



# Centers of Gravity and Strategic Planning

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**I**t is clear that if war starts between NATO and the Warsaw Pact, Western forces will initially fight at a quantitative disadvantage, and probably

qualitative parity. This creates an overwhelming need for efficiency in the application of force. Skillful planning is one way this can be accomplished.

**One definition of strategy is “the science and art of employing the political, economic, psychological, and military forces of a nation or group of nations to afford the maximum support to adopted policies in peace or war.” However, the question remains against what are these national forces employed to support adopted policies, especially during war?**

Recognition of this and of the ad hoc nature of much military planning and execution in US history has inspired the US Army to search for a unified theory of war, or at least for an array of concepts and theories that can assist in focusing effort and maximizing available power. This, in turn, has led to rediscovery of classical theorists of war, especially Carl von Clausewitz. However much Clausewitz has to offer the US Army, problems emerge when concepts or relationships are considered valid simply because they originated with him.

*On War* is a masterpiece, but there is a dangerous tendency to view it as complete and unalterable. Not only is *On War* unfinished by Clausewitz’s own reckoning, but even finished passages require further development and interpretation if they are to be of use today. Thus, the Army finds itself poised between the rediscovery of Clausewitz and the development and application of his wisdom.

The concept of “center of gravity” (*Schwerpunkt*) is a perfect illustration. Clausewitz intended it as an analogy and a heuristic device to provide a focus and framework for the application of military force. The Army has recognized the need for such a device and thus has incorporated the concept of center of gravity into current doctrine. US Army Field Manual (FM) 100-5, *Operations*, for instance, gives the concept of center of gravity a prominent role. However, FM 100-5 focuses on the operational level of war and only tangentially on the strategic. It does not deal with the vital issue of how a strategic planner can accurately identify the enemy’s center of gravity.

Most exercises to identify centers of gravity are performed after the fact. It is assumed that the winners of wars accurately identified the centers and successfully attained them, while losers either could not identify or could not attack the enemy’s center of gravity. While individual historical studies are useful for a strategic planner, their value is eroded by the absence of any general guidelines or conclusions collated from a number of cases.

This failure to provide indicators to use in identifying the enemy’s center of gravity during, or just prior, to war is a glaring weakness in existing US joint and Army doctrine. This has created a need for some sort of framework or methodology to assist strategic planners in this process. The development of such a methodology will be a complicated and important task and must begin with the clarification of the basic elements and implications of the concept of center of gravity at the strategic level.

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## Alternative Conceptions

Two very different conceptions of centers of gravity exist. One approach identifies centers of gravity solely within the enemy’s armed force or, more precisely, as the central concentration of his armed force. The second approach admits that the enemy’s armed force is the most tangible center of gravity and the easiest to identify, but that other possible centers of gravity exist which contribute to the ability of this force to pursue the war.

Center of gravity is a principal building block in *On War* and Clausewitz argued that the “first task ... in planning for a war is to identify the enemy’s centers of gravity, and if possible trace them back to a single one.”<sup>1</sup> However, Clausewitz vacillated between the two approaches.<sup>2</sup> On one hand, he noted that center of gravity is “always found where the mass is concentrated most densely” and he described it as “the hub of all power and movement, on which everything depends.”<sup>3</sup> This

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holds at the tactical and theater level since "a theater of war, be it large or small, and the forces stationed there, no matter what their size, represent the sort of unity in

which a *single* center of gravity can be identified."<sup>4</sup> Even at this level,

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though, the center of gravity is still seen as organic to the deployment of armed forces.

Confusion arose when Clausewitz, in Book Eight of *On War*, briefly abandoned this first or operational approach to the center of gravity and described other possibilities that we categorize as strategic: "In countries subject to domestic strife, the center of gravity is generally the capital. In small countries that rely on large ones, it is usually the army of their protector. Among alliances, it lies in the community of interest, and in popular uprisings it is the personalities of the leaders and public opinion."<sup>5</sup>

This indicates that Clausewitz himself was unclear as to whether a center of gravity was defined solely by the distribution of military forces or was linked to the broader ability of the enemy to continue the war. Clearly, a choice between these conflicting approaches will have profound implications for strategic planning. Modern US Army thinking, at least at the operational level, generally follows Clausewitz by acceding that even though the enemy's armed force is the most readily identified center of gravity, historical cases such as Vietnam, World War II in the Pacific (where much of the Japanese army was intact) and a number of others have proven that it is not the only one.

In FM 100-5 the operational-level center of gravity is defined as: "That characteristic, capability, or locality from which the force derives its freedom of action, physical strength, or will to fight. ... [It can be] the mass of the enemy force, the boundary between two of its major combat formations, a vital command and control center, or perhaps its logistical base or lines of communication."<sup>6</sup>

At a strategic level, FM 100-5 notes that the center of gravity may be an economic resource or locality, allied cohesion, the mental and psychological balance of a key commander, or something even more intangible, such as morale or the national will. Adapting the second approach opens numerous possibilities for strategists, but also generates problems and complexities.

Paradoxically, both approaches to the center of gravity involve advantages and disadvantages. The first approach, which identifies the center of gravity as the greatest point of concentration of enemy forces, has the advantage of clarity and simplicity. The center of gravity becomes tangible with a physical location toward which operational plans can aim.





Cologne, Germany 24 April 1945. A victim of the Allies strategic bombing campaign.

***The American infatuation with industrial areas is clearly derived from our historical approach to war which often compensated for strategic, operational and tactical shortcomings with industrial prowess. When the enemy's industry was concentrated, as was Germany's, and to a lesser degree Japan's, in World War II, this was all the more tempting.***

There are two problems with this. The first is that it is most useful for conventional warfare and has far less utility for low-intensity conflict. The second problem is incompleteness as shown by those instances where a nation lost a war with its armed force largely intact. It is important to remember that victory in war has often occurred when a belligerent concluded that the costs of continuing the war rose above the cost of ending it, not only when it no longer had the capability to continue.<sup>7</sup>

Even the second approach contains two variations. One considers factors outside the enemy's actual forces to constitute centers of gravity, but still deals with only tangible elements such as lines of communication and war industry. The second variation also admits that psychological factors—or anything vital to the enemy's will to resist and which can be destroyed or eroded—sometimes form centers of gravity. Victory, in this case, derives from the enemy's perception of

the costs of persistence. Skillful manipulation of this perception is especially important for a belligerent fighting from a position of numerical inferiority.

This psychological angle involves thorny problems for the strategic planner. Concentrations of armed forces (as in the first approach) and lines of communication and war industry (as in the first variation of the second approach) can be identified without attempting to understand how the enemy thinks and what he values. Discovering exactly what would cause the enemy to quit with his forces more or less intact is a much more slippery process—and a more relevant one for the commander of a unified command who may have to deter a war or fight a limited war short of the conventional level. It entails total familiarization with the thought processes of the enemy elite who have the power to decide to stop the war. It involves deciding what they value and what they perceive the costs of losing to be.





General Vo Nguyen Giap led the Communist military campaigns against the French, Americans and South Vietnamese.

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As vital as this kind of analysis is, it seems especially difficult for US strategists grappling with an enemy of radically different ideology, religion, culture or values. Planners must attempt to think like the enemy or, more precisely, like that segment of the enemy elite having the ability to terminate the war or decide not to start it in the first place. Values and thought patterns must be drawn from speeches, writings and analyses of potential enemies, many of which are designed to camouflage true values and priorities. In addition, the trap of “mirror image” logic, which imputes one’s own values and thought patterns to others, must be avoided. Some efforts have been made in this area, as illustrated

in the “countervalue” nuclear strategy described in Presidential Directive 59 (July 1980).

According to former Secretary of Defense Harold Brown, the new US strategy targets “not only the lives and property of the peoples of the Soviet Union, but the military, industrial, and political sources of power of the regime itself.” The strategy thus recognizes that the Soviet elite consider the survival of the regime as important as the physical survival of the nation.<sup>8</sup> Unfortunately, less has been done to integrate enemy values and priorities into theater and conventional strategies. In fact, nuclear strategy may not be instructive for other types of strategies: the destructive power of the US nuclear arsenal means that there is less need for the strategist to accurately identify the enemy’s center of gravity since enough weapons exist to simply destroy anything that vaguely looks like a center of gravity.<sup>9</sup>

## Identifying the Center of Gravity

When the psychological component is considered, it is clear that no ironclad and rigid process for identifying centers of gravity can be produced. It is, however, possible to derive general rules of thumb and guidelines. The basis for this is found in Clausewitz’s menu of possible centers of gravity or, more specifically, in the fuller analysis of those possibilities.

**Industrial Areas.** The American infatuation with industrial areas is clearly derived from our historical approach to war which often compensated for strategic, operational and tactical shortcomings with industrial prowess. When the enemy’s industry was concentrated, as was Germany’s, and to a lesser degree Japan’s, in World War II, this was all the more tempting. However, for an industrial region to actually become a strategic-level center of gravity, two conditions must exist:

- ◆ The enemy armed forces must be heavily dependent on the products of that industrial region. In other words, the denial of the products from an industrial region must cause a very quick collapse of the armed force since it can be assumed that before or as soon as denial takes place, steps will be taken to find alternative sources of the products or ways to wage war without those products. Nazi Germany, attempting to fight an industrially dependent force, might have fit here; North Vietnam did not.
- ◆ It must be impossible to disperse the industrial capability. This could occur either when the



German III Corps and US V Corps troops preparing communications for a fire direction center.

***If the alliance is seen as relatively trivial to the main power, as in Adolf Hitler's alliances, alliance cohesion does not constitute a center of gravity. For NATO, where the United States could not wage a war for Europe without European allies, alliance cohesion may form a center of gravity. For the Soviet Union, the cohesion of the Warsaw Pact may not constitute a center of gravity.***

destruction or capture of a region happens so quickly that dispersal is preempted or when the nature of the industry (such as petroleum drilling and refinement) precludes dispersal.

**Public Morale.** To many strategic planners, especially those cognizant of the war in Vietnam, this appears to provide an enticing center of gravity, but the history of warfare shows that the US experience in Vietnam was the exception, not the rule. For public morale to constitute a center of gravity, a very special set of circumstances must exist. Clearly the government waging war must be either sensitive or susceptible to public opposition to the continuation of the war—which can only be a major factor in democracies—or deep public discontent with the government must exist prior to the war, as in Imperial Russia.

Even in democracies it is difficult to drive a wedge between a polity and a regime because of the natural

tendency to rally behind a government during times of threat. Also, even democracies become less democratic, and thus less susceptible to public pressure, during a war. Historically, if all losers of wars were examined, those whose defeat was caused by a loss of public support would be very rare. Even nations where citizens suffered grievously, such as the Confederate States of America, Nazi Germany and Imperial Japan, could probably have counted on further public support or acquiescence had the elite been determined to persist in the war and had some capability to do so been present.

In general, it is not at all clear that centers of gravity determined by public morale (or its absence) have much to offer US strategists. As noted, democracies are the most vulnerable to this, but it is highly unlikely that US strategy will call for waging war against a democracy. It is difficult to imagine how US military actions could affect public morale in the Soviet Union.



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In the case of Imperial Russia, Germany clearly took advantage of the weakness of the Czar's government by assisting in the return to Russia of Vladimir Lenin, Grigori Zinoviev, Nadezhda Krupskaya and other revolutionaries in April 1917. However, actual German and Austrian military strategy only participated in this process in an indirect fashion by consistently and bloodily defeating the Russian army. This implies that public morale can form an important vulnerability in an authoritarian or perhaps even totalitarian nation, but it is a vulnerability which must fester for a relatively long time before it can be exploited.

The realities of the current US military situation do not provide the luxury of slowly developing centers of gravity before exploiting them. Since almost by definition the likely future enemies of the United States will be totalitarian regimes that can count on an extended period of public acquiescence, there is little utility in constructing strategies based on centers of gravity defined by public morale.

**Alliance Cohesion.** This was a possible strategic center of gravity mentioned by Clausewitz, but it is a precarious one. The determinant here is how the enemy views the alliance. If the alliance is seen as relatively trivial to the main power, as in Adolf Hitler's alliances, alliance cohesion does not constitute a center of gravity. For NATO, where the United States could not wage a war for Europe without European allies, alliance cohesion may form a center of gravity. For the Soviet Union, the cohesion of the Warsaw Pact may not constitute a center of gravity.

Even in those rare cases where alliance cohesion is a center of gravity, it is difficult for strategic planners to assess. As Joseph Stalin discovered in the late 1940s, threats can have the opposite result of what

was intended and can cause friends and allies to tighten their links and their vigilance rather than disintegrate. The nature of the threat and the prethreat condition of the alliance help determine whether a given threat will cause an alliance to pull more closely together or disintegrate. Even with this, the calculations involved when alliance cohesion is considered a center of gravity are extremely tentative.

**Capital Cities.** Historically, after actual armed forces, capital cities have probably been the one thing most often considered a center of gravity. Union strategy early in the US Civil War is a stark example of planning based entirely on the assumption the enemy's capital constituted his center of gravity. It was only with the emergence of General Ulysses S. Grant that perceptions of the Confederate center of gravity shifted toward General Robert E. Lee's army and the economic base in the Deep South.





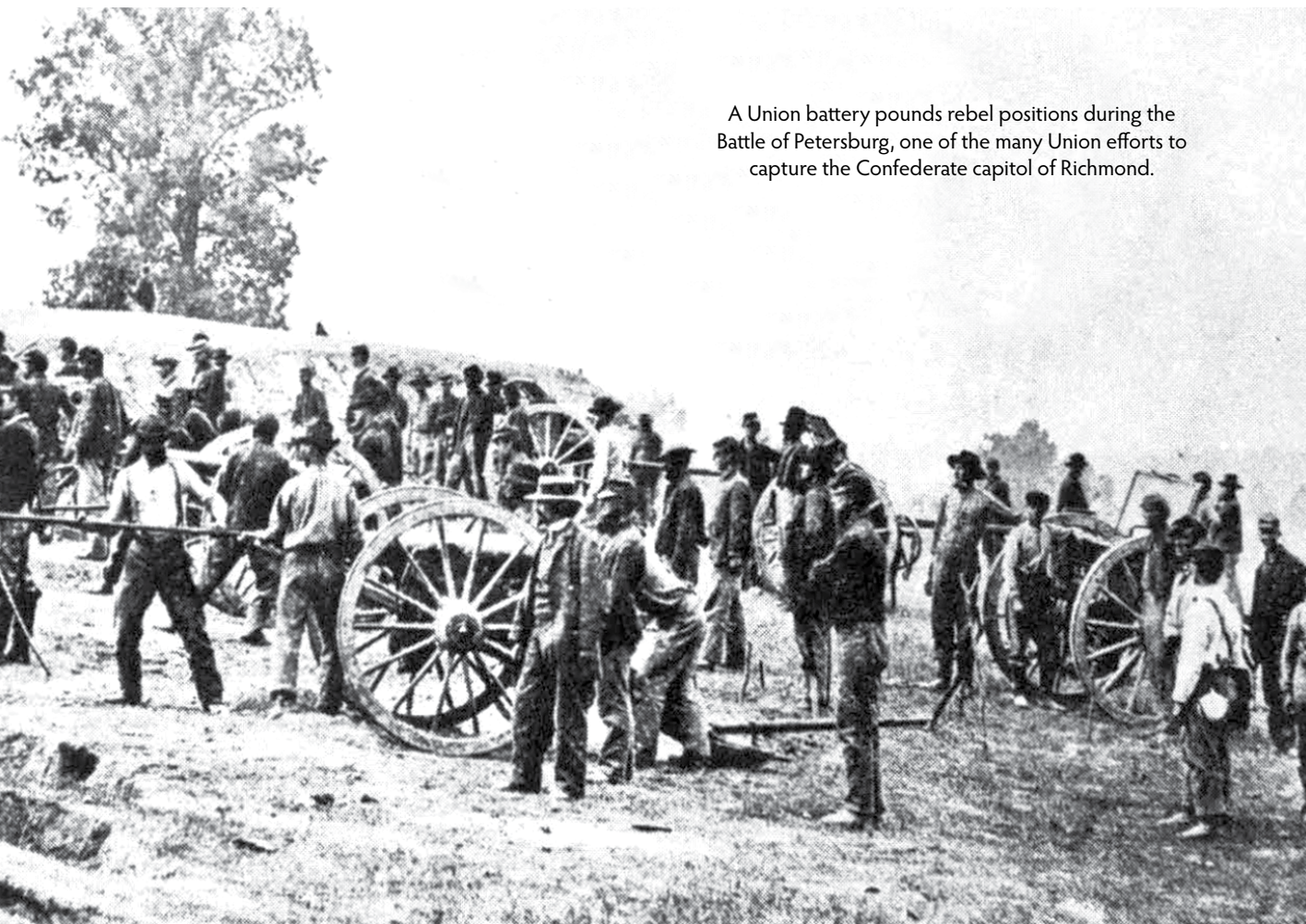
In World War II, the fall of France further reinforced the notion that a capital city formed the center of gravity. German strategy during the initial invasion of the Soviet Union and Soviet and Western strategy in the final years of the war placed great emphasis on capitals as centers of gravity. It is likely, however, that the role of a capital as a center of gravity is transitory. Thus, if a capital is captured quickly—as was Paris in 1940—and the government cannot physically move itself and refocus national attention, then it does serve as a center of gravity. If the capture is delayed enough

to allow such a physical and psychological transfer, then the value of the capital declines.

It is likely that the capture of Moscow in the late summer or fall of 1941 would have led to Soviet defeat, while its capture a year or two later would not have. Likewise, if George McClellan had taken Richmond in the summer of 1862, the Confederacy may very well have fallen, but if Grant had done the same in the summer of 1864, it is highly possible the South could have regrouped and held out for a few more months.

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A Union battery pounds rebel positions during the Battle of Petersburg, one of the many Union efforts to capture the Confederate capitol of Richmond.



**Political Elites.** It is occasionally argued that the real Nazi center of gravity was Hitler and his top aides. Similarly, it is thought that if leaders such as Winston Churchill, Stalin or Lee could have been eliminated, their nations would have suffered immediate defeat. It is even more likely that the death of Napoleon Bonaparte or Alexander the Great would have brought quick

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victory to their opponents. This is a fascinating prospect. A possible retort might be that it is extremely difficult to remove an individual leader or a small elite under wartime levels of security. However, if a concerted effort had been made, it certainly might have been no harder to assassinate Stalin than defeat the Red Army.

While the assassination of key enemy leaders can be considered contrary to modern rules of warfare, it is worth noting that it was the United States that proved most successful at this when Admiral Isoroku Yamamoto was hunted down and killed by P-38 aircraft. The only general rules that can be derived from this are:

- Cases are rare where an individual or a small number of individuals are so vital to a nation's war effort that their death would cause defeat.
- The uncertainty involved means that in strategic planning, such objectives should play only a minor role.

There are several reasons that guidelines and general rules of thumb for identifying centers of gravity cannot be reduced to a rigid and mechanical methodology. Centers of gravity do not exist in isolation from perceptions and decisions, and can be created as a result of conflict. They are dynamic and often change as a conflict evolves. They must be appropriate to the nature of the conflict and the political objective.

Strategy is a creative process that, among other things, seeks to establish some form of control over an opponent. All strategists are constrained by the means

they can employ, and a successful strategist must be able to do more than simply determine what a center of gravity is. In the event he identifies one that cannot be attacked, he must discover how to encourage his opponent to respond in a way that will create a different center of gravity.

This process can be likened to a chess player creating the conditions that will allow him to predict his opponent's actions several moves ahead. Examples might be fostering reliance on a specific ally and then stripping away that ally's support. In the event this is impossible, a pressing question arises: Is the destruction of the enemy's center of gravity the only key to strategic-level victory or can a campaign not directed at a center of gravity obtain benefits?

The dynamic nature of centers of gravity is one factor that makes strategy as much an art as a science. War is not chess and modern nations are not chessboards. Nations are increasingly complex organizations and are remarkably resilient.

Strategic centers of gravity can change as conflict progresses, but not only as a result of deliberate decisions. They may change as a result of a series of apparently random defensive actions or due to changes in the nature of the conflict. The oft-articulated goal of a clearly stated strategic objective pursued with single-minded purpose may be impossible or unwise.

It is often noted that North Vietnam attained victory by its consistent pursuit of the US national will. However, until 1965 the South Vietnamese elite were more the center of gravity than US national will. As the United States increased its commitment and took over the war, the viability of the South Vietnamese government became a secondary concern and the North Vietnamese seemed to have discerned this shift. Thus, the single-minded pursuit of an initial center of gravity may generate failure rather than success.

Centers of gravity must be appropriate to the nature of the war. On one level it may be that Clausewitz menu may define the viability and vulnerability of the nation, but may have little relevance to the war or conflict. If the purpose of the war is limited and the strategy is not only to achieve control, but also to keep the conflict limited, then the appropriate center of gravity may not be one at the heart of the state's survival or viability, but one that imposes costs that do not threaten survival.

Secondary explosions continue after the Japanese bombing of Pearl Harbor, 7 December 1941. Photo taken outside the patrol plane hangers at the extreme southern end of Ford Island. The battleship Nevada, aground in shallow water near Hospital Point, can be seen in the background.



***There are a number of other issues to be confronted if center of gravity is to be used in an optimal fashion by strategic planners. It is vital for a strategic planner to avoid misidentifying the enemy's center of gravity. The Japanese attack on the US Pacific Fleet at Pearl Harbor is often considered a classical example of this.***

The identification of centers of gravity is only the first step in strategic planning. There are a number of other issues to be confronted if center of gravity is to be used in an optimal fashion by strategic planners. It is vital for a strategic planner to avoid misidentifying the enemy's center of gravity. The Japanese attack on the US Pacific Fleet at Pearl Harbor is often considered a classical example of this.

When using historical case studies, it is usually assumed that losers erred in this, but strategic (and operational) planning—along with chances of military victory—would be greatly augmented if there were some way of knowing when the enemy's center of

gravity has been misidentified short of defeat. In other words, the use of center of gravity in strategic planning would include some sort of feedback procedure for midcampaign reevaluation.

One final issue is the most abstract of all, but potentially the most important. Edward N. Luttwak has analyzed what he calls the “paradox of strategy.”<sup>10</sup> By this he means that since war and strategy involve conflict between two thinking, analyzing, reacting parties, what appears optimal in terms of “linear logic” is not always best. To take a simple tactical example, the easiest route of movement for a body of troops which would be optimal in linear logic is often not the best. The enemy



is more likely to prepare defenses along that route than along a more difficult path.

Thus the paradox that the poorer road turns out to be the better one. This paradoxical logic also operates when the concept of center of gravity is integrated into strategic planning. Simply put, center of gravity analysis attempts to provide a way to defeat an enemy in the quickest, most efficient manner possible, but in the long term, this may not be optimal because an enemy defeated quickly and efficiently is more likely to instigate another fight at some future date than one defeated slowly.

This might have been acceptable in Clausewitz's time when the purpose of war was an advantageous short-term settlement and it was assumed that war would occur again fairly quickly. In the modern era, quick, easy victory may not solve the root problem which led to war and can set the stage for bigger conflicts in the future. The Franco-Prussian War and the Six-Day War serve as examples. What this means is that US strategic planners must decide whether we want the cheapest, quickest resolution possible in a given conflict or, to phrase it differently, whether we seek war termination or conflict termination.

Currently, center of gravity is part of US military doctrine, but the full implications and applications of

the concept have not been explored. This is particularly true at the strategic level. If center of gravity is to form part of the groundwork of our military planning,

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these implications and applications must be fleshed out. The guidelines and rules of thumb suggested here are intended to be the first step in this direction.

What needs to follow is a larger project of integrating historical case studies and present and future strategic considerations into a more general methodology for the identification and use of center of gravity at the strategic level. Only when this is done will center of gravity be transformed from an alluring Clausewitzian buzzword to a useful element in US strategic planning.

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## Notes

1. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Parat (Princeton, NJ: Princeton University Press, 1984), 619.
2. James J. Schnelder and Lawrence L. Izzo, "Clausewitz's Elusive Center of Gravity," *Parameters*, vol. 17, no. 3 (September 1987): 46.
3. Clausewitz, 485, 59-96.
4. *Ibid.*, 487. (emphasis in original)
5. *Ibid.*, 596.
6. US Department of the Army Field Manual 100-5, *Operations* (Washington, DC: US Government Printing Office, 1986): 179.
7. In the nuclear age, victory could, at least theoretically, occur when the enemy was totally annihilated, but no rational strategic plan could be based on this objective.

8. James E. Dougherty and Robert L. Pfaltzgraff Jr., *American Foreign Policy: FDR to Reagan* (New York: Harper and Row, 1986), 334.
9. Michael I. Handel has argued that "One should be very cautious about applying Clausewitz to the realm of nuclear strategy." See "Clausewitz in the Age of Technology," *The Journal of Strategic Studies* (June/September 1986):83.
10. Edward N. Luttwak, *Strategy: The Logic of War and Peace* (Cambridge, MA: Belknap, 1987).

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