In the confusion of the modern battlefield, commanders need to know when to let subordinates seize the initiative and when to exercise tight command and control. Sometimes they must do both simultaneously. Understanding these and other contradictory impulses is the key to success.
When we are dealing with two different things that have a common relation external to themselves, the polarity lies not in the things but in their relationship.

—Clausewitz

Principles of war have historically been considered rules of thumb that shape how military professionals try to make sense of the chaos inherent in conflict. They form the basis of the uncommon sense that sets military professionals apart from laymen. Over the years, military professionals have institutionalized the principles of war in their doctrine and decision-making. These principles represent a set of shared professional norms, values, and guidelines embedded in the military culture.

Principles of war have traditionally had a quality intended to transcend the uniqueness of every case. We believe, however, that the principles of war cannot stand alone without a rich context associated with each case. Military professionals need to become proficient at considering simultaneous, multiple, and opposite perspectives in order to make sense of the inherent complexities of warfare. What is needed is a way of reframing opposing ideas that present a more patterned, nonlinear, and dynamic sense of warfare. We believe that paradoxical reasoning is the transformational logic that must underpin all future applications of the principles of war. Our model does not discard the age-old, well-supported principles; rather, it transforms the way we make sense of them. We also add a few more principles (people, initiative, complexity, and defensive) in order to articulate the inherent opposites required for paradoxical reasoning.

Paradoxical logic is not a new idea. Rather, the profession has seemingly not addressed Clausewitzian notions of the paradoxical nature of war because we are habitually pursuing "the right answer"—a cultural characteristic of modern and rational military decision-making. In war technical military rationality exists in the midst of political decision-making; bureaucracy exists while battlefield innovations are being tested; stability and instability, ambiguity and clarity, and the routine and the surprising all exist at the same time.

Employing principles of war without acknowledging their opposites can result in taking a singularly focused extreme position that may be recognized as dysfunctional only after it is too late. For example, President Bush's proclamation that major combat operations were over in Iraq were later contradicted when he said: "Had we to do it over again, we would look at the consequences of catastrophic success, being so successful so fast that an enemy that should have surrendered or been done in escaped and lived to fight another day."2

In On War, Clausewitz recognized that, "war consists of a continuous interaction of opposites."3 While Clausewitz espoused a very comprehensive theory of war, he emphasizes that war is so complex that "theory conflicts with practice..." and that no set of principles "can be dogmatically applied in every situation, but a commander must always bear them in mind so as not to lose the benefit of the truth they contain in cases where they do apply."4 He demonstrates this complexity by explaining that, "all parts of a whole are interconnected and thus the effects produced, however small their cause, must influence all subsequent military operations and modify their final outcome to some degree, however slight."5

Clausewitz's main thesis is itself paradoxical: the ultimate war aim is peace, and because "in war the result is never final," elements of peace and war exist continuously and simultaneously.6 He postulates that linear cause and effect relationships in war are spurious (their effects are really unpredictable even though there appears to be a correlation) because the variables of war are mutually causal.7 Clausewitz is adamant throughout his text that each war has a distinctive "pattern" because of the interaction of the variables.8

Paradoxes seem to be absurdly contradictory, but many are two sides of the same coin, as some familiar military colloquialisms reveal. "The best defense is a good offense," is a paradox inherent to the current Bush administration's concept of preemption. The idea of "mission first, people always," is an informal, widely known adage that demonstrates a common military leadership paradox. Today, the coalition forces want to decrease their profile to the civilian population in Iraq while simultaneously increasing their presence and responsiveness to the insurgents.

There is another inherent paradox associated with information in a real time media-rich and image-infested environment. How a war is prosecuted is not just an invisible, local "on-the-battlefield" issue anymore. With the advent of modern communications technology, the battle plays itself out on a global stage and affects how the war is fought—witness the effects of embedded correspondents broadcasting while on the move, digital pictures from Abu Ghraib, internet beheadings, and digitized views of flag-draped coffins. The U.S. form of democracy strongly advocates freedom of information and freedom of the press (note the innovative "embedded press" technique during
The Ludendorff Bridge at Remagen shortly after its capture by elements of the 9th Armored Division in March 1945. Brigadier General Hoge’s command took the initiative and seized the bridge when the opportunity presented itself even though the operational plan called for the unit to cross the Rhine further south.

Operation Iraqi Freedom). At the same time the government also seeks to control the interpretation of wartime plans or events to sway public and international opinion as part of a strategic communications policy.9

The same tension applies in battle. Information technologies that permit a “common relevant operating picture” to increase the chances for initiative at all levels also enhance command and control (and potentially micromanagement) at the same time.10 Below, we explain our model of paradoxical reasoning and then highlight the principles of war as paradox.

The Model of Paradoxical Reasoning

Military professionals must simultaneously value the polar opposite principles of initiative and command and control in the conduct of warfare. We want subordinate commanders to exercise autonomous, adaptive thinking and acting when they encounter opportunities that higher-level echelons do not see. At the same time, we want to restrict a subordinate’s initiative because they cannot focus on the strategic “bigger picture” that holds them accountable for unintended outcomes that otherwise “sensible” mission-oriented decisions and actions might cause. If everything were predictable (i.e. “technically rational”) in war, we would only need command and control. But we also need adaptive variation. “Irrational” actions and mistakes are necessary for bold experimentation and ad hoc learning.

Command and control points to the principle of unity of command, a single mindedness of purpose. The entire command is moving in one direction. There is no tolerance for conflict with the intent of the commander at the top. Initiative implies autonomous thinking and acting that, in principle, opposes the commander’s quest for like-mindedness. For example, those involved directly with what is happening “up close and personal” may develop a very different picture than that derived from “higher headquarters.” All of us have experienced these conflicting ways of making sense, where it seems almost ludicrous from both perspectives to consider the opposing view.

This was the case in World War II when the 9th Armored Division captured the Ludendorff Bridge at Remagen (i.e. the “wrong” bridge according to the chain of command). Brigadier General William M. Hoge, the commander of the division’s Combat Command B, actually violated orders when he ordered the attack to secure Remagen since he was supposed to turn south to join up with Lieutenant General George Patton’s Third Army.

Military professionals must value both an internal focus (the disposition of their own forces, troop morale, training, maintenance status, and other qualities of readiness, etc.) and the opposing external focus (enemy forces, international and nongovernmental actors, national will, weather, geospatial variances, political decisions, etc.). While it is difficult for a commander at any level to maintain comprehensive and simultaneous cognizance of both, we have historically organized our military staffs and information technologies to better cope with both internal and external environmental complexities.

By juxtaposing these continua (initiative :: command and control; internal focus :: external focus) we show the basis of our paradoxical framework and depict these as primary competing values.12 The continua cross to produce the basic framework for paradoxical reasoning: four types of competing implications (human, learning, planning, and structural), thus enabling us to examine what would normally be considered impossible ideas to consider simultaneously (Figure 1).

Paradoxical reasoning insists that military professionals rapidly appreciate complex interactive patterns (i.e. the continua and quadrants do not exist in isolation from each other, but exist together to create the whole). Looking inward and outward simultaneously, while valuing both flexibility and command and control is what the Clausewitzian term coup d’oeil (shown in the center of
the diagram) describes. While we examine each quadrant individually for the purpose of drawing contrasts, it is important to realize that when practicing military art, the professional must contemplate the implications of all quadrants in a patterned, holistic way. Each quadrant has unique implications that seem mutually exclusive but, nevertheless, concurrently exist.

**Human Implications—Initiative and Internal Focus.** The upper left quadrant is associated with initiative (autonomous thinking and acting) that occurs within the internal boundaries of the military entity being considered (i.e., the individual, smallest team, unit, unified command, an international coalition). For example, a unit member takes action to improve *esprit de corps.* Many of us have experienced positive command climates ignited by strong beliefs and shared values that foster high morale and trust even under adversity. Trust is a human precondition that enables members to take more initiative—to adapt, innovate, and improvise. It helps to achieve an overall cultural integration and intent without the excessive need for internal controls (indicated in the lower left quadrant).

While human implications are important, it is also important to guard against them taking precedence over other factors, such as the mission orientation found in the lower right quadrant. The memorable 1949 war movie *Twelve O’clock High* depicts the simultaneity of these polar opposites in the leadership role played by Gregory Peck.

**Learning Implications—Initiative and External Focus.** As with human implications, the upper right quadrant relates to initiative, but conversely with an internal focus, in making sense of the external environment. We constantly seek to learn more about the external environment so we can judge whether our acts are or will continue to be productive. The continuous cycle of trial and error and learning from feedback as the environment reacts to that activity is characteristic of this quadrant.

In a highly interconnected, turbulent environment, success will be determined not by how much the commander knows, but how fast he and his organization acts, thinks, and learns. The United States has not been very quick at providing the insight and training needed to combat an ideologically based conflict—something that cannot be defeated by traditional military operations alone, but can be addressed through collective learning.

This does not ignore the importance of programmed training that sets tasks, conditions, and standards (valued in the lower left quadrant). On the contrary, the best forms of improvised initiative rests on practice, practice, and more practice so that the learning process can sense when the regimented tasks and conditions mastered in training should change, be rejected, or adapted and previous standards are no longer applicable.

**Planning Implications—Command and Control and External Focus.** In the lower right quadrant one seeks to apply previous learning about cause-and-effect relationships in order to plan for anticipated future outcomes in the external environment. The multi-level effects of strategic, operational, and tactical missions (military causes) on the external environment are efforts to predict and then control actions that will assure victory, e.g., “effects based operations.” However, focusing only on these levels of planning can result in ignorance of implications found in the other quadrants. For example, when examined in the context of human implications found in the upper right quadrant, the predisposition to plan in too much detail can be shown to interfere with the propensity to learn. Such ignorance can create conditions for unwanted surprise.

**Structural Implications—Command and Control and Internal Focus.** The lower left quadrant denotes institutionalized internal control methods that make highly controlled activity possible. One dominant value in this quadrant is to structure for certainty. There are two types of structures: soft and hard. Soft structures include institutionalized standard operating procedures, policies, doctrine, traditions, and habits that promote institutional memory. They ensure members are culturally indoctrinated as to how, when, and why things are done. Hard structures include equipment, buildings, installations, and other physical hardware and

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can also have strong institutional effects. For example, in the U.S. defense system, service departments own soft structures that systematically generate and employ military capabilities used by operational commanders. The planning, programming, budget and execution process, and basic military training processes are good examples of soft structures. Installations as force projection platforms are hard structures. Although such structural segmentation can later serve the wartime commander's intent well, these soft structures can also generate institutional inertia that can serve to oppose advantages gained in other quadrants (such as the potential benefits of initiative and challenges to the status quo characteristic of the upper two quadrants).

**Understanding the Patterns**

By reframing the above competing quadrant implications, the principles of war are transformed into paradox, enabling us to better see the unique and shifting patterns associated with the complexities of war. Above, we show the principles of war not as a list in isolation to one another but as principles that must be appreciated with respect to each other and, in relation to their intertwined, yet opposing guidelines (Figure 2).

*Offensive*: Defensive. *Offense* implies taking the fight to the enemy while *defense* implies preparing for the enemy attack or deterring it. Although contrary when considered alone, both should be considered together as a normal paradox of war. During the 3rd Infantry Division (Mechanized)’s offensive attack into Iraq, the commander was concerned with defending his columns. Conversely, while coalition forces believed early offensive speed in Iraq forced their adversary on to the defensive, it also set the conditions for insurgent offensive operations by that same enemy. In time, defense might not dominate whereas offense might prevail better as a solution. The Soviet initial space-for-time defensive strategy in World War II actually helped shape the battlefield for offensive operations; the Soviets defensive posture was actually a form of offense. The Strategic Defense Initiative of the 1980s contributed as a decisive factor in winning the Cold War. At roughly the same time, NATO developed the doctrine of “active defense” which was really a combination of offense and defense.

*Surprise*: Objective. To reason paradoxically, means surprise must be considered along with its polar opposite objective. Determining objectives (planning) assumes the ability to predict cause-and-effect relationships (if I want to cause the enemy to do this, I must do that). Surprises result from finding the unpredictable—perceived after the fact by the surprised party as being creative and sometimes improvisational. Finding the bridge at Remagen intact was an “unwanted” surprise to some of the Allied commanders and staff because the objective in the detailed plan was to cross further south with another unit.

We saw the result of the simultaneity of these concepts when we knew al Qaeda had executed multiple attacks against the United States before the surprise 9/11 attack, yet failed to recognize the war started with the 1993 attack on the World Trade Center (i.e. we could have set appropriate wartime rather than law enforcement policy objectives). Our legalistic view of the objective blinded us to the pattern. Considering objective and surprise as a continuum requires both concurrent deductive reasoning (applying a known scheme—a plan) and inductive reasoning (developing new schemes as objectives are not accomplished as planned).

*Maneuver*: Security. While maneuver attempts to increase flexibility by moving friendly forces to an advantageous position, sacrificing security may be required to do so. High-speed helicopter maneuver during the Vietnam War did little to ensure permanent security of vast parts of the South Vietnamese countryside and did little to encourage the hearts and minds of the populace to support the central government. And in Iraq, insurgent maneuver strategies take coalition focus and resources away from security operations.

*Mass*: Economy of Force. As we have learned from more recent wars, the mass of forces may not be as important as economy of force gained through the use of high tech, precision-guided munitions and effects-based operations; albeit, the opposite might be true in post-combat operations where large scale “low-technology” troop presence can be more important in inhabiting territory and where conventional high technology systems do not dominate. Similarly a very economical cell of terrorists can creatively produce massive destructive effects in New York, Chechnya, Madrid, London, or Baghdad. While some call this “asymmetric warfare,” paradoxical reasoning would underscore the pattern shift from mass with respect to economy of force.
Mission :: People. The military profession calls for getting the job done while taking care of people. There is an inherent tension that exists between the military's concern with the morale and welfare of the troops and the natural hardship and possible death of those troops in armed conflict. Achieving balance between these principles not only defines the individual military leader but also is the root cause of acts of heroism. Institutionally, balance is sought by such value-laden monikers as “Leave No Soldier Behind” as well as the commitment to the health and welfare of soldiers and their families. This tension is particularly acute in the regulatory policies that govern the mission expectations and structure of the National Guard and Reserves.

Simplicity :: Complexity. Complication may be necessary at the same time one embraces “K-I-S-S” (keep it simple, stupid). This paradox has always plagued the warrior. The value of the “Napoleon’s adjutant” technique for assuring the clarity of orders must be considered alongside the detailed rehearsals necessary for intricate operations. The dynamics of military actions many times call for exactly the opposite approach to simplicity. The most successful military actions have been those in which the strategy was simple, yet also diverse, emergent, and complicated. Trying to find the one simple way for doing things and sticking to it is a recipe for disaster.

Using the paradoxical reasoning model, we can see holistic, emergent patterns that dominate the specific context of different military operations. Above are two patterns with dominant principles depicted (Figures 3 and 4). These diagrams show the importance of viewing the principles of war as patterns of paradox rather than a list of singular, stand-alone guidelines. Note how unity of command, objective, mission, offensive, and maneuver dominated over surprise and security during Operation Iraqi Freedom; notwithstanding, other “opposing” principles were simultaneously important. The Balkans NATO Implementation Force pattern was highlighted by security, defensive, and complexity. These examples demonstrate that paradoxical reasoning is not like engaging in dialectical reasoning about the principles, where a solution is sought at some point.

Paradoxical reasoning is accepting the simultaneous existence of contradictory, seemingly mutually exclusive elements that have the potential to operate equally, albeit, in tension with others. We have argued that the principles of war cannot stand alone absent a rich context associated with each unique case. Our model offers a holistic way of making sense of the circular, interconnected, conflicting, and interdependent relationships of the principles of war. The art of warfighting is recognizing when the patterns are or should be shifting in dominance from one to the other and what they reveal together. In that regard, the model we have presented reflects not so much a “common sense” approach, but an uncommon sense approach expected in the postmodern military professional’s version of coup d’oeil.

Endnotes for this article available online.

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