future Warfare: The Rise of Hybrid Wars*. Online: <https://www.usni.org/magazines/proceedings/2005/november/future-warfare-rise-hybrid-wars>
- MCNICOLL, Iain (2003): Effects-Based Air Operations: Air Command and Control and the Nature of the Emerging Battlespace. *The RUSI Journal*, 148(3), 38–44. Online: <https://doi.org/10.1080/03071840308446887>
- MEYER, Andrew – WILSON, Andrew R. (2003): Sunzi Bingfa as History and Theory. In LEE, Bradford A. – WALLING, Karl F. (eds.): *Strategic Logic and Political Rationality. Essays in Honor of Michael I. Handel*. London: Frank Cass, 99–117.
- NAGEL, Ernest (1979): *The Structure of Science. Problems in the Logic of Scientific Explanation*. Indianapolis: Hackett Publishing Company.
- NATO (2015): *Press Statements by the NATO Secretary General Jens Stoltenberg and the EU High Representative for Foreign Affairs and Security Policy, Federica Mogherini*. Online: [https://www.nato.int/cps/en/natohq/opinions\\_125361.htm](https://www.nato.int/cps/en/natohq/opinions_125361.htm)

- NATO (2017a): *NATO Welcomes Opening of European Centre for Countering Hybrid Threats*. Online: [https://www.nato.int/cps/en/natohq/news\\_143143.htm](https://www.nato.int/cps/en/natohq/news_143143.htm)
- NATO (2017b): *Secretary General Participates in Hybrid Centre of Excellence Inauguration with Finnish Leaders and EU High Representative*. Online: [https://www.nato.int/cps/en/natohq/news\\_147497.htm](https://www.nato.int/cps/en/natohq/news_147497.htm)
- NATO (2021): *What Is NATO Doing to Address Hybrid Threats?* Online: [https://www.nato.int/cps/en/natohq/news\\_183004.htm](https://www.nato.int/cps/en/natohq/news_183004.htm)
- RAȚIU, Aurelian – CÎRDEI, Ionuț A. – HERMAN, Ramona-Elena (2023): Military Actions Characteristics in Hybrid Operational Environments. *International Conference. Knowledge-Based Organization*, 29(1), 78–85. Online: <https://doi.org/10.2478/kbo-2023-0013>
- PINDJÁK, Peter (2014): *Deterring Hybrid Warfare: A Chance for NATO and the EU to Work Together?* Online: <https://www.nato.int/docu/review/articles/2014/11/18/detering-hybrid-warfare-a-chance-for-nato-and-the-eu-to-work-together/index.html>
- PUYVELDE, Damien van (2015): *Hybrid War – Does It Even Exist?* Online: <https://www.nato.int/docu/review/articles/2015/05/07/hybrid-war-does-it-even-exist/index.html>
- ROBBINS, Stephen P. (1987): *Organization Theory. Structure, Design, and Applications*. Hoboken: Prentice Hall.
- TOFFLER, Alvin – TOFFLER, Heidi (1993): *War and Anti-War. Survival at the Dawn of the 21<sup>st</sup> Century*. Boston: Little, Brown and Company.
- TUDORACHE, Paul – BÂRSAN, Ghiță – JOBBÁGY, Zoltán – RAȚIU, Aurelian (2022): Hybrid Warfare – From Red to Blue Operational Behaviours. *International Conference. Knowledge-Based Organization*, 28(1), 128–133. Online: <https://doi.org/10.2478/kbo-2022-0020>
- TUDORACHE, Paul – BÂRSAN, Ghiță – JOBBÁGY, Zoltán – CÎRDEI, Ionuț A. – GLIGOREA, Ilie (2023): An Innovative Conceptual Model for Education and Training on Hybrid Warfare. *Management & Marketing*, 18(3), 234–250. Online: <https://doi.org/10.2478/mmcks-2023-0013>
- VAN DER WALDT, Gerrit (2021): The Judicious Use of Theory in Social Science Research. *The Journal for Transdisciplinary Research in Southern Africa*, 17(1), 1–9. Online: <https://doi.org/10.4102/td.v17i1.1039>