

# Improving Maneuver Warfighting with Antoine-Henri Jomini

Warfighting Functions, the Single Battle Concept, and Interior Lines

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**Abstract:** After distilling 2,500 years of military thought, particularly that of Chinese military strategist Sun Tzu, Prussian military theorist Carl von Clausewitz, and U.S. Air Force colonel John R. Boyd, *Warfighting*, Marine Corps Doctrinal Publication (MCDP) 1, does a remarkable job describing war and a warfighting philosophy. Noticeably absent in this document, however, are the ideas of Swiss military theorist Antoine-Henri Jomini. More importantly, *Warfighting* contains three interrelated gaps, namely identifying the significance of the seven warfighting functions, describing the importance of warfighting function integration, and explaining warfighting function integration in terms relative to an enemy. Consequently, *Warfighting* conveys a nonholistic approach to war and, consequently, articulates an incomplete warfighting philosophy. When applied within a modern context, however, contextualizing Jomini's theory of war offers a

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solution to each of these gaps. Therefore, the U.S. Marine Corps should amend *Warfighting* to include equal emphasis on all warfighting functions, utilization of the single battle concept to explain the importance of integrating all warfighting functions to achieve a desired end state, and adoption of Jominian interior-exterior lines framework to describe warfighting function integration in relative terms to an enemy. Failure to do so invites an inability for maneuverists to achieve greater tempo and create combined arms dilemmas in the twenty-first century.

**Keywords:** Antoine-Henri Jomini, *Warfighting*, MCDP 1, maneuver warfare, military theory, warfighting functions, single battle concept, interior lines

Warfighting, Marine Corps Doctrinal Publication (MCDP) 1, codifies the maneuver warfare philosophy for the U.S. Marine Corps. Impressively, it distills more than 2,500 years of military thought into a clear, concise publication and discusses the nonlinear and complex nature of war. As one observer notes, Warfighting (MCDP 1) provides "a conceptual framework for thinking about war itself . . . focused on attacking an adversary's mental and moral cohesion, with the goal of disrupting their ability to think and respond effectively to those friendly activities directed against them." Therefore, rather than describe a method, it expresses a mindset to approach warfighting.

The maneuver warfare philosophy articulated in *Warfighting*, however, is incomplete. Specifically, *Warfighting* fails to emphasize the importance of all warfighting functions, describe the necessity of integrating all warfighting functions, and explain warfighting function integration as relative to an

enemy. These gaps are not esoteric or insignificant; they prevent *Warfighting* from providing maneuverists with a holistic understanding of both combat power and leveraging all elements of combat power against a thinking enemy. As *Warfighting* states, in order to create a combined arms dilemma, maneuverists must organize combat power that "to counteract one, the enemy must become more vulnerable to another." In the aggregate, these gaps, all preconditions to create combined arms dilemmas, restrict the ability of maneuverists to achieve this result.

By emphasizing the importance of integrating all elements of combat power, however, nineteenth-century Swiss military theorist Antoine-Henri Jomini serves as a guide to identify solutions to the aforementioned gaps. Therefore, in applying Jominian concepts to a modern, maneuverist context, this article argues that the Marine Corps must amend *Warfighting* as follows: identify and emphasize the equal importance of the seven warfighting functions; utilize the single battle concept to explain the importance of integrating all warfighting functions to achieve a desired end-state; and adopt a Jominian interior-exterior lines framework to describe warfighting function integration in relative terms to an enemy. Failure to do so will only widen gaps for maneuverists to understand and apply maneuver warfighting.

# An Incomplete Warfighting Philosophy

As General Charles C. Krulak, 31st Commandant of the Marine Corps and the only one to have the original 1989 *Warfighting*, Fleet Marine Force Manual (FMFM) 1, revised by its original authors, emphasizes in his 1997 foreword to *Warfighting*, it "contains no specific techniques or procedures

for conduct. Rather, it provides broad guidance in the form of concepts and values."<sup>4</sup> Most of all, unlike most doctrinal publications of the other U.S. military Services, it describes the nonlinear and complex nature of war.<sup>5</sup> As a result, *Warfighting* provides a warfighting philosophy for the Marine Corps. Nevertheless, it fails to include critical elements of warfighting, and this section explores three gaps in detail to underscore the importance of each. The cumulative effect of these gaps reduces the ability of *Warfighting* to arm maneuverists with a warfighting philosophy suited for sustained, complex operations in the twenty-first century.

### Gap 1: All Warfighting Functions

Warfighting articulates the warfighting philosophy of the Marine Corps—maneuver warfare—which seeks to "concentrate strength against critical enemy vulnerabilities, striking quickly and boldly where, when, and in ways in which it will cause the greatest damage to our enemy's ability to fight." Frequently contrasted with attrition warfare, maneuver warfare's key difference from an attritionist approach is the mechanism of defeat. Whereas attritionists seek to erode enemy combat power over time, maneuverists seek "systemic disruption—eliminating the enemy's ability to operate as a coherent and cohesive whole." To operate effectively in multiple domains, both the Joint force and Marine Corps group all military activities into seven warfighting functions: command and control, maneuver, fires, intelligence, logistics, force protection, and information. Warfighting discusses a maneuverist, decentralized approach to command and control, to generate tempo and exploit opportunity through commander's intent, mission tactics, and subordinate initiative. Through its discussion and

examples of combined arms, *Warfighting* highlights fires and maneuver to place an enemy in a dilemma.<sup>10</sup> However, *Warfighting* does not describe force protection or information and loosely mentions logistics and intelligence. By failing to explicitly discuss all warfighting functions in equal terms, *Warfighting* at best adds unnecessary uncertainty—or at worst describes a fragmented approach—to warfighting.

Warfighting explains the importance of leveraging combat power in maneuver warfare. By focusing combat power against an enemy's critical vulnerabilities, maneuverists seek to undermine enemy centers of gravity and dismantle the enemy system. Combat power is the physical, mental, or moral means through which maneuverists tear apart the enemy system. Warfighting describes combat power as "the total destructive force we can bring to bear on our enemy at a given time." Apart from physical components, maneuverists can generate combat power through speed, surprise, focus, boldness, positional advantage, fighting spirit, and leadership. Significantly, there is no mention of how maneuverists sustain combat power through logistics or generate situational understanding through intelligence. To emphasize, combat power relates to all warfighting functions.

Combat power is directly related to combined arms, which creates a dilemma for an enemy "in such a way that to counteract one, the enemy must become more vulnerable to another." Additionally, combined arms "take[s] advantage of the complementary characteristics of different types of units and enhance our mobility and firepower." Warfighting does not state that combined arms only refers to fire and maneuver, but it also does not mention any other warfighting function with regard to combined arms.

The examples of combined arms within *Warfighting* deal explicitly and exclusively with fire and maneuver warfighting functions:

We can expand the example [of combined arms] to the MAGTF level: We use assault support aircraft to quickly concentrate superior ground forces for a breakthrough. We use artillery and close air support to support the infantry penetration, and we use deep air support to interdict enemy reinforcements that move to contain the penetration. Targets which cannot be effectively suppressed by artillery are engaged by close air support. In order to defend against the infantry attack, the enemy must make themselves vulnerable to the supporting arms. If they seek cover from the supporting arms, our infantry can maneuver against them. In order to block our penetration, the enemy must reinforce quickly with their reserve. However, in order to avoid our deep air support, they must stay off the roads, which means they can only move slowly. If they move slowly, they cannot reinforce in time to prevent our breakthrough. We have put them in a dilemma. 16

By not mentioning the need to integrate all warfighting functions in its exploration of combined arms and instead emphasizing fire and maneuver in every example, *Warfighting* misses the mark in laying the foundation for successful combined arms in the twenty-first century. All warfighting functions are critical.

Warfighting lacks any focused discussion of warfighting functions other than fire, maneuver, and command and control. It is ironic that the only time the word *logistics* is explicitly used within Warfighting is as an

example in the section "Orienting on the Enemy" that describes understanding the enemy as a system: "For a Marine expeditionary force commander, it might be all the major combat formations within an area of operations as well as their supporting [command and control], logistics, and intelligence organizations." All warfighting functions are equally important components of both an enemy's and the Marine Corps' system. By not addressing all warfighting functions, *Warfighting* conveys an insufficient foundation for understanding two critical components of maneuver warfare: combat power and combined arms.

### Gap 2: Integrating All Warfighting Functions

The complex and complicated character of modern military operations requires the full integration of all warfighting functions. When describing the importance of integrating combined arms, U.S. Army general George S. Patton Jr. used an effective analogy: "To get harmony in music, each instrument must support the others. To get harmony in battle, each weapon must support the other. Team play wins. You musicians of Mars . . . must come into the concert at the proper place and at the proper time." To continue this analogy, Mars' orchestra requires more than just harmonizing the strings and woodwind sections; the brass and percussion sections are all part of the whole, and a conductor must properly integrate them. As detailed below, both *Logistics*, MCDP 4, and *Intelligence*, MCDP 2, describe the necessity for integrating each of their warfighting functions within operations, but *Warfighting* unfortunately does not. Other warfighting functions, such as information and force protection, have no doctrinal publication linking them to maneuver warfare, further underscoring the

need to incorporate them within *Warfighting*. By failing to express the importance of integrating all warfighting functions, *Warfighting* does not provide a sufficient framework to understand modern warfighting.

Logistics is not a warfighting function that occurs in isolation. Indeed, it "is an integral part of warfighting. Logistic action is an essential part of military action."20 Logistics define what is and is not possible to achieve operationally, and therefore there is a "tense and dynamic partnership" between operations and logistics."21 Warfighting has the potential to ease this tension by addressing logistics as a warfighting function equal in importance to all others; logistics enables maneuverists to place an enemy in a combined arms dilemma.<sup>22</sup> Tellingly, *Logistics* contains an historical example showing the interrelationship between logistics, intelligence, and maneuver: "For his conquest of the Persian empire, Alexander the Great conditioned his troops to march with a minimum of baggage, and he developed an intelligence system that made him aware of the location of sources of food and fodder along his route of march."<sup>23</sup> This more balanced description of warfighting is absent from Warfighting and also highlights another important warfighting function that Warfighting falls short on: intelligence.

Just as logistics is equal in importance to fire and maneuver, so too is intelligence. Indeed, intelligence "is a central component of [command and control], a fundamental responsibility of command, and inseparable from operations." <sup>24</sup> Intelligence plays a critical role in maneuver warfare by identifying enemy critical vulnerabilities to exploit and providing commanders situational awareness. <sup>25</sup> *Warfighting* acknowledges intelligence within operations, but not in an organized way that emphasizes its

interrelationship with all warfighting functions. In the section "Uncertainty," Warfighting explains the nature of war as precluding the ability to obtain a complete, verified picture of events. Collections attempt to reduce, not eliminate, the "fog of war." In the section "Surfaces and Gaps," Warfighting states that exploiting gaps "demands flexibility and speed. We must actively seek out gaps by continuous and aggressive reconnaissance."27 Commanders should have trust in their subordinates and empower them to find gaps and "pull' combat power through gaps from the front, rather than 'pushing' it through from the rear."28 Furthermore, in explaining command push and reconnaissance pull, Warfighting shows a link between intelligence and operations. Nevertheless, intelligence does not just consist of reconnaissance. Warfighting falls short of emphasizing full integration of intelligence within operations to include enabling the commander to make informed decisions, continuously refining the plan throughout planning and execution, and conducting counter-reconnaissance to prevent enemy collections.<sup>29</sup> Additionally, Warfighting fails to describe the importance of intelligence in warfighting functions apart from fire and maneuver.

While *Warfighting* articulates a cohesive framework of integrating fire and maneuver through combined arms, this framework does not extend to all warfighting functions as the exclusion of logistics and intelligence illustrate. Further, despite Marine Corps logistics and intelligence doctrine describing the importance of integrating specific warfighting functions together, there is no organizing framework or logic that synchronizes and sequences all warfighting functions together over time. Military analyst Stephen D. Biddle claims that "force employment had played a more important role than either technology or preponderance for twentieth

century warfare."<sup>30</sup> Consequently, warfighting function integration has a far greater role in success on the battlefield than any specific warfighting function or military hardware advantage.<sup>31</sup> Moreover, maneuver warfare aims to leverage strength against weakness, yet *Warfighting*, the Marine Corps' seminal publication that articulates the philosophy of maneuver warfighting, does not contain the theoretical foundation of full integration of warfighting functions to leverage strength against enemy critical vulnerabilities over time. As the character of war continues to evolve, maneuverists must understand combined arms maneuver as full warfighting function integration to enable them to put enemies in a multidomain dilemma. Failing to do so is to invite defeat.

### Gap 3: Integration in Relation to an Enemy

Importantly, maneuverists cannot view warfighting function integration in terms of friendly forces in isolation. War is similar to a duel with two opposing forces acting upon each other.<sup>32</sup> *Warfighting* conveys this intrinsic aspect of the nature of war repeatedly throughout its text. As a result, both maneuverists and their enemies concurrently endeavor to integrate their own warfighting functions and disintegrate their opponent's warfighting functions.<sup>33</sup> Since maneuverists understand that the nature of war is fundamentally interactive, understanding integration in relation to the enemy is a natural conclusion that should be included within *Warfighting*. Failing to consider relative warfighting function integration prevents maneuverists from fully understanding relative combat power and reduces their ability to force their enemies into combined arms dilemmas.

Combined arms maneuver remains an essential part of warfighting because it attacks an enemy physically, mentally, and morally. However, *Warfighting* does not acknowledge, let alone emphasize, the importance of integrating all warfighting functions to create a combined arms dilemma. The character of war continues to evolve and grow more complex, and the military organization capable of understanding combined arms maneuver as integrating all warfighting functions more effectively than its opponent will have a decided advantage. *Warfighting* remains an invaluable text to guide maneuverists' approach to war. The goal, therefore, is not to supplant the ideas contained within *Warfighting*, but rather to strengthen them by offering a compatible framework to fill these gaps. Fortunately, a long-overshadowed nineteenth-century military theorist, Antoine-Henri Jomini, provides a framework to fill these gaps.<sup>34</sup>

## A Jominian Response

All Jominian thought stems from what Jomini termed the "fundamental principle of war."<sup>35</sup> In his *Treatise on Grand Military Operations*, he summarizes this principle as "to operate with the greatest mass of our forces, a combined effort, upon a decisive point."<sup>36</sup> Jomini's fundamental principle of war is not of importance here; instead, his approach to harnessing combat power to apply the fundamental principle has significant value. Jomini conceptualizes warfighting as far more than consisting of fire and maneuver. Rather, he elevates logistics, which he views in terms of several warfighting functions, and intelligence to serve as equal components of his theory of war.<sup>37</sup> Jomini also provides a framework through which warfighting functions are directed, namely lines of operation.<sup>38</sup> Finally, his

ideas concerning interior and exterior lines serve as a meaningful construct for how lines of operation are considered in relation to an enemy.<sup>39</sup> For Jomini, each of these elements are critical to create an advantage over an enemy.

This section addresses each gap within *Warfighting* identified in the previous section through a Jominian lens and provides a recommended addition to fill each gap. As Michael I. Handel asserts when considering classic works of military theory, "Like all other classical works of art and philosophy, they are open to different interpretations according to the background, interests, and perspectives of a particular reader." Jomini wrote within a certain context, namely nineteenth-century Europe, and was strongly influenced by the Seven Years' War and the Napoleonic Wars. Therefore, after describing Jomini's theory in relation to each gap, this section will apply Jomini's approach within a modern context and provide specific recommendations to amend *Warfighting*.

## An Inclusive Approach to Maneuver Warfare: Warfighting Functions

As a consequence of his belief that the fundamental principle of war was the secret to victory, Jomini strives to develop a holistic understanding of all military activities that contribute to applying this principle.<sup>42</sup> As historian Jean-Jacques Langendorf observes, "When Jomini is able to see 'the big picture,' develop a vision of it, what he believes to be the true nature of the strategic effort, he is also able to deal with the essential problems, raised by the organization of armies."<sup>43</sup> One of these "essential problems" was logistics. Indeed, Jomini classifies logistics as one of six distinct parts of the art of war.<sup>44</sup> He views logistics as critical in planning and executing

operations: "Logistics is the art of moving armies. It comprises the order and details of marches and camps, and of quartering and supplying troops; in a word, it is the execution of strategical and tactical enterprises." Therefore, rather than regard it as marginal to fighting, Jomini's theory of war considers logistics to be inseparable from warfighting. 46

Importantly, Jomini's definition of logistics includes more than logistics as a warfighting function. As Ami-Jacques Rapin observes, logistics "gained the significance it retained later only because Jomini had questioned the set of conditions required for the application of the principle of the concentration of forces." Therefore, Jominian logistics encompasses all the duties of a military staff, to include:

- Arranging with the chiefs of engineers and artillery the measures to be taken for the security of the posts.
- Ordering and directing reconnaissances of every kind . . . [to procure]
  as exact information as possible of the positions and movements of
  the enemy.
- Giving proper composition to advanced guards, rear-guards, flankers, and all detached bodies.<sup>48</sup>

As seen above, Jominian logistics includes functions typically associated with intelligence and force protection. Consequently, when Jomini describes logistics as an integral part of warfighting, he is not only referring to the Marine Corps' six functions of logistics, consisting of supply, transportation, maintenance, health services, general engineering, and services, but also the force protection and intelligence warfighting functions.

Jomini places great emphasis on acquiring and analyzing intelligence, largely because intelligence is critical to identify the enemy's decisive point and develop a plan to mass strength against it.<sup>49</sup> Although Jomini states that a commander should strive to obtain "perfect information of the enemy's proceedings . . . it is a thing of the utmost difficulty, not to say impossibility; and this is one of the chief causes of the great difference between the theory and the practice of war."50 Jomini's balanced approach to intelligence consists of using a variety of means to increase situational awareness, to include employing spies, conducting reconnaissance with light troops or officers, questioning prisoners of war and deserters, and developing possible enemy courses of action through careful analysis.<sup>51</sup> Therefore, according to Handel, in comparison to Chinese military strategist Sun Tzu and Prussian military theorist Carl von Clausewitz, "Jomini's The Art of War makes the best theoretical statement on the role of intelligence." This is because Jominian thought views intelligence as a military activity equal in importance to all others while still understanding the limits of gathering intelligence. 53 Jomini's lasting value stems from articulating a theory of war that considers the interrelation of all warfighting functions as inseparable from warfighting.

Applying Jomini's logic to *Warfighting*, there is a noticeable absence of considering warfighting functions as mutually supportive and integral to placing an enemy in a combined arms dilemma. There is no construct within *Warfighting* that ties together all friendly elements of combat power that allows maneuverists to achieve greater tempo in relation to an enemy. When maneuverists approach warfighting holistically through fire, maneuver, command and control, intelligence, logistics, force protection,

and information, they can assess and integrate friendly critical capabilities and critical requirements against enemy critical vulnerabilities, ultimately aimed to destroy the enemy's center of gravity.

Jomini's theory of war is unique in that it considers what are now called warfighting functions to be necessary and mutually supporting. Using the admittedly catch-all term *logistics*, Jomini holistically explored how combat power transitioned from a base of operations to massing on an enemy's decisive point. Rapin argues that this is one of Jomini's key contributions to military thought: "Far more important is the conceptual rebalancing that no longer made logistics an area subordinate to operational strategy or tactics." This "rebalancing" is far more significant than a historical curiosity. It provides a framework with which maneuverists understand their own forces and the enemy as a system. Combined arms remains a key component of maneuver warfare, and *Warfighting* should emphasize the role of all warfighting functions in conducting combined arms maneuver. Accordingly, in considering both systems, maneuverists should ask themselves, "Am I accounting for all warfighting functions?"

Jominian Lines of Operation Reimagined: Warfighting Function Integration and the Single Battle

To Jomini, to mass combat power on the decisive point is the fundamental principle of war, resulting in his emphasis on lines of operation.<sup>55</sup> In an effort to thoroughly describe lines of operation, he defined as many as 10 different kinds of maneuver lines of operation, which, rather than clarify important aspects of the concept, tend to confuse his ideas.<sup>56</sup> These lines of operation include simple, double, interior, exterior, concentric, divergent,

deep, secondary, provisional, and accidental.<sup>57</sup> Far more important than understanding each type of line of operation is understanding why Jomini believed they are so important. Indeed, Jomini writes, "The great art, then, of properly directing lines of operations, is . . . to seize the communications of the enemy without imperiling one's own."<sup>58</sup> By "communications," he refers to lines of communication, by which information, supplies, and reinforcements travel.<sup>59</sup> Through lines of operation, commanders choose how to focus their combat power on the most vulnerable part of an enemy, which includes either the physical part of the enemy's line or the enemy's supply lines.<sup>60</sup>

Significantly, Jomini breaks from other military theorists such as Welsh writer Henry Llyod and Prussian writer Adam Heinrich Dietrich, baron von Bülow, both of whom discussed lines of operation in deterministic, geometrical terms, and instead describes them as existing within a space of action and opportunity. 61 For Jomini, a line of operation is not merely a spatial arrangement of combat power, but rather an expression of a commander's will: "The idea the author seeks to express somewhat clumsily is that the lines of operation are not really positions relative to enemy forces, but projections of the will of the general-in-chief beyond his strategic front."62 Therefore, when Jomini writes that one of the key decisions of a general is the "choice of lines of operations leading to the objective point or strategic front," he is arguing that the commander provides both the unifying purpose and the intent for how the unit maximizes combat power to achieve that objective. 63 Finally, as an example to reinforce his break with the determinist, geometric theorists, Jomini writes in "Maxims on Lines of Operations" that the "nature of the country, the rivers and mountains, the

morale of the armies, the spirit of the people, the ability and energy of the commanders, cannot be estimated by diagrams on paper."<sup>64</sup> Jomini acknowledges both the limitations of planning and the intangibles of war.

Jomini further develops his idea concerning lines of operation as a commander's decision in explaining the relationship of strategy, logistics, and grand tactics: "Strategy decides where to act; logistics brings the troops to this point; grand tactics decides the manner of execution and the employment of the troops." Jominian logistics, consisting of the logistics, force protection, and intelligence warfighting functions, are equally important as grand tactics, the integration of fire and maneuver organized through command and control, to achieve the commander's end state determined by strategy. The logic that translates decision into action is the line of operation. Within the context of the nineteenth century, Jomini gave lines of operation a new meaning that necessitated warfighting function integration to achieve mass at the decisive point.

Although critical in building the foundation for warfighting function integration, Jominian lines of operation are unsuited to enable the mindset required for maneuver warfare for two main reasons. First, Jomini inherited the term *line of operation* from previous military theorists who considered war as a mathematical problem to solve. Although Jomini was not geometric in his approach, the term carries the connotation of a linear approach to warfighting. There is no need to introduce an incongruity between the nonlinear nature of war and lines of operation. Second, *line of operation* is already used by the Marine Corps and Joint Services as part of campaign design and operational art. *Joint Planning*, Joint Publication 5-0, states that lines of operation "describe and connect a series of decisive actions that

lead to control of a geographic or force-oriented objectives."<sup>67</sup> However, *Warfighting* describes a warfighting philosophy for all levels of war, and the Marine Corps should continue to nest its terminology with the Joint Services. Nevertheless, the Marine Corps has a better term to describe warfighting function integration that is well-suited for maneuver warfare: the *single battle concept*.

The single battle concept provides the foundational understanding that emphasizes the need for complete warfighting function integration. Defined in *Marine Corps Operations*, MCDP 1-0, as a tenet of planning, the single battle is "a unifying perspective of operations, which holds that actions anywhere in the operational environment can affect actions elsewhere." The single battle concept has far greater applicability than just planning; it equips maneuverists with a holistic understanding of their actions within a battlespace. As Wayne A. Sinclair explains, "The single battle is essentially about how to most effectively and simultaneously harness the power of all elements of the MAGTF [Marine Air-Ground Task Force] and integrate their activities across the MAGTF's area of operations." By including single battle and linking it directly to warfighting function integration, *Warfighting* would promote a mindset that integrates and synchronizes all elements of combat power in time and space against enemy weakness.

Simply using warfighting functions as a framework to approach friendly and enemy forces as a system is insufficient; maneuverists must integrate warfighting functions. Lines of operation are a fundamental part of Jomini's theory of war, and they provide the theoretical foundation for warfighting function integration. As Jomini argues, "No enterprise will

succeed in war without combined and simultaneous movements; without perfect coordination and cooperation of all the parts at the same time directed to the same end."<sup>70</sup> Due to their geometric roots and current use as a Joint Service operational-level term, however, lines of operation do not adequately convey a broadly applicable understanding of warfighting function integration within maneuver warfare. Instead, *Warfighting* should include the single battle concept and describe it as more than a tenet of planning; the single battle both provides a foundation for maneuverists to visualize battlespace holistically and emphasizes full warfighting function integration. Therefore, maneuverists should ask themselves, "Am I integrating warfighting functions in a way that maximizes their effects and economizes their efforts?" and "How can I better integrate warfighting functions to support the single battle?"

Interior Lines and Exterior Lines: Relative Warfighting Function Integration

Jomini was fascinated by how the smaller armies of Frederick the Great and

Napoleon Bonaparte repeatedly defeated larger armies. After analyzing
their battles, he concluded that interior lines held the answer to their
successes. Jomini defines interior lines as having such a direction that the
general can concentrate the masses and maneuver with his whole force in a
shorter period of time than it would require for the enemy to oppose to
them a greater force. Accordingly, he states that exterior lines lead to the
opposite result, and are those formed by an army which operates at the
same time on both flanks of the enemy, or against several of his masses. Significantly, as Richard M. Swain observes, Jomini was perhaps the first to
assert that the relationship of interior lines is temporal rather than

spatial."<sup>74</sup> Interpreting this through a maneuverist lens, Jomini viewed interior lines to be advantageous because these enabled a commander to generate greater tempo than the enemy.

Just as Jomini considers interior lines in terms of relative time, maneuverists should understand warfighting function integration as similar to tempo. Warfighting defines tempo as "rapidity of action . . . [in] both time and space . . . over time." Through greater relative tempo, maneuverists "seize the initiative and dictate the terms of action, forcing the enemy to react," all of which are critical components to create combined arms dilemmas. Successfully integrating warfighting functions will sustain speed over time, thereby generating tempo. As a result, Warfighting should emphasize integrating warfighting functions more effectively than the enemy.

Interior lines provide a framework to understand warfighting function integration in relation to an enemy. For example, an infantry battalion command post is located closer to its subordinate companies' command posts than the enemy battalion is to theirs. Due to enemy spectrum jamming, however, the friendly battalion is unable to communicate with its companies' command posts during an enemy attack. Even though the friendly battalion is physically closer to its companies' command posts, it is operating with exterior lines while being jammed because the battalion is unable to rapidly integrate its combat power. As another example, a battalion landing team (BLT) depends on rotary aircraft for resupply. Although the BLT's supplies are located farther away than their enemy's logistics resupply point, the BLT receives resupply far more quickly than the enemy, thereby having logistical interior lines. Nevertheless, the enemy

strengthens its integrated air defense system to such an extent that it establishes a denied-access combat airspace over the BLT; it now operates with logistical exterior lines. This last example reveals two important characteristics of warfighting function integration. First, maneuverists should consider the resiliency and flexibility of their particular warfighting function integration. Second, an enemy seeks to disintegrate components of its opponent's warfighting function integration to generate greater relative integration, reinforcing the first point. Nevertheless, maneuverists should strive to maintain interior lines across all warfighting functions.

The nature of war is competitive. Jomini's theory of war viewed interior lines as creating a decisive relative advantage due to its temporal, not spatial, characteristics. Similarly, maneuverists seek to gain a greater relative advantage in integrating warfighting functions to their enemy. As shown above, interior and exterior lines provide a valuable framework with which to understand integrating warfighting functions within the single battle against a dynamic enemy. Maneuverists should ask themselves, "Are all aspects of the single battle generating interior lines? What is the risk of not doing so? How resilient and flexible is my warfighting function integration?" In doing so, maneuverists can sustain greater warfighting function integration in relation to an enemy, generate faster tempo, and tear the enemy system apart.

#### **Recommendations**

First, *Warfighting* should identify and briefly discuss warfighting functions within the section "Combat Power" in chapter 2. Currently, *Warfighting* indicates that it does not "try to list or categorize all the various components

of combat power, to index their relative values, or to describe their combinations and variations; each combination is unique and temporary."<sup>79</sup> The intent to include warfighting functions here is not to introduce a formulaic approach to combat power, but rather to emphasize that all action, or inaction, within the battlespace contributes to or degrades physical, mental, and moral combat power. Despite relegating them to appendix B—which follows appendix A, "Principles of Joint Operations"—*Marine Corps Operations* contains a detailed description of warfighting functions, and it should remain the primary reference concerning warfighting functions. *Warfighting* should only provide enough explanation of warfighting functions to allow maneuverists to understand them in broad terms and relate them to combat power.

Second, *Warfighting* should add a new section entitled "The Single Battle Concept" in chapter 4 between the "Main Effort" and "Surfaces and Gaps" sections. It should include both a brief discussion of warfighting function integration and an explanation of how that integration impacts all aspects of the battlespace. As Sinclair explains, the singe battle "is about shared objectives, total force utilization, and a type of singular integration in time, space, and purpose that ensures the MAGTF 'whole' is, in fact, greater than the sum of its parts." Therefore, this new section in *Warfighting*, building on the previous discussions of mission tactics, shaping actions, and commander's intent, would synthesize these key concepts and place them within a larger picture. Additionally, *Warfighting* should fuse together the concepts of warfighting function integration with combined arms. Not only should the "Combined Arms" section in chapter 4 emphasize the importance of warfighting function integration, but also it should amend its examples to

include combined arms across warfighting functions and domains. Similar to the identification of warfighting functions within "Combat Power," *Marine Corps Operations* should provide the detailed description of the single battle concept as it relates to warfighting function integration and battlespace framework, not *Warfighting*.

Third, Warfighting should include interior and exterior lines as they relate to warfighting function integration relative to the enemy in the "Surfaces and Gaps" section in chapter 4. In doing so, Warfighting would expand the surfaces and gaps discussion by explaining that to break an enemy's interior lines forces them to utilize exterior lines, which not only creates advantage for friendly forces but also causes the enemy to culminate more quickly. Warfighting should also incorporate examples with interior lines within the "Combined Arms" section to emphasize the necessity of relative warfighting function integration in the creation of combined arms dilemmas.

A complete understanding of warfighting function integration enables maneuverists, from fire team leaders to Marine Expeditionary Force commanders and their staffs, to plan and execute operations effectively. Although *Marine Corps Operations* describes warfighting functions and the single battle concept, it discusses them as disconnected terms and does not capitalize on their potential value. Warfighting functions and the single battle concept should remain in *Marine Corps Operations*, but they may require increased emphasis and revision concurrent with implementing the recommended changes in *Warfighting*. The single battle provides maneuverists with a foundation to conceptualize warfighting function integration to focus, sustain, and protect combat power across domains

over time that, combined with interior lines, enable maneuverists to achieve greater tempo and tear the enemy's system apart. With the inclusion of the above recommendations, *Warfighting* will articulate a holistic warfighting philosophy that develops the minds of maneuverists to combat the challenges in the twenty-first century and beyond.

#### **Counterarguments**

At its core, *Warfighting* is Clausewitzian. Its author, then Captain John F. Schmitt, indicated that he was heavily influenced by the theories of Sun Tzu, Clausewitz, and U.S. Air Force colonel John R. Boyd. Indeed, renowned Clausewitzian scholar Christopher Bassford observes that *Warfighting* "is essentially an easily readable distillation of Carl von Clausewitz's famous philosophical treatise *On War*, heavily flavored by the ideas of the ancient Chinese military sage Sun Tzu and written to encourage a maneuverist orientation."<sup>81</sup> Therefore, it seems strange for the Marine Corps to amend *Warfighting* with ideas inspired by Jomini, whose writings some maneuverists view as too prescriptive and in direct conflict with both Clausewitzian theory and maneuver warfare.<sup>82</sup> Similarly, some maneuverists may consider warfighting functions, the single battle concept, and interior-exterior lines to be too prescriptive to be included in *Warfighting*. This section addresses both of these concerns.

## Jominian Thought Is Incompatible with Maneuver Warfare

As James D. Hittle observes, "The military world today that burns gunpowder at the altar of Clausewitzian doctrine has all but forgotten Antoine Henri Jomini."<sup>83</sup> This is due, in part, to a misinterpretation of the relationship

between Jomini and Clausewitz as mutually exclusive, not complementary.<sup>84</sup> Previous scholarship analyzing Jomini's ideas has largely ignored his theoretical development, leading some observers such as Bassford to argue that "Jomini's view of history and of war was static and simplistic." After writing his *Treatise on Grand Military Operations* in 1805, Jomini went on to serve on French Imperial marshal Michel Ney's staff beginning in 1805, experience Spanish partisan warfare in 1808, take an active role in Napoleon's 1812 retreat from Russia, and again serve as Ney's chief of staff during the 1813 Battles of Lützen and Bautzen. Following the Napoleonic Wars, Jomini served as an aide-de-camp to the Russian czar, was present at the 1815 Congress of Vienna, helped found the Russian Military Academy, and advised senior commanders during the 1828–29 Russo-Turkish War. 86 It was also during this period that he interacted with the ideas of multiple theorists, most notably the Austrian archduke Charles, Erzherzog Karl, and Clausewitz.87 Therefore, Jomini's 1839 The Art of War reflects both his personal experience of war and the synthesis of his own ideas with the other leading minds of the day, in turn making his and Clausewitz's theories of war complementary.

The purpose here, however, is not to detail how one can harmonize Jomini and Clausewitz, but rather point out that this approach is a false bifurcation. Although he did not write specifically about the nature of war, Jomini was "aware of the complexity of war, as well as the impossibility of reducing the phenomenon to a simple formula." More importantly, Jomini is not incompatible with maneuver warfare for two main reasons. First, his theory includes aspects that coincide directly with maneuver warfare. Second, war is a complex endeavor with no single approach providing the

one true answer; he offers a different perspective. It does not matter whether or not Jomini is a maneuverist; instead, Jominian thought contains valuable ideas that improve maneuverists' understanding of warfighting.

A thorough examination of how Jomini's theory of war coincides with maneuver warfare is in itself a major undertaking beyond the scope of this article. However, a cursory sample of Jomini's writings reveal that he aligns with several key aspects of maneuver warfare to include attacking an enemy's weakness with strength and seeking to shatter an enemy's cohesion and will. After all, Jomini's fundamental principle of war is attacking an enemy's weakness with the greatest amount of strength—"to operate with the greatest mass of our forces, a combined effort, upon a decisive point"—which is usually either the flank of an enemy or their lines of communications.<sup>89</sup> Therefore, Jomini states, "The great art, then, may be reduced to this: to seize upon the enemy's communications without the loss of our own."90 Importantly, Jomini argues to gain an enemy's lines of communication precisely due to the effect it has on its cohesion and will: "Irresolution and fear would be spread throughout the entire line; thus overthrown upon its flanks, and threatened with entire destruction from the enemy's direction upon his rear."91 Jomini did not anticipate maneuver warfare, but his ideas certainly nest within some of its core concepts.

More importantly, as Peter Layton observes, "no single approach to studying an activity as complex as war can be expected to be all-encompassing." Theory must be informed by a variety of approaches and cannot become static. Maneuverists, especially those familiar with Boyd, should not be surprised by this sentiment. In fact, soon after the publication of *Warfighting* (FMFM 1), the predecessor to *Warfighting* (MCDP 1), Boyd

called Schmitt, congratulated him on the important milestone, and then began listing recommendations to improve it. As one observer notes, "Even in victory, the process of destroying and creating new mental worlds could not be allowed to stop." According to Boyd, a way to create new mental models is to break down multiple systems to their essence through analysis, form novel connections between them through synthesis, and create a new system. Handel asserts that there is no definitive interpretation of any classical strategist: "Like all other classical works of art and philosophy, they are open to different interpretations according to the background, interests, and perspectives of a particular reader." In this way, contextualizing Jomini's theory, analyzing it in terms of effects, and applying it to a modern context enables the formation of a new mental model that does not replace but reinforces maneuver warfighting.

## Solutions Are Too Prescriptive for Warfighting

In the foreword to *Warfighting*, General Krulak explains that the publication's purpose is to describe a warfighting philosophy. To that end, he writes, "This book contains no specific techniques or procedures for conduct. Rather, it provides broad guidance in the form of concepts and values." *Warfighting* aims to arm maneuverists with a mindset to approach warfighting, not provide specific answers. Therefore, incorporating warfighting functions, the single battle concept, and interior-exterior lines within *Warfighting* may appear incompatible with its purpose. These terms, however, are meant to provide a framework and vocabulary with which maneuverists can consider warfighting functions as they relate to warfighting—nothing more.

The solutions to fill each gap identified within Warfighting relate to how maneuverists understand and approach warfighting; they do not prescribe how maneuverists should fight. For example, by including warfighting functions, Warfighting would not tell maneuverists what to think, but rather provide a framework with which to consider warfighting as a whole. Additionally, Warfighting portrays combined arms through fire and maneuver, failing to emphasize the role of all warfighting functions. However, maneuverists should understand the need to integrate all warfighting functions to force the enemy into a combined arms dilemma. The single battle concept is not a prescriptive approach to integrate warfighting functions either; it is merely a framework to consider warfighting function integration to accomplish a mission. After all, warfighting function integration without an objective is meaningless. Finally, interior lines are not specific guidance. Instead, they are a framework to consider advantage and risk as relative to an enemy in a time-competitive environment. The "questions maneuverists should ask themselves" associated with each Jominian solution reinforces the notion that warfighting functions, the single battle, and interior lines are concepts, not specific techniques.

#### Conclusion

Currently, *Warfighting* contains three related gaps, namely identifying the significance of warfighting functions, describing the importance of integrating warfighting functions, and explaining warfighting function integration in terms relative to an enemy. *Warfighting* conveys a nonholistic approach to war and, consequently, articulates an incomplete warfighting

philosophy. When applied within a modern context, however, Jomini's theory of war offers a solution to each of these gaps. The Marine Corps should amend *Warfighting* to include an equal emphasis of all warfighting functions, utilization of the single battle concept to explain the importance of integrating all warfighting functions to achieve a desired end state, and adoption a Jominian interior-exterior lines framework to describe warfighting function integration in relative terms to an enemy. Failure to do so invites an inability for maneuverists to achieve greater tempo and create combined arms dilemmas. Under no circumstances, however, should maneuverists view the aforementioned solutions as a checklist or prescription; they are intended to build a strong foundation to approach integration of all assets on the battlefield across all domains against a thinking enemy, and they will always be situationally dependent and require judgement.

Classical works of military theory are living documents that should be simultaneously understood within the context of their writing as well as interpreted through the lens of the reader. As Jomini writes, "The secret of war does not exist in men's legs, but in the head which sets their legs in motion."<sup>97</sup> By distilling 2,500 years of military thought, particularly that of Sun Tzu, Clausewitz, and Boyd, Warfighting does a remarkable job describing war and a warfighting philosophy. Nevertheless, as Boyd would agree, the stagnate.<sup>98</sup> allow Warfighting to Marine Corps cannot understanding classical military works, both within their own context and a modern one, maneuverists can continue to develop a deeper understanding of war and form new mental models to improve their warfighting philosophy.

**Expeditions with MCUP** 

<sup>&</sup>lt;sup>1</sup> Christopher Bassford, "Doctrinal Complexity: Nonlinearity in Marine Corps Doctrine," in *Maneuver Warfare Science*, ed. F. G. Hoffman and Gary Horne (Quantico, VA: Marine Corps Combat Development Command, 1998), 10.

<sup>&</sup>lt;sup>2</sup> Ian T. Brown, *A New Conception of War: John Boyd, the U.S. Marines, and Maneuver Warfare* (Quantico, VA: Marine Corps University Press, 2018), xxv.

<sup>&</sup>lt;sup>3</sup> Warfighting, Marine Corps Doctrinal Publication (MCDP) 1 (Washington, DC: Headquarters Marine Corps, 2018), 4-24.

<sup>&</sup>lt;sup>4</sup> Charles C. Krulak, "Foreword," in *Warfighting*.

<sup>&</sup>lt;sup>5</sup> Bassford, "Doctrinal Complexity," 10.

<sup>&</sup>lt;sup>6</sup> Warfighting, 4-6.

<sup>&</sup>lt;sup>7</sup> "Marine Corps Maneuver Warfare: The Historical Context," *Marine Corps Gazette* 104, no. 9 (September 2020): 88.

<sup>&</sup>lt;sup>8</sup> Marine Corps Operations, MCDP 1-0 (Washington, DC: Headquarters Marine Corps, 2011), B-1; and Marine Corps Bul1etin 5400, Establishment of Information as the Seventh Marine Corps Warfighting Function (Washington, DC: Headquarters Marine Corps, 17 January 2019).

<sup>&</sup>lt;sup>9</sup> Warfighting, 4-9.

<sup>&</sup>lt;sup>10</sup> Warfighting, 4-25.

<sup>&</sup>lt;sup>11</sup> *Warfighting*, 4-13–4-14.

<sup>&</sup>lt;sup>12</sup> Warfighting, 2-18.

<sup>&</sup>lt;sup>13</sup> Warfighting.

<sup>&</sup>lt;sup>14</sup> Warfighting, 4-24.

<sup>&</sup>lt;sup>15</sup> Warfighting, 4-25.

<sup>&</sup>lt;sup>16</sup> Warfighting, 4-25.

<sup>&</sup>lt;sup>17</sup> Warfighting, 4-8.

<sup>&</sup>lt;sup>18</sup> David Jordan et al., *Understanding Modern Warfare*, 2d ed. (Cambridge: Cambridge University Press, 2016), 87.

<sup>&</sup>lt;sup>19</sup> George S. Patton Jr., quoted in *Musicians of Mars II*, Center of Army Lessons Learned Handbook 16-12 (Fort Leavenworth, KS: Army Combined Arms Center, 2016), iii.

<sup>&</sup>lt;sup>20</sup> Logistics, MCDP 4 (Washington, DC: Headquarters Marine Corps, 2018), 1-30.

<sup>&</sup>lt;sup>21</sup> *Logistics*, 1-27.

<sup>&</sup>lt;sup>22</sup> Logistics, 1-5–1-6.

<sup>&</sup>lt;sup>23</sup> *Logistics*, 1-15.

<sup>&</sup>lt;sup>24</sup> Intelligence, MCDP 2 (Washington, DC: Headquarters Marine Corps, 2018), 1-10–1-11.

<sup>&</sup>lt;sup>25</sup> Intelligence, 1-24–1-25.

<sup>&</sup>lt;sup>26</sup> Warfighting, 1-6.

<sup>&</sup>lt;sup>27</sup> Warfighting, 4-24.

<sup>&</sup>lt;sup>28</sup> Warfighting, 4-24.

<sup>&</sup>lt;sup>29</sup> Intelligence, 1-5.

<sup>&</sup>lt;sup>30</sup> Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton, NJ: Princeton University Press, 2004), 5.

<sup>&</sup>lt;sup>31</sup> Biddle, *Military Power*, 190.

<sup>&</sup>lt;sup>32</sup> Carl von Clausewitz, *On War*, trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 75.

<sup>&</sup>lt;sup>33</sup> *Warfighting*, 1-3–1-4.

<sup>&</sup>lt;sup>34</sup> James D. Hittle, ed., *Jomini and His Summary of the Art of War* (Harrisburg, PA: Stackpole Books, 1987), 395.

- <sup>35</sup> Antoine-Henri Jomini, *The Art of War: Restored Edition* (Kingston, Ontario: Legacy Books Press, 2008), 52.
- <sup>36</sup> Antoine-Henri Jomini, *Treatise on Grand Military Operations or a Critical and Military History of the Wars of Frederick the Great*, vol. 2, trans. S. B. Holabird (New York: Trüber, 1865; repr., Charleston, NC: Nabu Press, 2012), 448.
- <sup>37</sup> Jomini, *The Art of War*, 204.
- <sup>38</sup> Jomini, *The Art of War*, 71.
- <sup>39</sup> Jomini, *The Art of War*, 73.
- <sup>40</sup> Michael I. Handel, *Masters of War: Classical Strategic Thought*, 3d ed. (New York: Routledge, 2007), xxvi–xxvii.
- <sup>41</sup> Michael Howard, "Jomini and the Classical Tradition in Military Thought," in *The Theory and Practice of War*, ed. Michael Howard (Bloomington, ID: Indiana University Press, 1965), 12–13.
- <sup>42</sup> Jomini, *The Art of War*, xxvi.
- <sup>43</sup> "Wenn Jomini in der Lage ist, «im Großen» zu sehen, eine Sicht dessen zu entwickeln, was er für die wahre Natur der strategischen Anstrengung hält, ist er auch fähig, sich mit den wesentlichen Problemen zu befassen, die von der Organisation der Armeen aufgeworfen werden." Jean-Jacques Langendorf, *Krieg Führen: Antoine-Henri Jomini* (Zürich: vdf Hochschulverlag AG an der ETH, 2008), 358.
- <sup>44</sup> Jomini, *The Art of War*, 1.
- <sup>45</sup> Jomini, *The Art of War*, 46.
- <sup>46</sup> Hittle, *Jomini and His Summary of the Art of War*, 416–17.
- <sup>47</sup> "Le concept gagna la signification qu'il a conservée ultérieurement que parce que Jomini s'était interrogé sur l'ensemble des conditions requises pour l'application du principe de la concentration des forces." Ami-Jacques Rapin, *Guerre, Politique, Stratégie et Tactique chez Jomini* (Lexington, KY: CreateSpace Independent Publishing, 2015), 93.
- <sup>48</sup> Jomini, *The Art of War*, 202.
- <sup>49</sup> Jomini, *Treatise on Grand Military Operations*, 452–53; and Jomini, *The Art of War*, 214.
- <sup>50</sup> Iomini, *The Art of War*, 214.
- <sup>51</sup> Jomini, *The Art of War*, 218.
- <sup>52</sup> Handel, Jomini and His Summary of the Art of War, 251.
- <sup>53</sup> Handel, *Jomini and His Summary of the Art of War*, 252–53.
- <sup>54</sup> "Autrement plus important est le rééquilibrage conceptuel qui ne faisait plus de la logistique un domaine subordonné à la stratégie opérationnelle ou à la tactique." Rapin, *Guerre, Politique, Stratégie et Tactique chez Jomini*, 122.
- <sup>55</sup> Crane Brinton, Gordon A. Craig, and Felix Gilbert, "Jomini," in *Makers of Modern Strategy: Military Thought from Machiavelli to Hitler*, ed. Edward Mead Earl (Princeton, NJ: Princeton University Press, 1943), 86.
- <sup>56</sup> John Shy, "Jomini," in *Makers of Modern Strategy from Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 166.
- <sup>57</sup> Jomini, *The Art of War*, 72–74.
- <sup>58</sup> Jomini, *The Art of War*, 88.
- <sup>59</sup> David G. Chandler, *The Campaigns of Napoleon: The Mind and Method of History's Greatest Soldier* (New York: Scribner, 1966), 1149.
- <sup>60</sup> Jomini, *Treatise on Grand Military Operations*, 449.
- <sup>61</sup> Rapin, Guerre, Politique, Stratégie et Tactique chez Jomini, 100.

Expeditions with MCUP

- <sup>62</sup> "L'idée que cherche à exprimer quelque peu maladroitement l'auteur est que les lignes d'opération ne sont pas véritablement des positions relatives aux forces ennemies, mais des projections de la volonté du général en chef au-delà de son front stratégique." Rapin, *Guerre, Politique, Stratégie et Tactique chez Jomini*, 104.
- <sup>63</sup> Jomini, *The Art of War*, 46.
- <sup>64</sup> Jomini, *The Art of War*, 90.
- <sup>65</sup> Jomini, *The Art of War*, 47.
- <sup>66</sup> Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War* (New York: Oxford University Press, 2001), 126–27.
- <sup>67</sup> Joint Planning, Joint Publication (JP) 5-0 (Washington, DC: Joint Chiefs of Staff, 2020), IV-29.
- <sup>68</sup> Marine Corps Operations, 3-2.
- <sup>69</sup> LtCol Wayne A. Sinclair, "In Search of the Single Battle: The MAGTF Command Element's Role in Irregular Warfare," *Marine Corps Gazette* 91, no. 2 (February 2007): 65.
- <sup>70</sup> Jomini, *Treatise on Grand Military Operations*, 308.
- <sup>71</sup> Shy, "Jomini," 169.
- <sup>72</sup> Jomini, *The Art of War*, 73.
- <sup>73</sup> Jomini, *The Art of War*, 73.
- <sup>74</sup> Richard M. Swain, " 'The Hedgehog and the Fox': Jomini, Clausewitz, and History," *Naval War College Review* 43, no. 4 (Fall 1990): 103.
- <sup>75</sup> Jomini, *The Art of War*, 73.
- <sup>76</sup> Warfighting, 2-19.
- <sup>77</sup> Warfighting, 2-19.
- <sup>78</sup> Swain, "The Hedgehog and the Fox," 103.
- <sup>79</sup> Warfighting, 2-18.
- <sup>80</sup> Sinclair, "In Search of the Single Battle," 65.
- <sup>81</sup> Fideleon Damian II, "The Road to FMFM 1: The United States Marine Corps and Maneuver Warfare Doctrine, 1979–1989" (master's thesis, Kansas State University, 2008), 104; and Bassford, "Doctrinal Complexity," 10.
- <sup>82</sup> "Maneuver Warfare and the Principles of Wars: Maneuverist Paper No. 8," *Marine Corps Gazette* 105, no. 5 (May 2021): 105.
- <sup>83</sup> Hittle, Jomini and His Summary of the Art of War, 395.
- <sup>84</sup> Christoph M. V. Abegglen, "The Influence of Clausewitz on Jomini's *Precis de l'Art de la Guerre*" (master's thesis, King's College London, 2003), 5.
- <sup>85</sup> Christopher Bassford, "Jomini and Clausewitz: Their Interaction," Clausewitz Homepage, accessed 30 August 2022.
- <sup>86</sup> *Jomini, Clausewitz, and Schlieffen* (West Point, NY: Department of Military Art and Engineering, U.S. Military Academy, 1954), 5–14.
- <sup>87</sup> For a detailed examination of Clausewitz's influence on Jomini, see Abegglen, "The Influence of Clausewitz on Jomini's *Précis de l'Art de la Guerre.*"
- <sup>88</sup> Abegglen, "The Influence of Clausewitz on Jomini's *Précis de l'Art de la Guerre*," 24.
- <sup>89</sup> Jomini, *Treatise on Grand Military Operations*, 448; and Jomini, *The Art of War*, 61.
- <sup>90</sup> Jomini, *Treatise on Grand Military Operations*, 46.
- <sup>91</sup> Jomini, *Treatise on Grand Military Operations*, 258.
- <sup>92</sup> Peter Layton, "Redefining War," *RUSI Journal* 152, no. 1 (February 2007): 37.
- <sup>93</sup> Brown, A New Conception of War, 175.

<sup>&</sup>lt;sup>94</sup> Col John R. Boyd, USAF (Ret), "Conceptual Spiral," in *A Discourse on Winning and Losing*, ed. Grant T. Hammond (Maxwell AFB, AL: Air University Press, 2018), 347.

<sup>&</sup>lt;sup>95</sup> Handel, *Jomini and His Summary of the Art of War*, xxvi–xxvii.

<sup>&</sup>lt;sup>96</sup> Krulak, "Foreword."

<sup>&</sup>lt;sup>97</sup> Jomini, *Treatise on Grand Military Operations*, 261.

<sup>&</sup>lt;sup>98</sup> Brown, *A New Conception of War*, 195.