

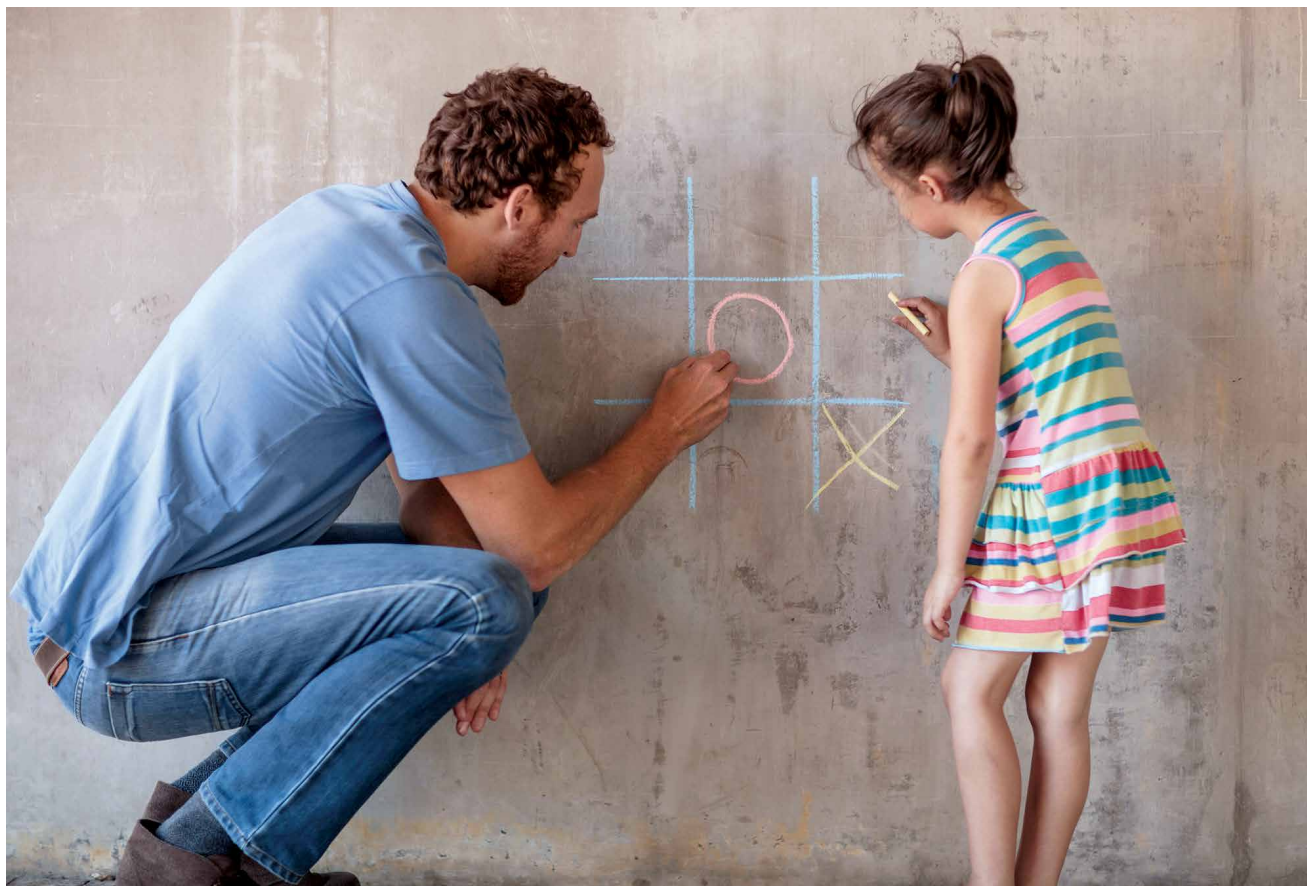


The Strategic Relevance of Tic-Tac-Toe

Maj. Amos C. Fox, U.S. Army

Great-power competition and the struggle among states, nonstate actors, and lesser polities require a sound understanding of strategic theoretical concepts. Commenting on the relevance of

strategic armed conflict to solve international political problems, British historian Sir Michael Howard wrote, “There is, unfortunately, little reason to suppose that this process, of creating and preserving states by the use



or threat of armed force, belongs to a bygone era from which no conclusion can be derived applicable to the contemporary international system.”¹ Despite the continued relevance of armed conflict in the international system, the United States is regularly caught strategically flat-footed in modern conflicts.

Author Tom Ricks’s germane study of U.S. senior military leadership captured across the breadth of three works—*Fiasco*, *The Gamble*, and *The Generals*—highlights the strategic depravity that dominated the U.S. military in the years following the Soviet Union’s demise.² Ricks was one of the first in the post-9/11 era to bring this point to light, but he certainly was not the last. In recent years, a cavalcade of reporting, reflecting the United States’ inability to achieve its political and strategic aims in Afghanistan, Iraq, Syria, and elsewhere, illustrates this point.

Much of the contemporary writing on this situation argues that the problem lies in poor strategic

thought. Arguably, this is largely the result of insufficient and antiquated theoretical models. In turn, this results in misunderstanding the strategic environment, which undercuts the ability to properly see relationships, methods of warfare, and an actor’s objectives. For example, historian Donald Stoker argues, “We see a dangerous example of clarity in U.S. thinking in regard to war and strategic issues ... too many defense and security intellectuals do not understand the differences between tactics, operations, strategy, and the political aim.”³

Meanwhile, strategic theorist Sean McFate contends that the West has been losing wars because it suffers from strategic atrophy.⁴ The atrophy he describes is the byproduct of antiquated notions about strategy and outsourcing of strategic thinking to false prophets and PhDs who have never smelled gun smoke in battle.⁵

Today’s era of great-power competition requires a sound understanding of strategic theoretical concepts. It does so because a solid theoretical base allows an actor to better navigate and manipulate the strategic environment. This work uses a metaphor, a game of tic-tac-toe between a father and his daughter, to draw

Previous page: Graphic elements courtesy of macrovector, www.freepik.com. Composite graphic by Arin Burgess, *Military Review*.
Above: Photo by Westend61 GmbH, Alamy Stock Photo

out several key strategic concepts that are often overlooked in discussions of strategy.

The Tic-Tac-Toe Metaphor

A father comes home from a long day at work and sits down to spend time with his daughter. The father, a dedicated professional with over fifteen years in his chosen field, does not have a lot of discretionary time because of the demands of his job. At the same time, he is dedicated to his family and puts forth his best effort to find a balance between the demands at work and being the husband and father that he wants to be.

Tic-tac-toe is one of his daughter's favorite games. Thus, he is not surprised when the daughter asks to play when he is home from work. Over the years, the father has learned that he can extend the amount of time spent with his daughter if he willingly loses more than he wins. Extending the duration of the game is important to the father because doing so provides him more one-on-one time with his daughter. In fact, maximizing the time spent with his daughter is his real objective; the game is just the vehicle by which he accomplishes that aim.

The deliberate losses, the father's tactical approach, are not agreed to when each party sits down, but instead, they are a critical piece of private information. Private information is any information that a player or actor possesses that is not common knowledge among the other actors within a given context.⁶ When multiple actors meet in an adversarial context, the convergence of each party's private information results in what game theorists call incomplete information. Incomplete information, or information not available to all players or actors in each situation, is fundamentally important in the father and daughter's tic-tac-toe dynamic.⁷

The father keeps his private information close to the vest in order to achieve his real objective. The

father's private information is his tactical approach's substratum because it best advances him toward his strategic objective. He employs a negative tactical approach in order to achieve a positive objective. Or, to put it another way, the father wins through what an onlooker would perceive as a loss.

Over the years, the father has played innumerable rounds of tic-tac-toe with his daughter. In her younger

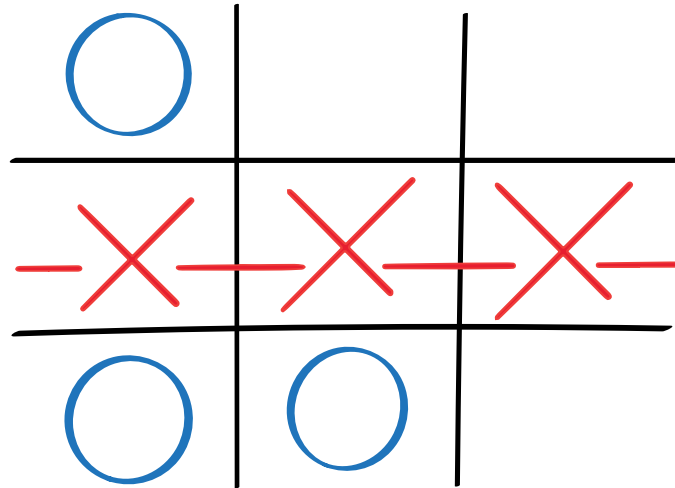
years, he taught his daughter the rules of the game, and she quickly took to them. He was always blue Os and she was always red Xs, and three red Xs or three blue Os in a row meant victory (see figure 1). However, in recent months, he perceives regression in her play. For instance, she will announce, "I win!" at illogical times.

On occasion, the daughter's erratic play irritated her father. His

irritation usually manifested in a lecture on the rules of the game, followed by a game or two in which he thoroughly reviewed those rules with his daughter. The father assumed that his daughter either did not understand the rules of the game or was not following them. Nevertheless, in the father's eyes, the daughter must follow the rules and faithfully play the game.

Yet, what the father did not realize is that his daughter was playing the game with her own private information. The daughter, a creative little girl who loved to spend time with her father, realized years before that quick traditional victories result in her father leaving the game sooner than what she would like. Further, the game allowed her to experiment and create different pattern and color arrangements on the board with her and her father's colored icons.

For the daughter, continued time with her father and experimentation were the true objectives of the game, not getting three red Xs in a row. As a result, she began to play the game by her own rules, which she did not share with her father, in order to allow her to accomplish her



(Figure by author)

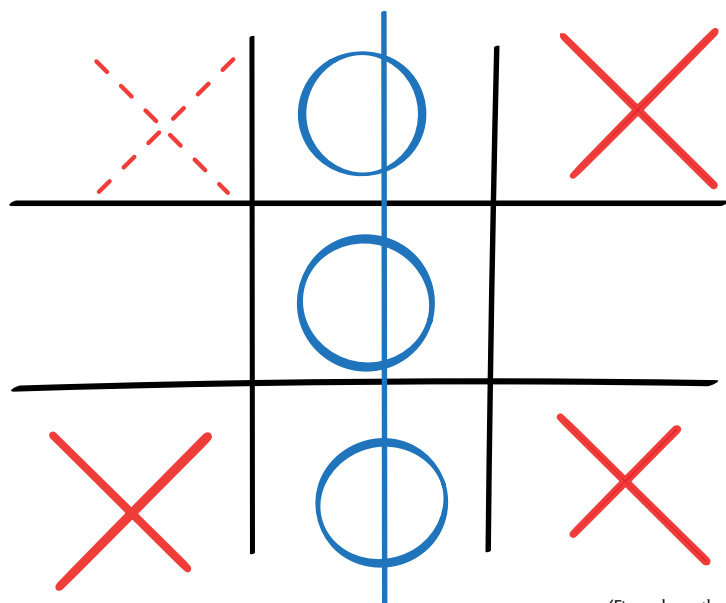
Figure 1. Traditional Rules

objectives. For instance, she began the game in a variety of ways that included aligning her Xs into a variety of shapes on the board, using her shape to create unique color patterns (see figures 2 and 3). Further, getting a rise out of her father also guaranteed at least an additional two games with him, thereby adding to the time they spent together.

Inevitably, another business trip rolled around for the father. He kissed his daughter goodbye yet again, happy that

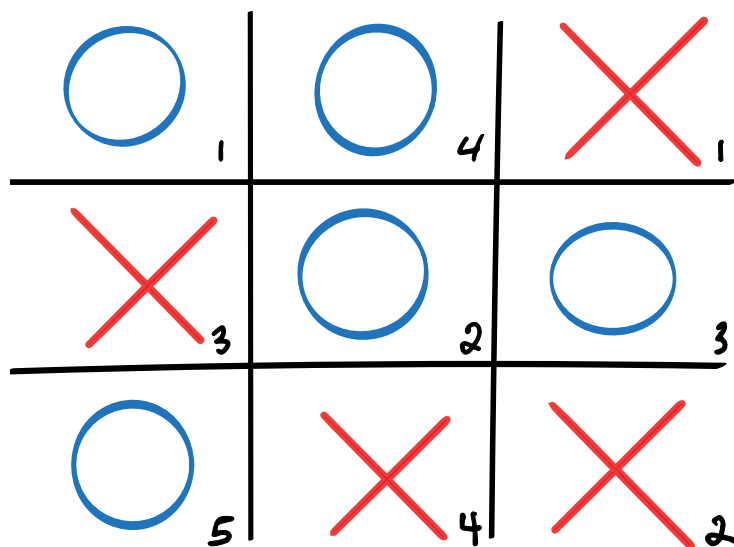
he got to spend time with her. As he departed, he pondered the latest round of tic-tac-toe, curious about why his daughter seemed to no longer understand the game's rules.

The purpose of the tic-tac-toe metaphor is to help illuminate three strategic concepts often lost in today's discussions of strategy, and which are often dominated by Arthur Lykke's formulaic interpretation of strategy and Lawrence Freedman's emotive interpretations of "good" or "bad" strategy.⁸ In this work, three concepts are proffered as important components of effective strategy. First, private and incomplete information dominate strategic interaction because they protect one's strategy from defeat. Second, strategic gain through tactical loss is a viable method for advancing one's strategic agenda. Finally, obedience to a rules-based system leaves one open to nonlinear strategies that are purpose-built around exploiting those rules to further one's aims.



(Figure by author)

Figure 2. Nontraditional Definition of Victory (Pattern Victory)



Numbers represent iteration of each player's turn

(Figure by author)

Figure 3. Nontraditional Rules (Stonewall without Win)

Protecting against the Decisive Blow

Twentieth-century Russian strategist Aleksandr Svechin offers what is arguably the most sagacious advice for any strategist. He asserts that the first rule of war is to protect oneself from the decisive blow.⁹ British theorist J. F. C. Fuller offers a similar argument, stating, "Self-preservation is the keystone in the arch of war."¹⁰ The postulate shared by Svechin and Fuller seems simple enough but is often overlooked in strategic discourse. One can assume that this is overlooked because strategists are too eager to make their strategy work and therefore shoehorn the enemy's course of action into their strategy.

Svechin and Fuller's principle is the first step in understanding the importance of private and incomplete information. Possessing private information—any information that a player or actor possesses that is not common

knowledge among the other actors within a given context—is vital to protecting one’s strategy from an adversary’s deleterious intent. While goals or aims might be openly discussed, the method by which one pursues that goal is often camouflaged.

Tying this to the tic-tac-toe metaphor, the father and the daughter both tacitly agreed to play the game in pursuit of victory, but neither actor openly stated their definition of victory nor did they state how they intended to pursue victory. Both the father and daughter possessed private information, which in turn resulted in incomplete information.

Private and incomplete information dominate strategic intercourse. Private and incomplete information serve as an invisible hand that manipulates the competitive environment from the strategic to the tactical levels of conflict. Failure to appreciate and incorporate private and incomplete information into strategic renderings can result in misleading analysis, much like the father misunderstanding his daughter’s game play, and missteps that ripple up and down the levels of war. As a result, strategic discourse, even among friends or allies, must not be taken on face value. Strategic discourse and strategic analysis must look beyond what is publicly stated and read between the lines of an actor’s pronouncements, operations, and tactics to discern their intent.

Moreover, strategic actors, or at least those interested in continued relevance, must keep international and domestic audiences pacified while pursuing their aims. At times, they will do so by offering narratives that appear misaligned, stating one argument outwardly while domestically arguing something else. For instance, a strategic actor might state that it is committed to a partner in the pursuit of defeating a common enemy, while domestically arguing that that enemy is defeated and that it is time to discontinue the operation. Political theorist Robert Putman defines this situation as a “two-level game,” and it is essential in understanding strategic interaction because it complements the ideas of private and incomplete information in strategic theory.¹¹

Strategic Subtractivism—The Art of Gain through Perceived Loss

In the tic-tac-toe metaphor, both the daughter and the father played the game in several ways. The father would intentionally lose in order to keep

his daughter’s interest, subsequently increasing the duration of time they spent together, thereby accomplishing his true intention. The daughter, on the other hand, sometimes also played for time. In many instances, unbeknownst to her father, she also played with the goal of creating shapes and aligning colors. In both cases, perceived rules-based tactical loss dominated the game play between the two. However, the praxis of their strategic interaction illustrated that perceived loss was often irrelevant to the overall strategic aim. In fact, tactical loss became a tool toward the attainment and maintenance of their aims.

At this point, it is instructive to borrow a concept from sculpting. Subtractive sculpting is a technique in which an artist starts with an aim in mind and a medium in hand. The artist then uses physical force to erode pieces of the medium until it attains the desired shape—the artist gains his or her objective through loss. It is not a stretch to see a parallel between the “winning strategically through tactical loss” scenario described in the tic-tac-toe game and the subtractive sculpting method. In turn, this idea—gaining operational and strategic aims through perceived or real tactical loss—is best classified as strategic subtractivism. One only needs to look at Russia’s recent activities in Eastern Europe to see strategic subtractivism at work.

Many strategic analysts argue that Russia’s approach in Ukraine (to include Crimea) failed because it did not achieve a decisive political victory and has resulted in a stalemate in the Donbas.¹² However, if one keeps in mind strategic subtractivism, or gaining through perceived loss, and Russia’s strategic goals for Ukraine, then it seems far more plausible that Russia is on positive footing.

To the onlooker, Russia accomplishes its goals vis-à-vis Ukraine through tactical destruction, occupying territory, and a deterrent cross-border

Maj. Amos C. Fox, U.S. Army, is the squadron executive officer for 3rd Squadron, 4th Security Forces Assistance Brigade, at Fort Carson, Colorado. He is a graduate of the U.S. Army’s School of Advanced Military Studies, Ball State University, and Indiana University-Purdue University at Indianapolis. His previous assignments include tours with the 1st Armored Division, the 4th Infantry Division, the 11th Armored Cavalry Regiment, and the U.S. Army Armor School.

capability. For instance, if Russia's strategic goals focus on keeping Ukraine weak, discrediting Kyiv, and keeping the country out of NATO, then Russia accomplished its goals (and continues to do so). Russia accomplished this by creating a rebel proxy army in the Donbas, leading that army in a regional coup against Kyiv, destroying infrastructure in Donetsk and Luhansk oblasts, physically occupying prodigious swaths of land therein, killing a substantial number of Ukrainian soldiers, and maintaining first-rate forces in Rostov and other border oblasts that can and have been used to interdict Ukrainian attempts to defeat the rebels and retake territory.¹³

This concept, subtractivism, can be scaled down to the operational and tactical level too. For example, the destruction of the Luhansk and Donetsk airports in 2014 and 2015, respectively, ensured that the Ukrainian armed forces will not again attempt to retake those airports, thereby solidifying rebel proxy and Russian territorial gains in Ukraine.¹⁴ Moreover, the Russian and proxy victory further discredits the Ukrainian government by demonstrating Kyiv's inability to put credible force in the field, develop an effective military plan to defeat the Russian and proxy forces, and protect the people and infrastructure against death and destruction.

Russia's strategy turns victory on its head. For Russia to lose, Ukraine has to overturn the status quo—it must defeat the rebel army, evict Russian forces from the Donbas and Crimea, be able to thwart a cross-border Russian counterattack, and mend the political and domestic situation that allowed Russia to develop a rebel movement.

To summarize, tactical wins and losses are often just a tool for the strategist in pursuit of their true objective. Like the father that intentionally lost at tic-tac-toe in order to maintain his daughter's interest and hence increased the time they spent together (i.e., his true objective), perceived loss is often a useful tool in strategic subtractivism. Accordingly, it is important to not mirror one's own strategy or employ emotive terms like "good" or "bad" when assessing another actor's strategy but to assess whether what they are doing is in fact accomplishing the desired goal.

Rules-Based Environments— A Framework for Exploitation

In strategic environments, actors play to win. To be sure, historian Donald Stoker argues, "Victory is achieving the political objective or objectives for which one is fighting, whether these are offensive

or defensive, and hopefully at an acceptable cost ... Victory—winning—is the point of the war."¹⁵

Winning is not determined by one's adversaries, although they certainly play a role in whether victory is achieved. However, victory is determined by an actor that willingly or unwillingly joins a given conflict. Victory is tied to the actors' aims but also to their operational approach, or how they align their tactics to support the attainment and maintenance of their aims.

Harkening back to the tic-tac-toe metaphor, the father overlooks how his daughter defined victory—that is, a mix of time, color patterns, shape arrangement—because he assumes that she is playing the game by its generally accepted rules and by the traditional definition of victory. The daughter, playing to win, intentionally kept that information from her father to prevent him from using that information against her. As a result, the father projects his own definition of victory and "good" strategy on how his daughter is playing the game and hence misses the fact that his daughter is achieving victory according to her own metrics. The point is that the "rules of the game," or a rules-based system, create opportunities for exploitation by adroit belligerents bent on attaining and maintaining their respective aims.

This idea is important to note because as a recent report argues, realpolitik did not die with the Cold War.¹⁶ Nor did Western values and a rules-based system triumph in the Cold War's wake, but instead, great-power politics and great-power competition continue to dominate the international system.¹⁷ Russia's militaristic and quasi-imperial resurgence in recent years coupled with China's Belt and Road initiative and continued militarization, and Iranian meddling across the Middle East, support this supposition. More to the point, Russia, China, and Iran regularly demonstrate a propensity to bend and manipulate the rules of the rules-based international system to their advantage and to use those rules as a handrail for exploitation. In today's era of great-power politics and great-power competition, it is vital to understand that the rules of international order, while idealistic, are often irrelevant.

Few strategic theorists capture the potential pitfalls of believing that all strategic actors will adhere to the rules-based international system better than Everett Dolman. In his seminal work *Pure Strategy: Power and Principle in the Space and Information Age*, Dolman contends that playing by the rules decreases an actor's

options, therefore making it predictable and far more susceptible to strategic defeat.¹⁸

Instead, Dolman posits that *pure* strategy hinges upon a few tenets. Dolman's central argument is that maintaining access and influence is the most important strategic goal for any actor.¹⁹ To put it another way, if strategy were equated to a game of poker, the strategist's primary focus should be on maintaining a seat at the table and maintaining the ability to keep playing the game. He argues that the essence of strategy is the pursuit, and subsequent maintenance, of continued strategic advantage. Because of this, tactical victories are often irrelevant. Instead, a successful strategist finds opportunities to manipulate the rules, boundaries, and context of the strategic game being played to advance his or her position relative to other strategic actors. Strategists do so in order to increase the quantity of options available to them in relation to their adversary.²⁰

International relations theorist Thomas Schelling provides another perspective on this point. He states,

War appears to be, or threatens to be, not so much a contest of strength as one of endurance, nerve, obstinacy, and pain. It appears to be, or threatens to be, not so much a contest of military strength as a bargaining process—dirty, extortionate, and often quite

reluctant bargaining on one side or both—nevertheless a bargaining process.²¹

Political scientist Dan Altman contends that the accepted rules on the use of force and red lines create a framework that can easily be outflanked by belligerents unwilling or disinterested in the rules. Altman posits that advancing without attacking is the primary method for creating options, bending the rules, and expanding the margins to one's advantage. He continues, stating that *fait accompli*—or taking control of an objective with overwhelming force before an adversary has time or will to counteract—and employing proxy forces are the primary methods to advance without attacking.²² Russia's annexation of Crimea and invasion of Ukraine's Donets River Basin in 2014 provides instructive example that illustrates the interplay of these ideas and clearly demonstrates the utility of advancing without attacking, the *fait accompli*, and the usefulness of proxy warfare.

More importantly, Russia's Ukraine expedition illustrates that traditional definitions of victory and

The main terminal of Donetsk Sergey Prokofiev International Airport after being hit by shells 8 October 2014 during fighting between pro-Russian rebels and Ukrainian government forces in the town of Donetsk, eastern Ukraine. (Photo by Dmitry Lovetsky, Associated Press)



adherence to a rules-based mental framework are not necessarily useful tools for understanding the how and the why of an actor's strategy. Therefore, it follows that one should not measure strategy using emotive terms like good and bad but instead in terms of effective or ineffective. Further, one should not look to rules as a guide but as a means for manipulation.

Conclusion

The United States' inability to successfully conclude its recent wars reflects an immature appreciation and application of strategy. In order to remedy the undertow of strategic depravity, American military leaders must transcend simplistic views of strategy that boil the process down to an unsophisticated linear equation. Further, they must think beyond emotive quantifying terms such as good and bad. Instead, they must define feasible goals and then establish an arrangement of operations to accomplish or attain that goal. To this point, early twentieth-century Russian strategist Aleksandr Svechin argues, "Strategic thinking begins when one in the course of military operations begins to see a certain path that must be traveled in order to achieve the goals of the war."²³

The arrangement of operations must account for each actor's unique station, allies, and partners—active and latent—and incomplete information. In doing so, inconvenient assumptions must not be brushed aside but be accounted for. More to the point, strategy development must include freethinkers, doctrinal and theoretical charlatans, and statisticians to help offset the groupthink that often dominates strategic planning.

It is also instructive to understand that potential adversaries are actively working to advance their own strategies. For instance, Russian Chief of the General Staff General Valery Gerasimov recently stated, "We must outstrip the enemy in the development of military strategy and move one step ahead."²⁴ Because of this, students and practitioners of strategy must study the subject in a similar fashion as historian Michael Howard, who contends that one must study history—in width, depth, and context.²⁵

Lastly, it is important to understand that strategy drives tactics. This assertion is nothing new, but it is important to understand that strategy can cast a long shadow, heavily influencing the associated operations and tactics. If the strategy is meant to mislead and misinform, like strategic subtractivism, one can expect the operations and tactics to echo this approach.

Just as useful doctrine requires a mixture of tactical and operational theories and concepts, so too does strategy. To be sure, American strategic theorist J. C. Wylie argues that a diverse understanding—not a dogmatic, mirroring mindset on strategy—is required for effective strategy because a "limitation to intuitive appreciation of one's own theory of strategy almost automatically inhibits adequate appreciation of any others."²⁶ ■

A special thank you is due to Maj. Bill Murray, who lit the spark for this article during a preclass discussion at the U.S. Army's School of Advanced Military Studies in the winter of 2016. That discussion, tied to the metaphor listed herein, was the impetus for this work. Without that discussion, this article would have not been written.

Notes

1. Michael Howard, *The Causes of War* (Cambridge, MA: Harvard University Press, 1983), 37.

2. Thomas E. Ricks, *Fiasco: The American Military Adventure in Iraq, 2003 to 2005* (New York: Penguin Books, 2007); Thomas E. Ricks, *The Gamble: General David Petraeus and the American Military Adventure in Iraq, 2006-2008* (New York: Penguin Books, 2009); Thomas E. Ricks, *The Generals: American Military Command from World War II to Today* (New York: Penguin Books, 2013).

3. Donald Stoker, *Why America Loses Wars: Limited War and US Strategy from the Korean War to the Present* (Cambridge, UK: Cambridge University Press, 2019), 18–19.

4. Sean McFate, *The New Rules of War: Victory in the Age of Durable Disorder* (New York: HarperCollins, 2019), 5.

5. *Ibid.*, 11–22.

6. Roger Myerson, *Game Theory: Analysis of Conflict* (Cambridge, MA: Harvard University Press, 1997), 64–66.

7. *Ibid.*

8. Harry Yarger, "Toward a Theory of Strategy: Art Lykke and the Army War College Strategy Model," in *Guide to National Security Policy and Strategy*, ed. J. Boone Bartholomees Jr., 2nd ed. (Carlisle, PA: U.S. Army War College Press, 2006), 107–13; Lawrence Freedman, *Strategy: A History* (Oxford, UK: Oxford University Press, 2015), x–xii.

9. Aleksandr Svechin, *Strategy* (Minneapolis: Eastview Press, 1992), 248.

10. J. F. C. Fuller, *Generalship: Its Diseases and Their Cure* (Harrisburg, PA: Military Service Publishing, 1936), 52.

11. Robert Putman, "Diplomacy and Domestic Politics: The Logic of Two-Level Games," *International Organization* 42, no. 3 (Summer 1988): 427–46.

12. Lawrence Freedman, *Ukraine and the Art of Strategy* (Oxford, UK: Oxford University Press, 2019), 1–5.

13. Amos Fox and Andrew Rossow, “Making Sense of Russian Hybrid Warfare: A Brief Assessment of the Russo-Ukrainian War,” *Land Warfare Paper 112* (Arlington, VA: Association of the United States Army, March 2017), 3–12.

14. Amos Fox, “Cyborgs at Little Stalingrad: A Brief History of the Battles of the Donetsk Airport, 26 May 2014 to 21 January 2015,” *Land Warfare Paper 125* (Arlington, VA: Association of the United States Army, May 2019), 4–11.

15. Stoker, *Why America Loses Wars*, 176.

16. Malcolm Chalmers, “Which Rules? Why There Is No Single ‘Rules-Based International System’” (occasional paper, London: Royal United Services Institute [RUSI], April 2019), 30–31.

17. Ibid.

18. Everett Dolman, *Pure Strategy: Power and Principle in the Space and Information Age* (New York: Frank Cass, 2005), 43.

19. Ibid., 127.

20. Ibid., 75.

21. Thomas Schnelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966), 7.

22. Dan Altman, “Advancing without Attacking: The Strategic Game around the Use of Force,” *Security Studies* 27, no. 1 (August 2017): 55–58, <https://doi.org/10.1080/09636412.2017.1360074>.

23. Svechin, *Strategy*, 239.

24. Valery Gerasimov, “The Development of Military Strategy under Contemporary Conditions: Tasks for Military Science,” *Military Review*, trans. Harold Orenstein and Timothy Thomas, (online exclusive, November 2019), accessed 19 March 2020, <https://www.armyupress.army.mil/Journals/Military-Review/Online-Exclusive/2019-OLE/November/Orenstein-Gerasimov/>.

25. Howard, *The Causes of War*, 195–97.

26. J. C. Wylie, *Military Strategy: A General Theory of Power Control* (Annapolis, MD: Naval Institute Press, 2014), 29.

STRATEGIC TIC-TAC-TOE

REMEMBERING ALEPPO? COUNTING ON THE STRATEGIC AMNESIA OF ADVERSARIES

Operating under the assumption that Western powers would do little to challenge its military intervention in Syria beyond making threats, Russia risked a well-planned and sophisticated military campaign aimed at rapidly achieving destruction of opponents to the Syrian regime that would enable the Syrian government to reassert sovereign control over most of its territory. In doing so, Russia ignored widespread global media and diplomatic condemnation of its actions—particularly those resulting in widespread loss of civilian life—anticipating that global interest in Aleppo would be quickly forgotten if relative stability to Syria were achieved by decisive and swift military action. Though regionally focused, Russia’s successful strategic gamble in Syria greatly enhanced its standing as a great power not only in the Middle East but also throughout the world.

Residents walk through the rubble of the once rebel-held Salaheddine neighborhood 20 January 2017 in eastern Aleppo, Syria. (Photo by Hassan Ammar, Associated Press)

