

LANDPOWER ESSAY



No. 01-1

March 2001

The Center of Gravity Fad: Consequence of the Absence of an Overarching American Theory of War

by

Colonel Gordon M. Wells, USA

Introduction

We Americans love our fads. As children we all have at least some memories of various fads that have come and gone: hula hoops, skateboards, tie-dyed jeans, pet rocks. Yet, our predilection toward fads is not limited to our purchases at the toy store. As we grow older, fads take on greater sophistication, such as joining the office rush to buy the latest Pentium computer or drink the newest microbrew beer.

Having attended several military schools in recent years, from Fort Leavenworth to Norfolk to Carlisle, I have observed a fad among students and graduates of these institutions: the tendency to define “center of gravity” as being everything from the military to national will to logistics to you-name-it. It has almost become stylish to see who can come up a unique center of gravity for a given scenario. In fairness to all of us who have engaged in such discussions, the modern seeds of this doctrinal cacophony were initially planted in the Army’s capstone manual, Field Manual (FM) 100-5, *Operations*, and later developed roots in the joint doctrinal capstone manual, Joint Publication 3-0, *Doctrine for Joint Operations*.

FM 100-5 defines the center of gravity as “the hub of all power and movement upon which everything depends.” Unfortunately, the doctrine writers added this statement: “Several traditional examples of a potential center of gravity include the mass of the enemy army, the enemy’s battle command structure, public opinion, national will, and an alliance or coalition structure.” Although Joint Pub 3-0 provides a better discussion of center of gravity, it too potentially muddies the water when it states, “[A]t the strategic level, centers of gravity might include . . . an alliance, national will or public support.”

The lack of a universally understood definition of center of gravity is only the tip of the iceberg. In reality, our current “center of gravity fad” is symptomatic of a larger problem: the absence of a joint, universally accepted theory of war. We continue to rely heavily on land warfare theorists such

The *Landpower Essay* series, published by AUSA's Institute of Land Warfare, is designed to provide an outlet for original essays on topics that will stimulate professional discussion and further public understanding of the landpower aspects of national security. The content represents the personal opinions of the author and not necessarily the position of the Association of the United States Army or its members. Candidate essays of 5,000 words or less may be submitted to: AUSA's Institute of Land Warfare ATTN: Landpower Essay Series, 2425 Wilson Boulevard, Arlington, VA 22201. For more information about AUSA and the Institute of Land Warfare, visit our website at www.ausa.org.

as Sun Tsu, Clausewitz and Jomini, who defined warfare in largely symmetric terms. Where is the theory that also pulls in the relevant ideas of Douhet, Warden, Corbett and Mahan? A theory that pulls the domains of land, sky and sea into a comprehensive whole? Or, equally relevant, a theory that includes the new fourth domain, cyberspace?

The absence of an American Theory of War has also contributed to our current lack of a basic framework for synchronizing all elements of national power at the strategic level. The Jominian geometric framework that addresses the line of operations that begins at the base of operations, passes through various decisive points, and ends at the objective is still useful for operational artists to design campaigns within a theater or area of operations. However, what model exists to guide the strategic artist in planning and executing a national or theater strategy that wields all elements of national power?

Using the “center of gravity fad” issue as a springboard for discussion, I address in this essay the elements of the current debate as I see them. Then I discuss the dilemma in which strategic planners and leaders find themselves because of the lack of an overarching framework for campaign design and propose a possible “strategic geometry” for their use. Ultimately, however, I believe that the central issue with which we must come to grips as a military is to develop a comprehensive American Theory of War. Current joint doctrine discussions are stymied largely by the lack of such a theory.

My intent in writing this essay is to stir debate on these important issues. Frankly, I do not have all the answers, just a number of questions for those of us in the military profession to grapple with. If this paper causes one other soldier, airman, sailor or marine to think about our lack of an overarching theory of war or the need for a “strategic geometry” to guide strategic artists, I have been successful.

Comments from a Modern Air Power Theorist

A source of confusion in recent years on what constitutes a center of gravity finds its roots in the writings of Colonel John A. Warden, III, USAF (retired). Unfortunately, because Colonel Warden is about the only person of standing in the Air Force who has taken the time to write on theoretical and doctrinal airpower issues, he is essentially “the only man at the microphone.” As a result, his writings, which for the most part are incisive and thought-provoking, suffer from certain unchallenged theoretical flaws.

Colonel Warden opened a necessary and long-needed debate in 1988 with his book, *The Air Campaign*, and his insightful article, “The Enemy As a System,” in which he posited his “Five Ring Model of the Modern Nation State” as a taxonomy for designing an air operation.¹ Although many have accused him of overstating the value of strategic bombing, clearly Operation Desert Storm revealed that the employment of an integrated air operation, synchronized with the overall campaign, can have a decisive, synergistic effect within a theater.

Nevertheless, Colonel Warden’s model goes astray when he defines each “ring” as a center of gravity, which he further defines as a “ring of vulnerability.” The direct association between center of gravity and vulnerability only adds to the current confusion.² Although his description of various centers of gravity (aka, the “five rings of death”) provides a very useful framework for defining target sets, target sets do not necessarily equate to centers of gravity.

It is important to remember that at its very heart, the essence of operational art boils down to first, the identification of friendly and enemy centers of gravity, and second, planning how to protect one while attacking the other. Certainly, a key part of the joint force planning and execution process (formalized in documents called the campaign plan and component operations plans and orders) involves attacking various decisive points (indirect approach) and/or the center of gravity (direct

approach). All of these targets are categorized into target sets and, in the case of air targets, are assigned and executed via the Air Tasking Order (ATO). However, if we employ Colonel Warden's model and call everything a center of gravity, we dilute its meaning and run the very real risk of not "keeping our eye on the ball."

Clausewitz: Hub of All Confusion?

To further complicate matters, the author who gave us center of gravity as a theoretical construct, Carl von Clausewitz, can be confusing to the casual reader of his work, *On War*. For example, in *On War* Clausewitz states that a center of gravity, depending on the nature of the conflict, could be a nation's capital, its national leaders or even public opinion.³ At the same time, however, he states:

If the enemy is thrown off balance, he must not be given time to recover. Blow after blow must be struck in the same direction; the victor, in other words, must strike with all his strength, and not just against a fraction of the enemy's. Not by taking things the easy way—using superior strength to filch some province, preferring the security of the minor conquest to a major success—but *by constantly seeking out his center of power, by daring all to win all, will one really defeat the enemy* [emphasis added].⁴

Clearly, Clausewitz was thinking of center of gravity as something more tangible than a nation's capital or public opinion. What, then, **was** the basis for his thinking? Although I do not claim to be a scholar of Clausewitz, I believe it is important for all military professionals to read *On War* in context, both in its totality and in its historical setting.

Age of Reason: Conceptual Context

Clausewitz and other classical theorists such as Baron Henri de Jomini wrote during the Age of Reason, a time when the world was being described in analytical and prescriptive terms by great scientific thinkers like Newton and Galileo. Arguably, there was something "faddish" about the writings of Clausewitz and Jomini, because they used geometry and Newtonian physics to describe Napoleonic warfare in terms of mass, space and time. From opposing sides, both men had observed the campaigns of Napoleon, certainly one of the most effective operational artists and military tacticians of all time.

Clausewitz observed conventional land warfare between large armies within defined theaters of operations and used the analogy of popular physical and mathematical theory to describe what he saw. In that context, it is clear that, to Clausewitz, center of gravity generally equated to the mass of a combatant's combat power. With regard to his unfortunate implication that center of gravity can include a nation's capital, its national leaders or even public opinion, let us keep in mind two thoughts when we quote Clausewitz: (1) he died before completing *On War* and (2) he was only one human being, who limited his thought largely to early 19th-century land warfare. Also, who is to say that just because a dead general wrote something it is necessarily gospel? We are always free to update military theory as our collective understanding improves.

Nevertheless, despite these contextual limitations, when *On War* is read completely and studied in context, it essentially defines two very useful elements intrinsic to the notion of center of gravity that are unchanging: *combat power* and the commander's *will* to use that combat power. Therefore, I propose that based on the writings of Clausewitz a useful definition of center of gravity at the operational level of war is this: ***Center of gravity is the relevant mass of a combatant's combat power that is made significant by his corresponding will to use it.***

To extend this definition as even Clausewitz suggests, I believe, only adds unnecessary confusion. If something does not incorporate both of these elements, then I suggest that it is not a

center of gravity. It may be very important, it may be linked to a center of gravity, its defeat may indirectly disable or defeat the center of gravity—but these do not make it a center of gravity. So how do we define these other “things” that are not centers of gravity but are critically linked to them? Jomini, a contemporary of Clausewitz, provides some assistance.

The Decisive Point

Jomini developed a very useful theoretical concept that can help us more clearly understand the notion of center of gravity: the “decisive” or “objective” point. Although he developed definitions for a variety of decisive and objective points, most of which had geographical significance, for our purposes the FM 100-5 definition of decisive point provides a useful collective definition. “Decisive points provide commanders with a marked advantage over the enemy . . . are often geographical in nature . . . could also include elements that sustain such as a command post, critical boundary, airspace, or communications node. *Decisive points are not centers of gravity; they are the keys to getting at centers of gravity.*”[emphasis added]⁵

At this point you may be thinking, “So what? Is it really terribly important to draw a clear line of distinction between our definitions of center of gravity and decisive point?” I believe so, for the simple reason that the ultimate aim of every military commander is the destruction and/or neutralization of the enemy’s center of gravity while simultaneously protecting his own. Furthermore, unless you destroy or neutralize the enemy’s center of gravity, the relevant mass of his combat power, you have not defeated him. You may seize his capital, attack his logistics base, and cause the majority of his population to want to quit. But, if you have not defeated his military forces *on or off* the field of battle, *you have not won.*⁶ Put in simple terms, if the bad guy *can* and *wants to* shoot you in the face, you still have a problem!

The enemy’s capital, his logistics and his national will are certainly important elements or potential decisive points that we will want to influence. Why? Because by influencing these decisive points to our favor, we hope to gain some advantage over his center of gravity, the relevant mass of his combat power and his corresponding will to use it. In many cases, by attacking these decisive points, we will defeat his center of gravity without ever having to attack it directly. Nevertheless, these are still only decisive points, the destruction or defeat of which may not necessarily result in the defeat of his center of gravity.

Thus, the first important concept to be grasped by any commander is the clear identification of centers of gravity and decisive points. Second, the commander must develop a clear understanding of the linkages between a center of gravity and its corresponding decisive points. Third, the commander then develops a campaign plan to target the enemy’s decisive points and/or center of gravity in a sequential and/or simultaneous manner ultimately leading to the defeat of the enemy’s center of gravity.

At the same time, the commander must understand what his own center of gravity and decisive points are and how they are linked. With this knowledge, he can incorporate into his campaign plan the ways and means to protect his own center of gravity, the relevant mass of his combat power. For example, an element of his plan will typically be an operations security (OPSEC) plan, a force protection plan designed to protect a key decisive point—his command, control, communications and intelligence (C³I) structure.

As we move to an information-based military that will allow for the rapid concentration of combat power from distributed forces across the globe and in space, how we attack an enemy’s center of gravity will change. In general, we will have to focus more on attacking key decisive points, particularly command and control (C²) nodes and information systems (cybernetic decisive

points) to neutralize an opponent's ability to mass combat power at the desired time and place. Nonetheless, this neither changes the basic definition of center of gravity nor dilutes its intrinsic link with combat power and commander's will.

OK, I Hear You . . . So What?

At this point, some of you are yawning through what may seem to be just another academic exercise in semantics. You may be asking, "So what? Does it really matter?" To quote a popular radio talk show host, "Words mean things."⁷ Definitions are important. So, yes, *it does* matter, particularly for the planner and commander who must operate at both the operational and strategic levels of war.

For example, as a division plans officer focused primarily on the tactical level of war, I found these issues to be less complex. An enemy's center of gravity was relatively easy to define and decisive points usually fell in line with the Jominian (read: geographic) definition. However, when I found myself working as a planner on a commander in chief's (CINC's) staff, suddenly the previous framework was less useful. By default, the geographic CINCs are, for the most part, the only entities in our government who must consider all elements of national power and are capable of developing comprehensive, synchronized campaign plans to achieve national objectives in both peace and war.

Only CINCs have the organization and resources to plan and execute operations across the entire spectrum. Until the State Department fields "regional ambassadors" (which is unlikely), our primary political/diplomatic arm will continue to focus only at either end of the diplomatic spectrum: at the individual country level and at the broad, national policy level. Until the many, disparate organizations throughout government are pulled together under the same "tent," the interagency process will continue to be decentralized. Presidential Decision Directive 56, "The Clinton Administration's Policy on Managing Complex Contingency Operations," is a recent attempt to pull interagency efforts together into a more streamlined process, but with limited success so far.

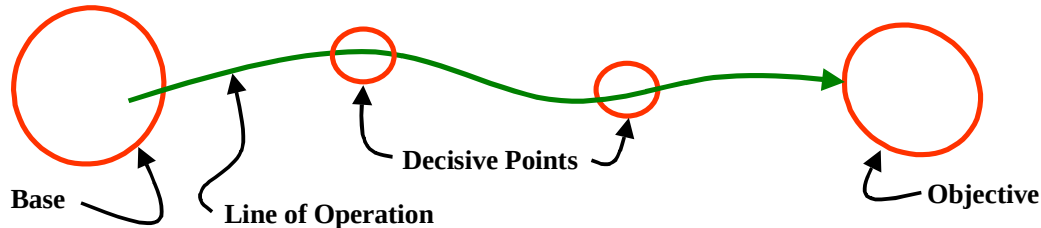
This being the situation with which we are faced, what framework do we have? The primary joint publication for joint command and control, Joint Pub 3-56, *Command and Control of Joint Operations*, has "died in committee" because the services still cannot agree on many basic definitions. Joint Pub 3-0 discusses campaign planning and operational art, but is focused almost singly on the military element of power. What model does the joint planner have for considering all elements of power as he crafts a comprehensive campaign plan? How are strategic, vice operational, centers of gravity to be determined and strategic, vice operational, decisive points? To fill this doctrinal vacuum, I propose a possible framework that could have some utility for strategic planners and leaders.

"Strategic Geometry"

Borrowing again from our Swiss friend, Jomini, I believe we can take his operational framework, combine it with Clausewitz's thoughts on center of gravity, and produce a new, workable model for the joint planner. In other words, just as the operational artist must design his theater in terms of the Jominian "operational geometry" of the theater of operations, so too must the strategic artist design his campaign in terms of a "strategic geometry" that employs all elements of national power. Moreover, this strategic geometry can help us define and identify centers of gravity and decisive points at the strategic level and avoid the current fad of calling everything a center of gravity or decisive point. Figure 1 presents a very simplified diagram of the concepts of both operational and strategic geometry, showing the similarity of the two.

“Strategic Geometry”

PREMISE: Just as the operational artist must design his theater in terms of the Jominian geometry of the theater of operations . . .



. . . so too must the strategic artist design his campaign in terms of a “strategic geometry” that employs all elements of national power.

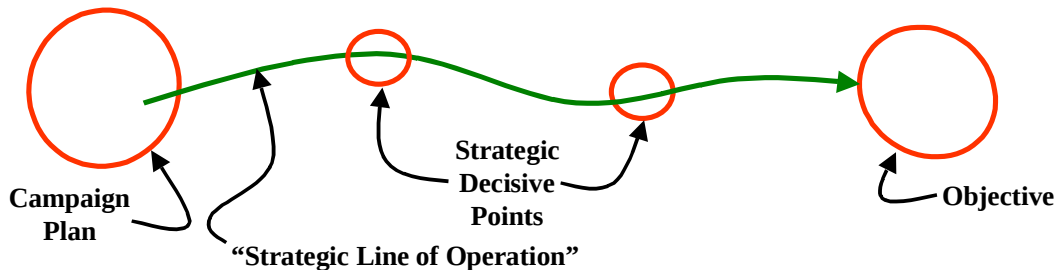


Fig. 1 – “Strategic Geometry” 1

For example, consider Operation Husky (figure 2), the Allied invasion of Sicily in July 1943. Several lines of operation, both surface and air, can be described that passed through multiple decisive points “en route” to the ultimate Allied objective of defeating all Axis forces on Sicily. Although not shown on the map in figure 2, the Allied base of operations was located primarily in North Africa (Tunisia).

First operating from air bases in North Africa, the Allied air forces had to defeat the Axis air forces on the outlying island of Pantelleria (an operational decisive point). Once in control of the island, the allied air forces could use Pantelleria as a base for further actions against Axis air bases at Palermo, Gela and Catania, as well as provide responsive air support for the Allied naval and airborne invasion on 10 July. The landing beaches were clearly operational decisive points through which the Allied lines of operation had to pass en route to their objective of defeating Axis forces in the vicinity of the Strait of Messina.⁸

For the tactical and operational commander planning operations against conventional forces, the Jominian model works well, as we see in the Operation Husky example. For the commander who must consider other elements of national power and is therefore, by definition, working at the strategic level of war, this model is less useful. Therefore, I propose the “strategic geometry” shown in figure 3 as a possible framework for the planner who must poke his head outside the military realm.

“Operational Geometry”

The map shows Sicily with various geographical features and locations labeled. Key locations include Palermo, Catania, Syracuse, and various smaller towns and islands. The map is overlaid with several lines and points:

- Lines of Operation:**
 - Surface:** Represented by a solid green line, showing a path from the north coast of Sicily, through the interior, and down the east coast towards Catania and Syracuse.
 - Air:** Represented by a dotted blue line, showing a path from the west coast (near Trapani) towards the south coast (near Syracuse).
- Decisive Point:** Represented by a red circle, located near the city of Catania.
- Axis Air Base:** Represented by a black airplane icon, located near the city of Palermo.
- Objective:** Represented by a double circle, located near the city of Catania.

Other notable features include the island of Pantelleria (It.) in the southwest, the city of Agrigento, and the city of Enna. The map also shows the surrounding sea and some smaller islands like Stromboli and Lipari.

Fig. 2 – “Operational Geometry”

Note that in figure 3 “strategic decisive points” are not geographic, but like Jominian decisive points are sequenced in time along their respective lines of operation (or, at the strategic level, element of national power). The “strategic base of operations,” instead of being a physical location, is the strategic leader’s campaign plan, an “intellectual base of operations.” The campaign plan is “operationalized” when it is executed along all relevant strategic lines of operation and through all strategic decisive points that are sequenced over time and space to have a net cumulative and synergistic effect on the enemy. In figure 3 the objective is the ultimate defeat of the enemy’s conventional combat forces, because this example generic campaign is expected to potentially involve conventional combat operations.

The defeat of conventional combat formations need not always be the ultimate objective. For example, as a subset of our National Security Strategy, CINCs are writing campaign plans today that are focused on engaging with and influencing the military structures of new allies. In U.S. European Command (EUCOM), the CINC is engaged on a daily basis with the defense structures of numerous central and eastern European nations through Partnership for Peace, the military-to-military contact team efforts of various state National Guard organizations and the George C. Marshall Center in Garmisch, Germany. The “campaign,” formalized in the EUCOM Theater Security Planning System (TSPS), attempts to synchronize these various activities on a country, regional and theater basis to achieve the CINC’s theater strategic aims of engagement and enlargement.

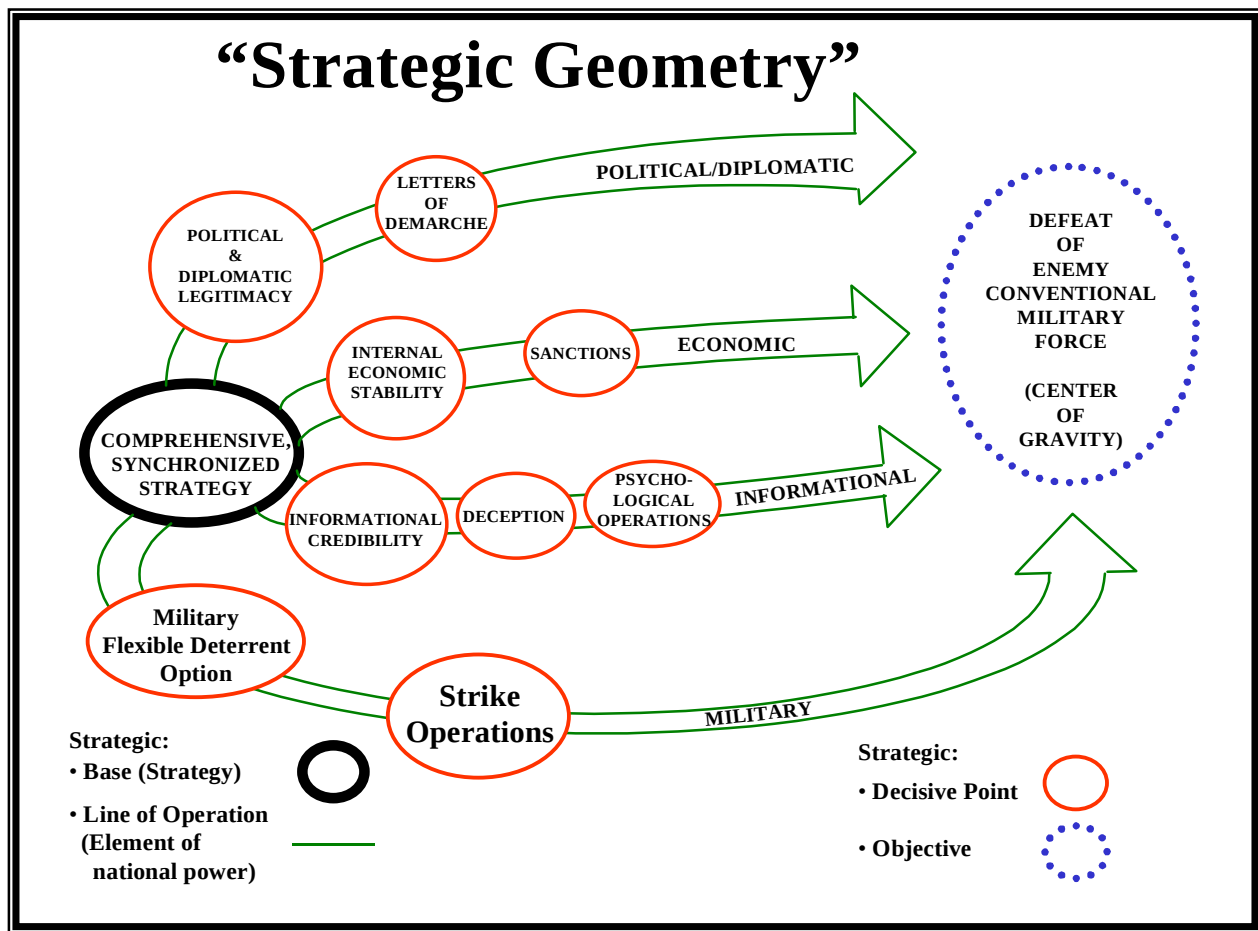


Fig. 3 – “Strategic Geometry” 2

Perhaps because no one is getting shot at, the EUCOM example is not too controversial. In general, we in the Department of Defense have embraced peacetime engagement activities and done them well over the past ten years. However, possibly as a by-product of our collective discomfort following the Vietnam War, we still seem to stiff-arm any comprehensive approach to some of the less-definable “operations other than war,” such as counterinsurgency.

Yet I believe it is in scenarios such as a counterinsurgency that having a framework like my proposed “strategic geometry” is absolutely essential. For it is in just such situations that identifying the enemy’s center of gravity is much more difficult and requires a campaign that employs all elements of national power in a comprehensive, synchronized approach. When we expand our thought process beyond conventional combat operations and consider an “other than war” scenario, we are necessarily driven away from simpler doctrinal frameworks and examples and forced to probe deeper into the theoretical basis of the concepts of center of gravity and decisive point.

Defining Centers of Gravity in Military Operations Other Than War

To illustrate the difference between centers of gravity and decisive points in military operations other than war (MOOTW), the Civil Operations and Revolutionary Development Support (CORDS) program in Vietnam provides a useful example of an interagency campaign from our own history. Although CORDS has never enjoyed the credit it deserves (because the impact of its success was not realized until after the American public’s will was already broken), it still provides an excellent example of a counterinsurgency campaign. In the broader context, as discussed in Joint Pub 3-08,

Interagency Coordination during Joint Operations, CORDS also provides an excellent example of a generic MOOTW interagency campaign.⁹

The operational planner interested in countering or supporting an insurgent campaign must avoid thinking in terms of the customary time-space-mass continuum of the conventional theater or battlefield. For example, the Maoist, three-phase theory of guerrilla warfare consists of the strategic defensive, the strategic stalemate and the strategic offensive. During the defensive phase, the emphasis is primarily on the political, diplomatic, informational and economic elements of power. Military actions are supporting efforts, generally confined to insurgent activities and limited conventional force operations.¹⁰

As strength grows through economic well-being, political and diplomatic legitimacy, and popular credibility, the insurgents can move to a point of strategic stalemate, wherein momentum begins to shift in their favor. Finally, once they gain sufficient “strength” economically, politically and militarily, they are able to move to Phase III and assume the strategic offensive. This phase is generally characterized by the employment of conventional forces whose task it is to complete the destruction of the enemy’s fielded forces.¹¹

The insurgents identify certain “*decisive points*,” on which they orient along each national element of power “axis.” Using the “strategic geometry” framework already discussed, the decisive points they typically target are political and diplomatic legitimacy, economic stability and security, and informational credibility. Ultimately, attainment of these decisive points has to be guaranteed by the employment of conventional military force. In the case of the Vietnam War, this meant the defeat of the South Vietnamese and U.S. fielded forces—our operational center of gravity. A graphical illustration is shown in figure 4.

The architects of the CORDS program largely recognized how the North Vietnamese Communist strategy, called *Dau Tranh*, wielded these elements of power. By integrating the efforts of various U.S. and South Vietnamese agencies, they “attacked” *Dau Tranh* along all four national power “axes.” In essence, CORDS was the campaign designed to achieve the strategic objective of defeating the Viet Cong (VC) insurgency. Unfortunately, it was implemented too late.¹²

The sophistication of *Dau Tranh* lay in the simple fact that the North Vietnamese Communists defeated the United States, not by defeating our fielded forces directly, but by persistently “attacking” along the other axes that oriented on key *decisive points*, such as our national will and international and domestic credibility. It is key to remember that the VC insurgency did not defeat the South Vietnamese and/or the U.S. forces: the ultimate victors were the North Vietnamese Army (NVA) regular forces that swept down from the North in the spring of 1975, once the threat of U.S. military intervention had passed. Most agree that the 1968 Tet Offensive was the “last gasp” of the VC, an offensive that both defeated the VC and, paradoxically, broke the will of the American people, paving the way for our ultimate pullout. Moreover, it is particularly ironic that CORDS contributed to the ultimate defeat of the VC.¹³

Bottom Line

The operational-level commander must persistently stay focused on enemy and friendly centers of gravity and decisive points so he can effectively craft and wage campaigns that both protect friendly centers of gravity and attack enemy centers of gravity. This is not easy to do and is in large measure why the process is called operational *art*. Again, “Does it make any difference whether something is called a center of gravity or a decisive point?” **Yes**, it does matter, particularly in less-defined, “other than war” operations where planners have the notable challenge of identifying decisive points within *each* of the various elements of national power—decisive points that are ultimately *linked* to the center of gravity, which may not yet exist.

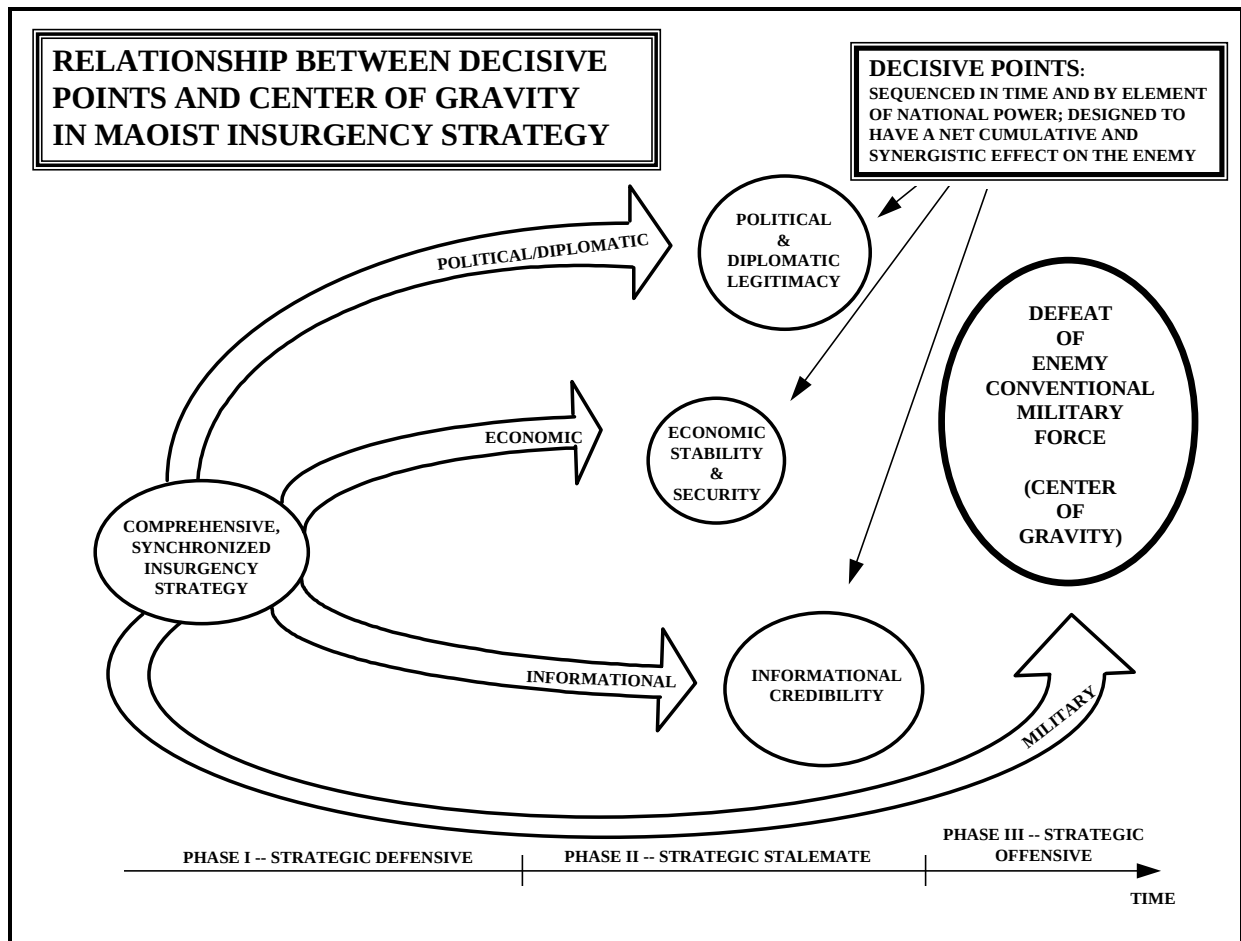


Fig. 4 – Relationship Between Decisive Points and Center of Gravity in Maoist Insurgency Strategy

Of course, in traditional conventional combat operations, decisive points must likewise be linked to the center of gravity, otherwise they are not decisive points! Moreover, in all types of military or interagency operations, if everything is a center of gravity, then the concept loses its meaning entirely, making it extremely difficult, if not impossible, to synchronize the activities of multiple forces and/or agencies that are attacking the same problem employing various means. The inability to distinguish between true centers of gravity and their corresponding decisive points will ultimately result in a failure to optimize combat power at the operational and tactical levels, which could well result in defeat on the battlefield or within the theater of war. Arguably, this is one of the lessons of Vietnam—a lesson we do not want to repeat.

So Where Do We Go From Here?

Unfortunately, coming to grips with universally understood basic concepts like center of gravity, decisive point or even a “strategic geometry” is an insolvable problem in our current joint doctrine development process. Although the development of joint doctrine should be focused entirely on the needs of the joint and service commanders who must execute the next Desert Storm or Support Hope, unfortunately the process often bogs down in interservice “food fights” due in large measure to unspoken individual service concerns about programatics.¹⁴

I propose that the solution to improving our definitions of center of gravity and other basic doctrinal terms, as well as to providing a solid foundation for the joint doctrine development process, is to develop a joint American Theory of War. Certainly we talk about the various theorists who have influenced the way we Americans approach war in our intermediate and senior service schools. At the Naval War College we discuss the writings of Mahan and Corbett, while at the Air War College Douhet is contrasted with the likes of Mitchell, LeMay and Warden. At the Command and General Staff College and the Army War College, we read Sun Tzu and Clausewitz and have written FM 100-5 with a strong Jominian flavor.

Nevertheless, to the best of my knowledge, no one is making a serious attempt to take the next step and develop a universal American Theory of War—"updating Clausewitz," if you will. Given the need to conduct this effort in an interservice academic environment untethered from individual service acquisition and budget concerns, I recommend that the National Defense University take the lead for this venture, supported by the four service war colleges.

Why is this so important? So that we all speak the same language at the very foundation of how we fight, the theoretical level. In my view, we have reached a critical nexus in our development of joint warfighting concepts. We have a framework and process for developing joint doctrine, yet some of the most important joint publications, such as Joint Pub 3-56, *Command and Control of Joint Operations*, have "died in committee" because we cannot agree on basic definitions.

Therefore, a servicewide effort to develop an American Theory of War will go a long way toward breaking the current logjam and will provide the necessary foundation for the development of important future warfighting concepts. More important, we must move beyond the histrionics that currently dominate many of today's joint doctrine discussions and develop the necessary joint theoretical foundation for our doctrine.

Doctrine developed without solid, comprehensive theory at its base is, quite simply, doctrine with clay feet. It is time to move on and develop the long-needed American Theory of War that encompasses land, air, sea and space (and cyberspace?) theoretical concepts woven into a complete whole. This foundational process would best take place in an interservice, academically pure environment, not connected to service programmatic. After all, the outcomes of budget battles have certain effects on each of the services' purse strings, generally in the mid to short term. On the other hand, the outcome of how well we come together and design an effective approach to joint warfighting (doctrine built on a sound theoretical foundation) will impact how well we conduct future operations, directly translating to future indeterminate costs of U.S. time, resources and lives.

Endnotes

1. John A. Warden III, *The Air Campaign: Planning for Combat* (Washington, D.C.: Pergamon-Brassey's, 1989). See also John A. Warden III, "The Enemy as a System," *Strategic Structures: Vol. 4A* (Maxwell Air Force Base, Ala.: Air Command and Staff College, 1994). As described by Warden, the five rings in order from the center (most important) outward are: Leadership, Organic Essentials (electricity/power production, petroleum), Infrastructure (transportation networks), Population and Fielded Military Forces.
2. Dr. Joe Strange of the U.S. Marine Corps War College recently addressed this issue of linking critical vulnerabilities and centers of gravity in his excellent, thought-provoking monograph titled, "Centers of Gravity & Vulnerabilities: Building on the Clausewitzian Foundation So That We Can All Speak the Same Language," Marine Corps University *Perspectives on Warfighting* No. Four, 1996.

3. Carl von Clausewitz, *On War*, ed. and trans. by Michael Howard and Peter Paret (Princeton, N.J.: Princeton University Press, 1984), p. 596.
4. *Ibid.*
5. Army Field Manual 100-5, *Operations* (Washington, D.C.: Department of the Army, June 1993), pp. 6-7, 6-8.
6. The repeated failures of Union commanders in the East to defeat Lee's Army of Northern Virginia stemmed in part from their fixation on Richmond rather than on the Confederate Army. Perhaps the Union leadership believed that the seizure of Richmond would break the enemy's will. In reality, Confederate will to resist did not diminish until Grant's pursuit of Lee's army to Appomattox Court House, where the Union Army completed the defeat of those Confederate forces. Of course, destruction of an enemy's forces does not always result in the immediate breaking of his will. Evidence Moltke's decisive defeat in 1870 of the French forces under Napoleon III at Metz and Sedan, capturing over 104,000 prisoners. Although the French will to resist was not broken for another five months, the Germans decisively defeated the French Army within seven weeks, undoubtedly a factor in France's eventual capitulation. From Gunther E. Rothenberg's article, "Moltke, Schlieffen, and the Doctrine of Strategic Envelopment," in *Makers of Modern Strategy*, Peter Paret, ed., (Princeton, N.J.: Princeton University Press, 1986), pp. 296-325.
7. Rush Limbaugh.
8. For a thorough description of Operation Husky, see Carlo D'Este, *Bitter Victory: The Battle for Sicily, 1943* (New York: Harper Collins, 1988).
9. Gordon M. Wells, *No More Vietnams: CORDS as a Model for Counterinsurgency Campaign Design*, School of Advanced Military Studies (SAMS) monograph (Fort Leavenworth, Kans.: U.S. Army Command and General Staff College, 1991).
10. *Ibid.*, pp. 6-13.
11. *Ibid.*
12. *Ibid.*, pp. 28-33. See also Douglas E. Pike, *PAVN: People's Army of Vietnam* (Novato, Calif.: Presidio Press, 1986).
13. *Ibid.*, p. 33. See also Douglas S. Blaufarb, *The Counterinsurgency Era: U.S. Doctrine and Performance—1950 to the Present* (New York: The Free Press, 1977), p. 251.
14. Joint Pubs 3-01 and 3-09 are two cases in point. In 1996, the Army preemptively nonconcurred with Joint Pub 3-01, *Joint Doctrine for Countering Air and Missile Threats* (being developed by the Air Force) before the publication was officially released for staffing. Likewise, the Air Force persistently nonconcurred with Joint Pub 3-09, *Joint Fire Support* (being developed by the Army) since its inception in 1991. The publication was recently approved, but only after arbitration by the Chairman of the Joint Chiefs of Staff in the "tank."

(This essay was written by Colonel Gordon M. Wells while he was a student at the U.S. Army War College. He assumed command of the Fort Worth District, U.S. Army Corps of Engineers, Fort Worth, Texas, in July 2000.)