Developing Self-Confidence in Military Decision Making
An Imperative for Wargaming

Colonel Eric M. Walters, USMC (Ret)

Abstract: In his *Commandant's Planning Guidance*, the 38th Commandant charges the Marine Corps with doing more to employ wargaming in education and training. It is not often clear why the Marine Corps needs to use this technique to practice decision making, given other kinds of decisions games, such as tactical decision games (TDGs) and decision forcing cases (DFC). While these other decision-making educational tools have their advantages in honing the communication of estimates, orders, and corresponding rationales, the primary virtue of wargaming lies in the far larger number of decisions players must make in a continuously unfolding situation.

Keywords: professional military education, PME, serious games, serious wargames, educational games, military judgment, decision making, maneuver warfare

I
n his *Commandant's Planning Guidance*, General David H. Berger assesses that—arguably—the greatest shortfall in how the Marine Corps trains and educates its leaders is in practicing decision making against an independent, hostile will.[1] He further says that, historically, wargaming was designed to

Eric M. Walters teaches strategy, operational art and design, Joint operations planning and execution of unified action for the U.S. Army Command and General Staff Officers' Course, Fort Lee Satellite Campus. He served as a tank officer and MAGTF intelligence officer at the tactical, Joint and combined operational, and strategic levels. An active hobby wargamer for more than 40 years, he has assisted commercial companies to develop a dozen published manual and computer wargame titles and is currently active in several online hobby wargame communities. He also integrated a variety of decision games into his curriculum for Marine Corps, Army, and American Military University courses and advised the Department of Defense on integrating serious games into intelligence training and education.

address this deficiency and the Marine Corps must do much better in employing it.[2]

Warfighting, Marine Corps Doctrinal Publication (MCDP) 1, argues that a bias for action—boldness—is essential in war, and that educating Marines to deal with war's uncertainty, friction, and disorderly nature through action is therefore imperative.[3] Our capstone doctrinal publication explains:

> The essential thing is action. Action has three stages: the decision born of thought, the order or preparation for execution, and the execution itself. All three stages are governed by will. The will is rooted in character, and for the man of action, character is of more critical importance than intellect. Intellect without will is worthless, will without intellect is dangerous.[4]

Wargaming supports developing this bias for action because it forces constant practice of military decision making for all participants, educating individuals and developing trust within the team involved. Wargame participants are immersed into an interactive system that feels animated in a way that readings, graphics, and videos cannot replicate.[5] But most of all, such extensive practice through wargaming grows self-confidence in both the individual Marine and in the unit engaged in it. That self-confidence is the part of individual personal character that enables the will to win.

What Is the Problem?

The Commandant is clear that, while the Marine Corps prizes a bias for action, this is not adequately supported by the learning environment in how we train and educate. Marine schools—as well as operating force and supporting establishment organization training and education sessions—do not effectively and continuously exercise it. Why is this?

Part of the reason for this is that we think we can plan our way to victory. Whatever Marine Corps doctrine demands of Marines in terms of action, Marines appear to hedge their bets through deliberate planning. While intuitive decision making is highly sought after in junior leaders, as Marines become more senior in military rank they learn that sometimes they should resist their immediate impulses. Some situations require them to take the time to analyze the crux of the problem and evaluate potential solutions before deciding on one and putting it into action.[6] Marines easily see this in the substantial amount of time they spend teaching service and Joint deliberate planning processes, as well as in developing the planning products such processes require.

These are often group projects where efforts of a few standout participants are visible, but the abilities of the remainder are harder to observe and assess.

Marines do this because it is convenient, easy, and reflects the real-world planning done in the operating forces. Both instructors and members of the learning audience readily understand the importance and relevance of generating quality planning products. One learns a lot from planning, but there is no way to know ahead of time whether or not the resulting plan will work once in contact.[7]

Comparatively, the Marine Corps bias for action culture in professional military education (PME)—whether in Marine Corps University formal schools or in unit staff training sessions—can look underdeveloped or anemic. To quote the well-regarded American naval theorist Captain Wayne P. Hughes:

> The clearest evidence of . . . deficiency is too much communication—reams of orders and directives which in the planning stage are little more than generalities and exhortations, and which defer too much to the moment of decision.[8]

Hughes's complaint is all-too-familiar to those military people involved in educating leaders and their staffs. This evidence today can be found in thick operations orders and in huge PowerPoint slide presentations that are lauded in classrooms and academic evolutions in the operating forces, leading to the insider joke of overworked military planners that "mass equals validity."[9]

Unfortunately, not enough attention is paid to teaching and practicing decision making during execution of the plan, especially when the plan can no longer work. When it comes time for that "moment of decision" executing in an uncertain and volatile situation, Marines often observe a great deal of hesitation, miscommunication, and confusion. Why does this happen? The Commandant is suggesting it is because Marines lack continuous practice doing this in a free-play situation under severe time pressures.[10] Proponents of unit cohesion, such as Donald E. Vandergriff and Dr. Jonathan Shay, will argue it is because the team members involved in execution do not know each other well; they have not sufficiently practiced together in coping with problems that fall outside the plan.[11] It boils down to trust, and trust is earned through shared experience, a professional ethic, and leadership.[12] To compensate for this, a great deal of very basic information must be explicitly communicated in planning documents, as if trying to cover every situation in writing will suffice.

When executing, often the only way to learn about one's adversary and the environment is to act. The time to plan has passed, and passive observation is not revealing anything important about the adversary. The phrase "move out and draw fire" aptly captures the notion of developing the situation in this way; to develop the situation and find out what is out there, one has to elicit an enemy response that gives some indication of their disposition and intent. While one learns much faster through acting in such a way than in passively watching, it does admittedly entail some dangers!

The Educational Requirement

Marines are told in *Warfighting* that "all professional schools, particularly officer schools, should focus on developing a talent for military judgment, not on imparting knowledge through rote learning."[13] *Learning*, MCDP 7, elaborates on the reasons for this:

> Developing fundamental cognitive competencies such as problem framing, mental imaging, critical thinking, analysis, reasoning, and problem solving enables Marines to make effective decisions more quickly in time constrained environments, when they often have incomplete, inaccurate, or even contradictory information.[14]

While Marines must teach planning, education cannot stop there; we have to then focus on the main task at hand when executing the plan by "making sure our warriors are up to the harshest intellectual demands of combat—making tough decisions under stress."[15] If the proof of these plans is in the execution of them, then we find limitations in the typical capstone evolution showcasing precisely this, a command post exercise (CPX). To be fair, CPXs are not intended to test plans but to practice staff procedures and command post information management. Because of this, they are conducted in "real time"—an hour on the CPX clock directly correlates to an hour of simulated combat. For the largest combined force CPX—Ulchi-Freedom Guardian in Korea—the exercise time allotted is approximately 10 days.[16] While that is enough to practice staffs in their wartime duties, it is far more difficult to evaluate decision making across the participants involved, especially at the operational level of war when decision consequences and implications may not become evident until many weeks or even months later. Time horizons to exercise termination are artificially shallow as participants might accomplish their current mission in a week or two, but at the end of the exercise it is not clear whether the unit will be postured to achieve the next one. Military judgment skills are best in evidence for some exercise billets—commanders and key staff positions—but not so for others. Does the exercise scenario usually render published plans/orders obsolete in short order, forcing adaptation to successfully overcome? Not often, as the situations are usually constructed/scripted to ensure accomplishing predetermined training objectives. Exercises where preformulated plans are rapidly overtaken by events and rendered irrelevant by the actions of a competitive enemy are those where Marines can best observe and evaluate military judgment in action. Even if Marines find this happening in a CPX, they can typically assess decision making in only a few individuals.

Similarly, how can leaders evaluate Marines in an operating force unit in

Figure 1. Marines work at a Command Operations Center during a logistics war-game aboard Marine Corps Base Quantico

Source: official U.S. Marine Corps photo by PFC Samuel Ellis.

terms of *how* they think, not *what* they think? This is especially true when given tight competition for field maneuver areas in garrison, limited facilities aboard ship, and times when not all the unit is present due to other commitments. On top of that, unit training time is at a premium, to say nothing of accompanying hour-consuming administrative, logistical, and other overhead tasks. What about supporting establishment organizations? How might Marine Corps leaders transcend those inherent limitations to educate Marines in military judgment skills? After all, Marine Corps doctrine of maneuver warfare demands it:

> Maneuver warfare is decision making; that is, the application of mission tactics. So the teacher must equip his students to make decisions. Given this, it is decision-making ability that, in maneuver warfare, determines whether or not the unit is successful. Therefore, it is the maneuver warfare teacher's task to develop judgment: judgment that can be applied to decision making. More than content, methodology, or procedures, the task at hand is teaching the student to make decisions. And what better way to teach decisions is there than to require the student to *make* decisions? He must make them repeatedly and often, under a multitude of circumstances, subject to the harshest criticism of his teacher and his peers.[17]

Wargaming as Preferred Solution

Tactical decision games (TDGs) and historical immersion problems (HIPs)—otherwise known as decision forcing cases (DFCs)—develop in a Marine estimative, decision-making, and orders communication skills "subject to the harshest criticism of his teacher and his peers" in Wyly's view. Using such tools, Marines will achieve a high degree of confidence in themselves, both individually and collectively, since they learn how everyone in the team thinks and acts. Individual deficiencies in communicating decisions and the supporting rationale become glaringly obvious, creating a strong incentive to improve. TDGs and HIPs/DFCs are also relatively easy to implement in an indoor, classroom environment. While facilitators running such events need some training, coaching, and practice to do this well, it does not take much time for them to become functionally effective. It is easy to think these kinds of teaching tools will answer the educational requirement mentioned above because they force the participants to make a decision and—through the scrutiny of their peers—learn how well or badly they made it.

The prime limitation of both these methods is the number and pacing of the decisions involved. TDGs typically require a single decision—the solution FRAGO with sketch—and HIPs/DFCs perhaps a handful of judgments at most. This is one of the reasons why *Warfighting* lists wargames as a useful tool for general professional development, to include educating military judgment.[18] Why is this?

Wargaming demands continuous estimates of the situation and a seemingly never-ending series of time-constrained decisions that build on dynamic interaction as forces collide. Wargame participants learn actively, similarly to TDGs and HIPs/DFCs, but wargamers must come up with options, quickly make a decision, execute it, and subsequently assess their thinking when opponents react—and do this repeatedly.[19] Unexpected outcomes, surprises, and revised estimates are commonplace, as are changes in objectives and missions.

The Fuel of Competition

Perhaps the other most compelling justification for wargaming is the idea that these games are competitive; the incentive to improve both as an individual and as a team is the strongest of all. "Competing is a way of thinking," according to *Competing*, MCDP 1-4.[20] There is a natural concern that we should not let participants in the educational environment lose so long as they understand what they have done wrong.[21] Jane McGonigal, a celebrated computer game designer, explains that people put more effort into their gaming than they do into their life *precisely because winning is so hard*.[22] She notes servicemembers overseas spend so many of their off-duty waking hours playing combat video games to win virtual medals.[23] In other words, they spend their free time in

a wargame playing at what they are supposed to be training to do every day. Watching Marines deeply immersed in *Call of Duty 4: Modern Warfare* on their PlayStation controllers for the first few times, one is struck by how quickly they lose and how ready they are to try again. And again!

There are many advantages to gaming, but McGonigal argues the most important is how clearly articulated and well presented the reward and failure system is. Because achieving victory is so clear-cut and so challenging, players willingly devote a lot of time and effort in these games—even in the face of frequently repeated losses—to earn it.[24] Her book argues that we would do better to incorporate competitive gaming techniques and procedures into our lifestyles to motivate more personal effort, even despite the sheer difficulty of winning in adverse circumstances.[25] Defeat is a bruising experience when and where it happens, but like ground fighting in the Marine Corps Martial Arts Program, one gets used to the pain—even the pain of failure.

Fear of failure can be useful. Marines will take on the challenge when they see how their individual decision making and team cohesion improve. If players are willing to play *Call of Duty* games over and over despite losing, they will behave the same way in unit wargaming if the challenge is a worthy one (and fun!). Lost games—if used properly—can be a great way to promote cohesion as teams struggle to overcome the agony of defeat and triumph the next time around. Nothing motivates people to learn more in less time than losing a competition. People naturally redouble their efforts to win the next time around. They cannot wait to get back in the arena and try again. This is what Marine Corps leaders want; this will lead over time to more and more victories, encouraging individual Marines and their units, reinforcing lessons learned in prior defeats as well as adding new insights.

Wargaming Builds Confidence

Like the other decision games mentioned previously, what wargaming does teach is self-confidence. But unlike tactical decision games and decision forcing case method, the feedback is far more compelling; one either wins or loses the wargame and participants are not left with merely each other's arguments for or against a particular estimate, order, or rationale. In wargaming, the player has to take risks and deal with the immediate and far-reaching consequences, learning over time how to do this well. Sometimes a Marine loses, but then sometimes they win. Both are valuable in building a vicarious experience base to increase personal confidence and resilience. From experience comes wisdom. From self-confidence comes character and will—those things talked about in the *Warfighting* quotation. All of this leads to a greater propensity to act in the fog, friction, fluidity, disorder, and complexity of combat—the goal of the Marine Corps maneuver warfare individual mindset and collective culture.

Figure 2. 3d Marine Division challenges junior Marines in a *Memoir '44* wargame tournament

Source: official U.S. Marine Corps photo by Cpl Timothy Hernandez.

Whatever kind of wargaming Marines do—whether it be computer games, board games, role-playing games, live-action role-playing games, or old-fashioned miniatures games using toy soldiers, ships, or planes—the experience of playing draws them into it. It is typically exciting and exhilarating, and the competition between players and teams only adds to that. Best of all, Marines feel like learning is occurring; improvement over repeated plays becomes evident. Naturally, Marines then want to take on more opponents to test themselves against a wider field of competition. Marines continue looking for opportunities to improve, whether they win or lose.

Practicing action to the point where it becomes not only reflexive but best suited to the situation at hand is more than training—it requires education—the business of how to think, not what to think. The more this is done, the better and faster one will be in taking effective action. As Lawrence of Arabia famously advised:

> Nine-tenths of tactics are certain, and taught in books: but the irrational tenth is like the kingfisher flashing across the pool. . . . It can only be ensured by instinct, sharpened by thought practicing the stroke so often that at the crisis it is as natural as a reflex.[26]

This instinctive reflex required to succeed in military decision making can

only come through repeated deliberate practice, subject to careful thought, and not just mere "reps" and "sets." Short of actual combat and major force-on-force field exercises, wargaming is the only other venue that can readily provide the arena to practice constant and continuous estimating, acting, and assessing skills for individuals and groups, and do so at far less expense.[27] To improve, Marines should not practice what they are already good at; instead, they must focus on remedying their deficiencies. Finding out what those deficiencies are also requires an experienced coach to see what is lacking, one who can structure scenarios and select the right kind of venue to challenge Marines, forcing them to repeatedly face and overcome their shortcomings and fears.[28]

For someone who has a grasp of only military history and current doctrine, it is all too easy to hesitate in an ambiguous, uncertain situation. Major General Ernest Swinton's subaltern, Lieutenant Backsight Forethought, in the famous early twentieth century tactical primer, *The Defense of Duffer's Drift*, laments when faced with his basic decision making problem that "I had passed all my examinations with fair success" and "if [only] they had given me a job like fighting the battle of Waterloo, or Sedan, or Bull Run, I knew all about that as I had crammed it all up and been examined in it too."[29] And yet, he is mystified by the situation he is faced with and is not aggressive in coming to grips with it in his first outing against the enemy.[30] It takes five failures in actual practice before Swinton's protagonist gains the necessary experience to master this "knotty problem" and win in his sixth attempt.[31] The famous Prussian reformer, General Gerhard von Scharnhorst, observed:

> I have often seen how pathetic those general staff officers are who draw their advice from their own observed data, how indecisive and timid they are to accomplish anything that . . . the circumstances demand. Such people do not know the risks which must be taken in war. . . . They probably never risk a bold idea, since no similar situation crowned with success in the past gives them the necessary self-confidence.[32]

This is true in competitive educational wargames as well as in battle. It can only be overcome by routinely stepping into the ring and trading punches with a sparring partner. Marines learn to accept that there will be the occasional black eye and bloody nose. Hesitation and fears are not dismissed but are overcome and evaluated much more objectively against the potential gains realized only by accepting a certain level of risk. The most important thing is having experienced success—even if not on every occasion—while taking chances. Wargaming gives its participants those experiences.

Wargaming does this by educating everyone, not just the leaders, about the situation, the "environment," and the "opposition" as well as the interaction of

Figure 3. Exploiting terrain in *Memoir '44* at a 3d Marine Division wargame tournament

Source: official U.S. Marine Corps photo by Cpl Timothy Hernandez.

forces, terrain, and weather—move by move, turn by turn. Quotation marks are placed around the "environment" and the "opposition" as these are most prone to bias due to the limitations of wargaming, either in a computer chip, a rulebook, or on a map. These portrayals are "like war" but not "war," as nothing can come close to approximating the danger and stress of battle. One must always keep this in mind. When determining what works and what does not work, a comparison to combat history and actual practical application is prudent. Validating anything from wargame experience alone is not recommended. Marines will need the benefit of historical hindsight and actual execution in the field in exercises and—especially—in combat.

It is easy to narrow one's attention on the science of war, achieving technical competence in employing arms and technology to solve military problems. That is necessary but not sufficient alone for success in combat. Marines must master the art of war as well.

> Art can be developed, but like hitting a curve ball, it takes a bit of innate talent, too. One day, if you have it, you look at a situation and you get the picture. Some folks, even very senior officers, never get it. These men, often very bright, insist upon learning all the proper buzz words, and chant them repeatedly, as if saying them enough would somehow impart understanding. Despite Benning, Leavenworth, and all the books, such

people never quite bridge the gap between theory and practice. They look, but do not see.[33]

Wargaming Grows Competence

When obtaining actual combat experience is not possible, wargaming provides the best and most accessible avenue to get the needed practice to obtain a rudimentary level of competence in military decision making. Tactical decision games and decision forcing case method have their place but involve less frequent decision-making practice to emphasize communication skills in issuing orders and explaining rationales. Wargaming can do these things as well in multiplayer team games without sacrificing the never-ending stream of continuous decisions participants must make. The games themselves, whether manual or computerized, are relatively cheap, portable, and easy to set up and run compared to larger military force-on-force field exercises. A considerable side benefit of this is gaining an ability of learning how to learn. Continuous practice in peacetime is far preferable to the expensive proposition of doing so in war.[34]

The problem with wargaming, because it is so immersive, is that this vicarious experience alone—without learning combat/military history, doctrine, and simultaneously reflecting deeply on the relationship between them—can be misleading, resulting in a heavy dose of vividness bias.[35] Historical and doctrinal knowledge alone is not enough without the education that practice—either in actual combat or vicariously in wargames—can provide. However, wargaming alone without the benefit of informed reflection on the strengths and weaknesses of the models used, is not desired either. This is what separates wargames intended purely for entertainment from those designed as serious games to educate the player.[36]

That said, even the stress of simulated conflict will reveal to participants a great deal about everyone involved and shatters an oft-overlooked cultural paradox: seniors and subordinates typically have diametrically opposite perspectives on what the cause is for effective action under the duress of combat. To quote Captain Hughes:

> Draw any good naval leader . . . into a conversation on his experience . . . and it will quickly come out that the tactical plan imposed by his seniors was to his mind too rigid. He will tell you how he maneuvered more cleverly and fired his weapons more effectively than . . . prescribed. In the next breath he will tell you how when he was in command his units moved together like clockwork. He will swear to you that all his captains knew exactly what each teammate would do as instinctively as a basketball player knows from body language which

way his teammate will cut. It will never occur to the speaker
that there is the slightest inconsistency in his account.[37]

This illustrates the implicit paradox embedded in our military culture, best evidenced in the way military members think about command and control. When acting as a subordinate, Marines think they can do a better job than their seniors intended. "Don't confine me inside your box!" subordinate leaders think. Yet, when Marines are the higher-level commander, they think they have the organization operating at peak efficiency and that the team does its mission seamlessly. Many military leaders with long experience—upon hearing the thinking of subordinates—will disagree: "I don't confine my people in a box; they work as a synchronized team." Wargaming actively challenges these perceptions on both sides of the paradox, forcing both senior and subordinate to reconcile such opposing viewpoints to succeed. Most of all, wargaming challenges the self-image bias that both senior and subordinate leaders may harbor:

> The greatest determinants of victory are the very things that commanders will judge most badly: their own attributes and reputation. All good combat leaders are highly competitive; unfortunately, so are most bad ones. Under the circumstances, the best counsel is this: The untried commander should assume that he or she has average skill and not presume that he can overcome disadvantage with talents he may not possess. If a commander has talent, it will grow.[38]

One can only reconcile the paradox and grow personal talent by learning; each individual learns about the situation and everyone on the team learns about each other. Such learning occurs to a degree that reams of detailed orders aiming to cover every conceivable contingency are not needed. The unit and its members are competent individually and collectively in making decisions in uncertain and complex situations. Moral force in an individual and across a team is partly a product of effective, top-quality training that is realistic and challenging, which means it is difficult.[39] Like actual war and warfare, it is competitive, with defeat a possible (and—particularly at first—frequently likely) outcome. If Marines think of shared experience in combat as something that both teaches participants about military judgment (achieving competence) and strengthens the bonds between unit members (achieving confidence and cohesion), Marines can then assume that shared experience in wargames, especially those played in teams, could do something similar. This is true even though wargaming lacks the dangers and physical fear so pervasive in battle.

Conclusion

Wargaming best supports developing the bias for action so essential to success in maneuver warfare, and it is understandable that the Commandant desires to see it employed on a wider and more frequent basis. Not only are wargame participants thoroughly engaged in problem solving in a dynamic, interactive way, the experience lends itself to explaining and evaluating why and how Marines make military estimates and decisions. The educational value of wargaming benefits both formal Marine Corps PME and unit training but also has the effect of creating cohesive bonds as Marines learn about how their teammates think and react in a dynamic, competitive environment.

The result? Greater self-confidence in the individual, who has many hours of experience in coping with fast-moving, ambiguous situations, making timely and considered decisions even in the face of obstacles. When those decisions turn out to be wrong and a loss ensues, the individual is used to adapting to adversity and learning from the situation, aiming to do better next time. For units, not only will its members benefit as individuals per the above, but the team knows itself well, communicating to each other before, during, and after each contest with the sure familiarity and trust that only such collective experience in competition can provide. Wargaming provides the arena for such competition; why not embrace it and use it?

Endnotes

1. Gen David H. Berger, *Commandant's Planning Guidance: 38th Commandant of the Marine Corps* (Washington, DC: Headquarters Marine Corps, 2019), 19.
2. Berger, *Commandant's Planning Guidance*.
3. *Warfighting*, MCDP 1 with change 1 (Washington, DC: Headquarters Marine Corps, 2018), 2-20, 2-22, 2-26, 3-6–3-7.
4. Hans von Seeckt, *Thoughts of a Soldier*, trans. Gilbert Waterhouse (London: E. Benn, 1930), 123.
5. Philip Sabin, *Simulating War: Studying Conflict through Simulation Games* (New York: Continuum International Publishing Group, 2012), 63.
6. Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Strauss and Giroux, 2011), 44–49; and Dietrich Dörner, *The Logic of Failure: Recognizing and Avoiding Error in Complex Situations* (New York: Metropolitan Books, 1996), 153–83. Kahneman describes the perplexing issue of knowing when to rely on intuition ("thinking fast") and—the purpose of his book—when not to ("thinking slow"); Dörner is sympathetic to this argument but also describes the perils of overanalyzing and other cognitive errors in planning when "thinking slow."
7. Helmuth von Moltke, "Second Part: Article from 1871 on Strategy," *Moltke's Military Works: II. Activity as Chief of the Army General Staff in Peacetime* (Berlin: Ernst Siegfried Mittler und Sohn, 1900), 291; Dwight D. Eisenhower, "Remarks at the National Defense Executive Reserve Conference: Date, November 14, 1957," *Public Papers of the Presidents of the United States, Dwight D. Eisenhower, 1957, Containing the Public Messages, Speeches, and Statements of the President* (Washington, DC: Federal Register Division, National Archives and Records Service, General Services Administration, 1958),

818. Notable planners/commanders warn against prescriptive planning. Helmuth von Moltke (the "Elder") wrote: "No plan of operations extends with any certainty beyond the first encounter with the main enemy forces. Only the layman believes that in the course of a campaign he sees the consistent implementation of an original thought that has been considered in advance in every detail and retained to the end." Eisenhower's observation was that "plans are nothing, planning is everything."

8. Capt Wayne P. Hughes Jr., USN (Ret), *Fleet Tactics and Coastal Combat*, 2d ed. (Annapolis, MD: Naval Institute Press, 1999), 31.

9. The author heard this phrase in his first MAGTF Staff Training Program (MSTP) MEFEX in 2000 during the orders generation process. Significantly, MSTP officers were quite good at closely reading the resulting products despite their voluminous nature, pointing out that these were usually not well integrated. Individual major subordinate command orders often contained disconnects between them as well as within themselves.

10. Berger, *Commandant's Planning Guidance*, 19.

11. "More on Trust and Betrayal—Dr. Jonathan Shay," Missing Human Manual, 24 June 2011; and Ardant du Picq, *Battle Studies* (New York: AMS Press, 1991), 110. Shay, a psychiatrist working with Vietnam War veterans and author of the acclaimed *Achilles in Vietnam*, focuses on the need for cohesion and trust in a dangerous world, which is a necessary ingredient for success in human pursuits of any kind. An aphorism by Col Ardant du Picq is usually cited as an illustration of this: "Four brave men who do not know each other will not dare to attack a lion. Four less brave, but knowing each other well, sure of their reliability and consequentially of mutual aid, will attack resolutely."

12. *Warfighting*, 3-7.

13. *Warfighting*, 3-12.

14. *Learning*, MCDP 7 (Washington, DC: Headquarters Marine Corps, 2020), 1-6. See also the accompanying endnote 7, citing *Warfighting*, Notes-1.

15. Michael Duncan Wyly, "Teaching Maneuver Warfare," in *Maneuver Warfare: An Anthology*, ed. Richard D. Hooker Jr. (Novato, CA: Presidio Press, 1993), 263.

16. "Ulchi-Freedom Guardian," GlobalSecurity.org. The author was the Combined Force Command/United States Forces Korea C2/J2 exercise planner for its predecessor, Ulchi-Focus Lens, 1995–97, and a participant in 1994, 2000–1, and 2004–6.

17. Wyly, "Teaching Maneuver Warfare," 251.

18. *Warfighting*, 63.

19. Philip Sabin, "Wargames as an Academic Instrument," in *Zones of Control: Perspectives on Wargaming*, ed. Pat Harrigan and Matthew G. Kirschenbaum (Cambridge, MA: MIT Press, 2016), 424.

20. *Competing*, MCDP 1-4 (Washington, DC: Headquarters Marine Corps, 2020), 5-13.

21. Kris Osborn, "Army Will Soon Conduct a 'Wargame.' And Losing Is 'Seen as a Great Development'," *National Interest*, 8 November 2018. There is a perceived stigma in publicly losing; the author has seen this in discussions with peers and colleagues regarding whether or not wargame novices in class should continue to play a game they are losing. Those advocating this reason say the risk of turning off participants to the value of wargaming is high if losing is allowed to occur. The issue revolves around whether or not participants have already absorbed the lessons they should learn and do not need to play on ("rubbing their noses in the dirt") to eventually lose. Osborn's article contains suggestions that one needs to experience the loss to fully learn something not known beforehand.

22. Jane McGonigal, *Reality Is Broken: Why Games Make Us Better and How They Can Change the World* (New York: Penguin Press, 2011), intro. and chap. 1, Kindle.

23. McGonigal, *Reality Is Broken*, intro.

24. McGonigal, *Reality Is Broken*, chap. 1.

25. McGonigal, *Reality Is Broken*.

26. Col T. E. Lawrence, *Seven Pillars of Wisdom: A Triumph* (New York: Doubleday, 1926; repr., Mannituck, NY: Amereon House, undated), 196.

27. Matthew Cox, "Army Focus on Combat Training Center Rotations 'Unsustainable,'

General Says," Military.com, 13 October 2020. The best force-on-force live field exercises, such as rotations into the U.S. Army's National Training Center at Fort Irwin, CA, are those on instrumented ranges so that participants can conduct detailed critiques on their decision making watching replays of the battle on electronic displays; these have traditionally also been called wargames. Such events only rarely happen, such as once a year, for a specific unit, and recently have been reduced in frequency given other competing priorities in unit operational tempo.

28. Geoff Colvin, *Talent Is Overrated: What Really Separates World-Class Performers from Everybody Else* (New York: Penguin Group, 2010), 66–72.

29. MajGen Ernest Swinton, *The Defense of Duffer's Drift*, Fleet Marine Force Reference Publication 12-33 (Washington, DC: Headquarters Marine Corps, 1989), 12.

30. Swinton, *The Defense of Duffer's Drift*.

31. Swinton, *The Defense of Duffer's Drift*, 61.

32. Charles Edward White, *The Enlightened Soldier: Scharnhorst and the Militarische Gesellschaft in Berlin, 1801–1805* (New York: Praeger Publishers, 1989), 91. See accompanying endnote 19, 115, for the original source, Rudolf Stadelman, *Scharnhorst: Schicksal und geistige Welt, ein Fragment* (Wiesbaden, Federal Republic of Germany: Limes Verlag, 1952), 155–56.

33. Daniel P. Bolger, *The Battle for Hunger Hill: The 1st Battalion, 327th Infantry Regiment at the Joint Readiness Training Center* (Novato, CA: Presidio Press, 1997), 88.

34. Frank G. Hoffman, *Mars Adapting: Military Change during War* (Annapolis, MD: Naval Institute Press, 2021), 258.

35. Richards J. Heuer Jr., *The Psychology of Intelligence Analysis* (Langley, VA: Center for the Study of Intelligence, Central Intelligence Agency, 1999), 116–19; and Christopher A. Weuve et al., *Wargame Pathologies* (Alexandria, VA: Center for Naval Analyses, 2004), 33. Heuer describes this bias as "information that people perceive directly, that they hear with their own ears or see with their own eyes, [and] is likely to have greater impact than information received secondhand that may have greater evidential value." Weuve et al. write of the problems that participant personal experience that vividness bias reflects can also "lose the forest for the trees" as they relate their game experience to what they have already seen, know, and will be comfortable with.

36. David Michael and Sande Chen, *Serious Games: Games that Educate, Train, and Inform* (Mason, OH: Course Technology, 2006), 17.

37. Hughes, *Fleet Tactics and Coastal Combat*, 31.

38. Capt Wayne P. Hughes Jr., USN (Ret), and RAdm Robert P. Girrier, USN (Ret), *Fleet Tactics and Naval Operations*, 3d ed. (Annapolis, MD: Naval Institute Press, 2018), 242.

39. Also routinely characterized as "first-class" or "first rate" in advice from Field Marshal Erwin Rommel: "The best form of 'welfare' for the troops is first-class training." Erwin Rommel, *The Rommel Papers*, ed. B. H. Liddell Hart (New York: Da Capo Press, 1953), 226; and B. A. Friedman, *On Tactics: A Theory of Victory in Battle* (Annapolis, MD: Naval Institute Press, 2017), 92. This oft-used quotation is intended to combat the "just get it done" mentality that often pervades packed training schedules and overworked staffs. "Taking care of the troops," as Rommel suggests, means doing training qualitatively better; tough, demanding training is personally rewarding for the individual and collectively appreciated by the unit. The fact that he served an evil regime takes nothing away from his sage advice as he earned the grudging respect of the Commonwealth forces he fought in the North African desert during World War II.