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THE CULMINATING POINT  
AND U.S. ARMY TACTICAL DOCTRINE

A Monograph  
by  
Major David B. Flanigan



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**ABSTRACT**

**THE CULMINATING POINT AND U.S. ARMY TACTICAL DOCTRINE by  
MAJ David B. Flanigan, USA, 47 pages.**

U.S. Army Field Manual 100-5, Operations (FM 100-5), the keystone warfighting manual, lists the culminating point as one of the three key concepts of operational design. It also states that the concept is applicable at the strategic, operational and tactical levels. The purpose of this monograph is to examine the incorporation of the concepts of culmination and the culminating point as introduced in FM 100-5 into the derivative tactical warfighting manuals.

The monograph first examines the theoretical framework of the of the concept of the culminating point. Subsequently, it surveys the contemporary use of the concept by the U.S. Army and suggests the concept will retain its validity. It then assesses current U.S. Army tactical warfighting manuals to determine how well the concept is addressed in the derivative warfighting manuals.

The monograph concludes that the derivative warfighting manuals do not adequately address the concept of the culminating point. It further concludes that, if the concept is one of the three keys to operational design and is not adequately addressed in the derivative warfighting manuals, a serious doctrinal shortfall exists. Finally the monograph offers recommendations for the correction of the problem. It recommends the modification of some current doctrine, the creation of new doctrine and the incorporation of instruction on the concept into professional education programs.

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## SECTION I

### INTRODUCTION

Every battle has a turning point when the slack water of uncertainty becomes the ebb tide of defeat or the flood water of victory.

Admiral Charles Turner Joy

### PURPOSE

The purpose of this monograph is to examine the incorporation of the concepts of culmination and the culminating point as introduced in U.S. Army Field Manual 100-5, Operations (FM 100-5), into the derivative tactical manuals.

### PROBLEM AND SIGNIFICANCE

FM 100-5, Operations, is the Army's keystone warfighting manual. It explains how Army forces plan and conduct campaigns, major operations, battles, and engagements in conjunction with other services and allied forces. It furnishes the authoritative foundation for subordinate doctrine, force design, materiel acquisition, professional education, and individual and unit training . . . . FM 100-5 presents a stable body of operational and tactical principles . . . capable of providing a long-term foundation for the development of more transitory tactics, techniques and procedures. It provides operational guidance for commanders and trainers at all echelons.<sup>1</sup>

The identification of FM 100-5 as the U.S. Army's keystone warfighting manual is clear. Equally clear is the role its authors expected it to play in the development of subordinate doctrine, specifically

tactical doctrine. One would expect, therefore, all the tactical warfighting manuals to be, to one degree or another, derivatives of FM 100-5.

The 1986 version of FM 100-5 discusses "three concepts central to the design and conduct of campaigns and major operations: the center of gravity, the line of operations, and the culminating point."<sup>2</sup> In addressing the culminating point, FM 100-5 first defines it:

Unless it is strategically decisive, every offensive operation will sooner or later reach a point where the strength of the attacker no longer significantly exceeds that of the defender, and beyond which continued operations therefore risk overextension, counterattack and defeat.<sup>3</sup>

The manual next addresses the significance of the culminating point:

The art of attack at all levels is to achieve decisive objectives before the culminating point is reached. Conversely, the art of the defense is to hasten the culmination of the attack, recognize its advent, and be prepared to go over to the offense when it arrives.<sup>4</sup>

FM 100-5 then states that culminating points exist at every level and that, "there are numerous historical examples of strategic, operational, and tactical offensives which reached culminating points before reaching their objectives."<sup>5</sup>

The manual is very clear: consideration of culmination is key to the conduct of successful operations at any level. Accepting the importance and the applicability of the culminating point concept at the

tactical level, one would expect the concept to be addressed in U.S. Army tactical doctrine. If the derivative warfighting manuals do not address the concept and provide guidance for its use to tactical commanders and their staffs then a serious doctrinal disconnect exists between the capstone warfighting manual and its tactical derivatives.

#### METHODOLOGY

In this monograph, I will first provide an understanding of culmination by examining the definition and theoretical basis of the concept as presented by Carl von Clausewitz in On War and as interpreted by several authors. Next, I will conduct a brief verification of the existence and continuing validity of the concept of the culminating point at the tactical level. Subsequently, I will present the U.S. Army's contemporary use of the concept and some considerations for its modern applicability. I will next present the results of an assessment of the incorporation of the concept into the current U.S. Army tactical level manuals. Finally, I will present my conclusions and recommendations.



SECTION II  
THEORETICAL FRAMEWORK

**Military Theory:** A structure of knowledge consisting of a set of first principles that explains the processes and phenomena that lead to the destruction, disorganization, and disintegration of armies in battle.

James J. Schneider

Before attempting a legitimate assessment of current military doctrine, one must possess an understanding of the theory from which that doctrine is derived. The U.S. Army concept of the culminating point is derived from the work of Carl von Clausewitz; therefore, it is appropriate to examine Clausewitz' writing. Although Clausewitz produced other writings, On War contains his thoughts on the culminating point.

One of Clausewitz' fundamental approaches to war centers on the dialectic relationship between defense and attack. He considers the attack to be the weaker form of warfare but observes that it has a positive aim: its object is to seize or destroy. Conversely, the defense is the stronger form of warfare but it has a negative aim, that is to say that its object is to deny or preserve. He concludes, however, that an absolute defense is contradictory. "The fact remains that merely parrying a blow goes against the essential nature of war, which certainly does not consist merely in enduring."<sup>1</sup> For

Clausewitz, the defense, although the stronger form of warfare, is not the decisive form and therefore should be employed only until the offense can be assumed and a decision sought or obtained. "A sudden powerful transition to the offensive - the flashing sword of vengeance - is the greatest moment for the defense."<sup>8</sup> In discussing the time for this "sudden transition," Clausewitz first discusses the existence of a culminating point.

Although most of Clausewitz' discussion on culmination centers on the attack, in Chapter Eight of Book Six, "Types of Resistance," he introduces the concept of the culminating point in a defensive context:

So long as the defender's strength increases every day while the attacker's diminishes, the absence of a decision is in the former's best interest; but if only because the effects of the general losses to which the defender has continually exposed himself are finally catching up with him, the point of culmination will necessarily be reached when the defender must make up his mind and act, when the advantages of waiting have been completely exhausted.

Tightly interwoven here is one of Clausewitz' fundamental attitudes toward space and time. Harold Nelson writes: "In war, space is contested but time is shared. The same minutes tick away for both adversaries. Clausewitz' ability to analyze the implication of this simple truth is one of his enduring contributions to our understanding of war."<sup>10</sup> The defender is holding that which the attacker desires: the space. As time passes

and as long as the defender continues to hold the object then he is, by definition, enjoying success and the attacker is not. According to Clausewitz, this proves that "time which is allowed to pass unused accumulates to the credit of the defender. He reaps where he did not sow. Any omission of attack -- whether from bad judgment, fear or indolence -- accrues to the defender's benefit."<sup>11</sup>

In Chapter Four, Book Seven of On War, "The Diminishing Force of the Attack," Clausewitz continues his discussion on culmination. There he discusses the depletion of the strength of an attack over time and cites some reasons for this depletion:

1. If the object of the attack is to occupy the enemy's country (Occupation normally begins only after the first decisive action, but the attack does not cease with this action).
2. By the invading armies' need to occupy the area in their rear so as to secure their lines of communication and exploit its resources.
3. By losses incurred in action and through sickness.
4. By the distance from the source of replacements.
5. By sieges and the investment of fortresses.
6. By a relaxation of effort.
7. By the defection of allies.<sup>12</sup>

He then asserts that these tendencies may be offset or completely canceled by other factors that tend to strengthen the attack, for example: a weakening of the defense. He concludes that many factors in combination will determine the ultimate result.

As a natural extension of the discussion, in Chapter

Five of Book Seven "The Culminating Point of the Attack," Clausewitz continues his examination of what many consider to be one of his most important concepts. Clausewitz defines the attacker's culminating point as:

The point where their remaining strength is just enough to maintain a defense and wait for peace. Beyond that point the scale turns and the reaction follows with a force that is usually much stronger than that of the original attack. This is what we mean by the culminating point of the attack.<sup>13</sup>

Beyond the culminating point, the attacker is no longer decisively stronger than the defender and, therefore, is in danger of counterattack and defeat.

Key to understanding Clausewitz' concept of the culminating point is an understanding of his concept of combat power. Clausewitz likened combat power to currency; if one desired some military victory one had to pay for it. "The attacker is purchasing advantages that may become valuable at the peace table, but he must pay for them on the spot with his fighting forces."<sup>14</sup> This suggests that he felt that at least some aspects of strength were measurable. Although Clausewitz did not provide a "combat power model" for determining relative strengths, he does address many of the factors involved in "strength."<sup>15</sup> H. Rothfels has suggested that Clausewitz viewed combat power as a combination of different energies: moral, physical, psychological and cybernetic.<sup>16</sup> Generally, it would seem that Clausewitz

viewed military strength as a summation of many different factors: some tangible, some intangible; some quantifiable, some not.

In Chapter 22 of Book Seven, "The Culminating Point of Victory," Clausewitz describes at length the relationship between the combat power of the attacker and that of the defender. "Every reduction in strength on one side can be considered as an increase on the other."<sup>17</sup> This relationship is graphically depicted in Figure 1.

Clausewitz refers to the point of intersection as the "the point of balance" or the "threshold of equilibrium" as well as the culminating point.<sup>18</sup> He also indicates that discerning that point is of the utmost importance.

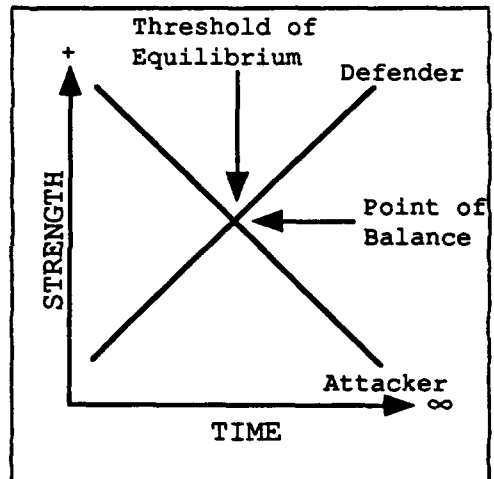


Figure 1

Clausewitz states, "What matters therefore is to detect the culminating point with discriminative judgment."<sup>19</sup> It is easy to follow his logic. If the culminating point is, "the point where their remaining strength is just enough to maintain a defense and wait for peace," then an attacker must identify the point in order to halt his advance in time to prevent overextension and defeat.<sup>20</sup> Conversely, a defender must identify the point, "at which the

advantages of waiting have been completely exhausted," so that he may make the "sudden powerful transition to the offensive."<sup>21</sup> Clausewitz fully recognizes the difficulty inherent in trying to identify the culminating point.

In reviewing the whole array of factors a general must weigh before making his decision, we must remember that he can gauge the direction and value of the most important ones only by considering numerous other possibilities--some immediate, some remote. He must guess, so to speak: guess whether the first shock of battle will steel the enemy's resolve and stiffen his resistance, or whether, like a Bologna flask, it will shatter as soon as its surface is scratched; guess the extent of debilitation and paralysis that the drying up of particular sources of supply and the severing of certain lines of communication will cause in the enemy; guess whether the burning pain of the injury he has been dealt will make the enemy collapse with exhaustion or, like a wounded bull, arouse his rage; guess whether the other powers will be frightened or indignant, and whether and which political alliances will be dissolved or formed. When we realize that he must hit upon all this and much more by means of his discreet judgment, as a marksman hits a target, we must admit that such an accomplishment of the human mind is no small achievement.<sup>22</sup>

He explains that the preceding is the reason "the great majority of generals will prefer to stop well short of their objective rather than risk approaching it too closely, and why those with high courage and an enterprising spirit will often overshoot it and so fail."<sup>23</sup> In conclusion, Clausewitz summarizes the impact of his concept and its importance to the military leader. "Only the man who can achieve great results with limited means has really hit the mark."<sup>24</sup>

Culmination is an absolute process with relative implications. Units expend energy regardless of their activity. Even those units not engaged in combat expend energy in waiting. Unless this energy is replaced or regenerated, the unit moves toward culmination. As units near culmination, their combat power or potential combat power is reduced. The implication of this absolute process is relative. The reduction of combat power renders a unit vulnerable to attack and defeat by a stronger enemy. This relative vulnerability may be only temporary if offset by friendly actions, such as resupply, undertaken to increase combat power. If a stronger enemy does not attack during the vulnerable time period, then the unit may not suffer any ill effects of culmination. If, however, the unit is attacked and defeated by a stronger enemy then the result of the culmination becomes disastrous.

Culmination seems to have a dual nature in that it is both unilateral and relative. Culmination may be unilateral in the sense that it may not be caused or affected by enemy action. It may also be relative in that enemy action might contribute to or cause friendly culmination.

From the Clausewitzian standpoint, culmination may be unilateral if the elements of "friction" are present to such a degree as to cause the tactical unit to

culminate. "Friction" according to Clausewitz is, "the force that makes the apparently so easy so difficult."<sup>25</sup> A force draws most of its energy from a base of operations. As a force moves away from its base of operations, it expends various kinds of energy. If this energy is not replaced then the force eventually will reach a point at which its energy is completely expended. If a force expends all its fuel, it is unable to move farther until refueled; if it expends all its ammunition then it is unable to fire until resupplied. Similarly, if it exhausts all its soldiers, it will be unable to continue until those soldiers have rested. All this may occur without enemy contact or unilaterally: units may outrun their fuel resupply; soldiers may discard ammunition to save space and weight or waste it firing at imaginary enemies; soldiers may become physically exhausted from loss of sleep and proper nutrition. Additionally, the expenditure of energy in terms of simple life support that occurs even when a unit is not in contact with the enemy will eventually lead to culmination if preventive measures are not taken. An example of unilateral culmination can be seen in the failed hostage rescue attempt, Desert One. Although the Iranians played no part, the mission still failed largely due to mechanical culmination caused by the "friction" of the operation.<sup>26</sup> Unilateral culmination is graphically



depicted in Figure 2. While the potential lines of culmination are shown as separate and distinct, they may be coincidental with one another.

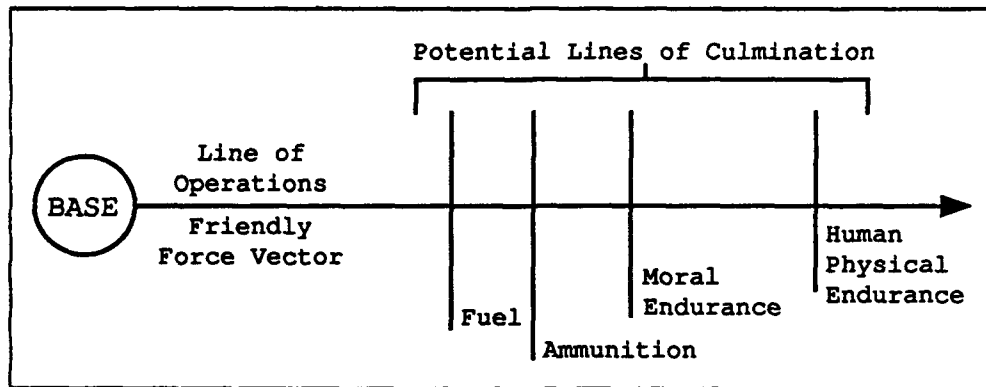


Figure 2

As Clausewitz explains, culmination may be and usually is relative in that it usually is caused by contact with the enemy. In fact, Clausewitz bases his concept and explanation of culmination primarily on the idea of it being a result of contact with the enemy. In the purest Clausewitzian sense, the concept would lose utility if not considered in relation to the enemy.

Since the process of unilateral culmination is ongoing, enemy action simply serves to make the culminating point dynamic, that is, possibly closer in space and time. Conversely, friendly actions undertaken to postpone or prevent culmination serve to move the point farther away in time and space. Clearly then, both sides attempt to achieve their respective objectives before reaching their respective culminating points. If the lines of unilateral culmination for both lie beyond

the objective, then the culminating point or "the threshold of equilibrium" will be determined during the battle as the combat power of the two sides shifts relative to one another. One force will destroy its opponent, force its opponent to withdraw, or compel its opponent to halt short of its objective. Enhancing the unilateral graphic depiction to account for enemy action might result in Figure 3.

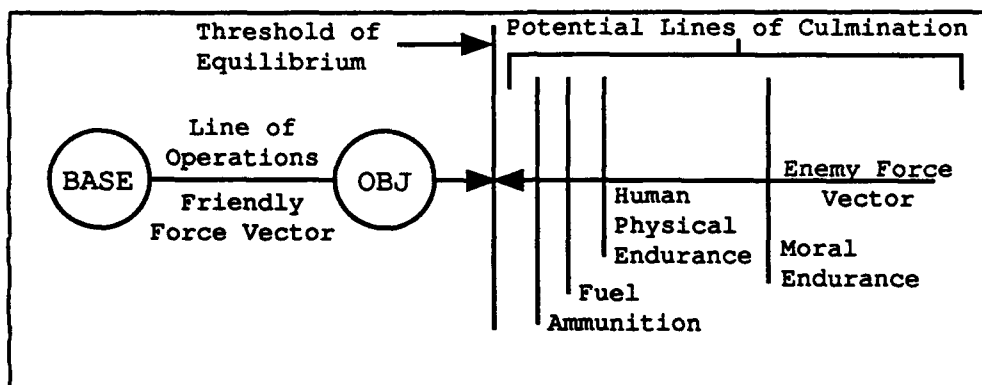


Figure 3

In the case depicted, the friendly force has been successful and has attained its objective. The enemy has caused a compression of several of the unilateral culminating lines in time and space. Conversely, the friendly success has caused an extension of the moral endurance line.

Some might argue that Clausewitz' concept of culmination applies at the strategic and operational levels but has no relevance at the tactical level. Charles O. Hammond addresses that question in his monograph, "Does the Culminating Point Exist at the

Tactical Level?" After investigating historical examples such as Erwin Rommel's experiences in North Africa during World War II and the Syrian experience on the Golan Heights in 1973, Hammond concludes that Clausewitz' concept, "has great utility for the tactical commander."<sup>27</sup> Similarly, FM 100-5 notes that, "Examples of tactical attacks reaching culminating points are equally numerous in military history but are rarely recorded."<sup>28</sup> Clausewitz' work gives no indication that he considered his concept to have limited application. All this seems to indicate that, indeed, culmination applies at the tactical level as well as at the operational and strategic levels.

Culmination at the tactical level occurs as the result of actions and decisions either at the tactical level or at higher levels. A tactical unit may culminate as a result of its own actions and decisions. As units continue to operate, energy is expended. If that energy is not replaced or regenerated, then the unit nears its culminating point and must either halt before progressing beyond the point or accept the risks associated with continued operations. If the unit has the ability to prevent or postpone the culmination but elects not to do so, the unit contributes to its own culmination.

Tactical culmination may also occur as a derivative of either operational or strategic culmination. During

the 1944 campaign in Europe, Eisenhower made the decision to give Montgomery instead of Patton priority on fuel. Despite the shortage of fuel, a component of combat power and therefore related to culmination, Patton continued to press his attack. Although an operational pause on Patton's part may have allowed the fuel situation to improve, the continued attack resulted in some of Patton's front line tactical units running out of fuel in the face of the enemy.<sup>29</sup> Clearly these tactical units had culminated; however, they did so as a result of a higher level decision.

Tactical culmination may very well have strategic implications. Much the same as actions and decisions at the strategic and operational levels can cause tactical culmination, tactical culmination may result in strategic failure. The experience at Desert One illustrates this point. The failure of the mission occurred at the tactical level but resulted in the abortion of a strategic level operation. Although one might argue that rescue attempts continued at the strategic level in the form of continuing diplomacy and other efforts, clearly Desert One must be considered both a tactical and strategic failure resulting from tactical culmination.

Undoubtedly then, progressing beyond the culminating point may result in defeat. This begs the question as to whether a commander should ever knowingly push beyond his

unit's culminating point. To answer this question, one must return to the earlier discussion on the relative nature of culmination. If a force knowingly reaches its culminating point it accepts risk in proceeding farther. If it is successful and achieves its objective and either is not attacked or is able to regenerate sufficient combat power before being attacked then the risk was acceptable. If, however, after knowingly pushing beyond the culminating point the force is defeated, then the risk was not a wise one. Recognition of the culminating point and acceptance of a degree of risk while operating within the "fog of war" are just two of the burdens Clausewitz places on the "genius" of the commander.<sup>30</sup>

This concludes the theoretical examination of the origin and concept of the culminating point. The concept has been valid historically at the tactical level. It is now appropriate first to observe how the U.S. Army has commonly addressed the concept and second to determine if the concept is likely to remain applicable at the tactical level.

### SECTION III

#### CONTEMPORARY USE AND FUTURE APPLICABILITY

Forewarned, forearmed; to be prepared is half the victory.

Miguel de Cervantes

#### U.S ARMY CONTEMPORARY USE OF TACTICAL CULMINATION

The U.S. Army has been actively attempting to address the ramifications of culmination at the tactical levels for some time although, perhaps, not knowingly so. James J. Schneider and Lawrence L. Izzo in their article "Clausewitz' Elusive Center of Gravity" note,

We observe a growing tendency throughout the Army to use certain theoretical terminology in a casual fashion. This tendency assumes a universal understanding of the definitions of such terms. But the use of this terminology in professional discourse suggests the contrary: we are nearer mutual confusion than common understanding.<sup>11</sup>

The article suggests that a precise and commonly shared definition of "center of gravity" is essential.

If it [center of gravity] is indeed the 'key to all operational design,' as FM 100-5 claims, then soldiers are going to have to start using the term correctly and with a uniform understanding.<sup>11</sup>

Ironically, although it too is one of the three concepts "key to all operational design," the culminating point seems to suffer from an inverse illness. While recognizing the importance of the theory, the military profession has tended to err in the opposite direction and address the concept under many aliases. A cursory

review of professional publications reveals some interesting and recurring topics.

Writers often discuss culmination under the guise of "endurance." This endurance is normally expressed as human endurance: the ability of soldiers physically, morally and psychologically to perform their missions for extended periods of time; as operational endurance: the ability of units to conduct military activities for extended periods of time; or as mechanical endurance: the ability of military equipment to operate continuously for extended periods of time without failure. Much training time and many research dollars are directed toward improving all three.

Many articles written on the importance of physical fitness, diet and physical training programs have addressed indirectly the concept of culmination. Articles on the success and impact of the Master Fitness Program have appeared in many professional publications.<sup>33</sup> Branch magazines have often published articles on different approaches to unit physical readiness.<sup>34</sup> Army dining facility menus are oriented toward providing the soldier a healthy diet. The Army has removed cigarettes from its combat ration and implemented a smoking policy which allows but discourages the use of tobacco. All these articles and actions seek a common goal: a more fit soldier, one who can perform

his or her duties better and for an extended period of time or, in other words, a soldier more resistant to personal physical culmination.

Similarly, personal physical culmination has been the subject of many studies dealing with continuous operations. The Center for Army Lessons Learned (CALL) has many reports from National Training Center (NTC), Joint Readiness Training Center (JRTC), and Combat Maneuver Training Center (CMTC) rotations outlining the effects of continuous operations on personnel. Again, articles have appeared in the professional journals detailing how units attempted to solve some continuous operations problems such as sleep deprivation with techniques such as sleep plans.<sup>35</sup> The Defense Technical Information Center (DTIC) alone has over 40 published reports on various aspects of continuous operations.<sup>36</sup> All these reports directly or indirectly address some aspect of personal physical culmination.

No less addressed are the moral and psychological aspects of culmination. Authors such as Ardant du Picq, T.E. Lawrence, and S.L.A. Marshall have all attempted to explain what motivates the individual soldier and enables that soldier to continue to perform under conditions of combat.<sup>37</sup> Leadership manuals attempt to provide guidelines for generating, tapping and directing that motivation.<sup>38</sup> The U.S. Army leadership has attempted



periodically to incorporate some of the ideas presented by these authors into the organization. The regimental system and the COHORT system are just two examples of attempts to increase the resistance of units and soldiers to culmination.

Other professional topics addressing both tactical and higher level operations during the last few years have included pacing, sequel planning, operational pauses, reconstitution operations, and actions during consolidation and reorganization. The first three generally address how to preserve combat power for extended operations while the last two commonly address the need to regenerate combat power rapidly. Although not always referring to "culmination," all the articles essentially address methods of avoiding or reducing its effects.

Theory provides the foundation upon which military scientists base doctrine. Doctrine, by its nature, is and must be dynamic. It must be continuously reviewed and revised to incorporate changing world conditions and new technology. With each review of doctrine, a review of its underlying theory also must be conducted to verify or refute the continuing validity of that theory. Therefore, the culminating point as a theoretical concept and its incorporation into doctrine should constantly be reviewed to verify its continuing applicability.

## FUTURE APPLICABILITY OF TACTICAL CULMINATION

Although Clausewitz addressed culmination from both the defender's and the attacker's standpoint, he clearly indicated that the impact of the concept held much more relevance for the attacker. The defender with his negative aim derives all the benefits of the defensive form of warfare and, therefore, is less susceptible to the effects of culmination. The attacker, however, since he has a positive aim, must project his combat power forward. Once this projection begins, the attacker's susceptibility to the effects of culmination greatly increases. U.S. Army officers must not overlook this important fact.

The recent collapse of the Warsaw Pact has raised many questions on the future role and form of NATO. For over forty years, the U.S. Army has been inextricably linked to the NATO organization and its mission of reinforcing central Europe. With the future of NATO in question, many are now reconsidering the future role of U.S. military forces. If the three most recent examples of U.S. military force use are an indication, then the future of the U.S. Army seems to lie primarily in contingency and force projection operations. The most recent U.S. military strategy supports this assumption.<sup>39</sup>

A shared characteristic of the three most recent

instances in which the U.S. used military forces is the almost immediate transition from combat operations to post-combat/nation-building operations. In Grenada, organized resistance was effectively eliminated after approximately 72 hours. Almost simultaneously, units were required to switch from combat operations to peacekeeping and nation building.<sup>40</sup> A similar situation occurred in Panama where organized resistance was eliminated fairly quickly and a rapid transition to post-combat operations challenged tactical commanders and their units.<sup>41</sup> The same relatively short combat phase followed by post-combat nation building and humanitarian efforts characterized the Persian Gulf War.

In each of the three examples, the same tactical commanders and units who had conducted the combat phase of the operation were the ones subsequently charged to perform the initial peace-keeping operations. Additionally, in each of the cases, the transition occurred immediately following the tactical and/or operational culmination of the enemy. Had this culminating point been foreseen accurately a smoother transition to post-combat operations might have been possible. There is no reason to believe that the requirement for a rapid transition to post-combat operations will disappear in future contingency operations characterized by limited political aims.

Since this transition is linked to culmination, identification of the culminating point is essential to a smooth conversion from combat soldier to peacekeeper.

This completes the assessment of the U.S. Army's contemporary use of the concept of tactical culmination and the likelihood that the concept will retain its validity in the foreseeable future. Generally, it seems fair to say that the U.S. Army has made efforts to address the concept while at the same time avoiding calling it by its proper name except in FM 100-5. It also seems likely that the concept will retain its applicability in future military operations. Since the culminating point is still a valid concept, it is appropriate to see if it is adequately addressed by current tactical doctrine.

## SECTION IV

### ASSESSMENT OF CURRENT TACTICAL DOCTRINE

Still it is the task of military science in an age of peace to prevent the doctrine from being too badly wrong.

Michael Howard

As stated in the introduction, the purpose of this monograph is to examine the incorporation of the concepts of culmination and the culminating point into the current U.S. Army tactical manuals. Clearly Field Manual 100-5 Operations is intended to be the U.S. Army's keystone warfighting manual and the primary source for the development of subordinate tactical doctrine. Reviewing briefly:

FM 100-5, Operations, is the Army's keystone warfighting manual . . . It furnishes the authoritative foundation for subordinate doctrine . . . professional education, and individual and unit training . . . FM 100-5 presents a stable body of operational and tactical principles . . . capable of providing a long-term foundation for the development of more transitory tactics, techniques and procedures. It provides operational guidance for commanders and trainers at all echelons."

Equally clear is the importance that the authors of the 1986 version of FM 100-5 attached to the concept of the culminating point. In addition to devoting several pages in Appendix B to a discussion of the culminating point, the authors addressed its importance in other parts of the manual.

In Chapter 7, "Conducting Offensive Operations," the authors state:

The key to success in an offensive campaign is to defeat the enemy before the offensive reaches what Clausewitz called its "culminating point." This culminating point is achieved when a force on the offensive expends so much of its strength that it ceases to hold a significant advantage over the enemy. At that point the attacker either halts to avoid operating at a disadvantage or goes on and risks becoming weaker than the defender.<sup>43</sup>

The authors state that, "culminating points occur because the attacker must consume resources."<sup>44</sup> They next explain some of the various reasons, specifically the impact of the enemy's actions, and conclude with a reference to unilateral culmination. "The natural friction of war acts to slow the attacker and bring him to the culminating point of his operation."<sup>45</sup>

In Chapter 8, "Fundamentals of the Defense," the authors again address the concept of culmination. In alluding to the regeneration of combat power or, in other words, the avoidance of culmination, the authors state that a purpose of the defense is, "to gain time for reinforcements to arrive or to economize forces in one sector while concentrating forces for attack in another."<sup>46</sup> Conversely, the authors also address the role of the defense in, "[causing] the enemy to overextend himself." After the defender has achieved this effect and, "the enemy has committed himself . . . and has been weakened . . . the defender maneuvers to

destroy him."<sup>47</sup>

Clearly, the authors of FM 100-5 attached great importance to the concept of the culminating point. They defined the concept; explained its applicability at the strategic, operational, and tactical levels; and provided some guidance for its consideration. Given the role of FM 100-5 as the "foundation for the development of more transitory tactics", one would expect to see the concept of the culminating point receive similar treatment in subordinate tactical warfighting manuals.

To assess how well the subordinate manuals incorporate the concept, one must specify the manuals to be reviewed and set forth the criteria for that assessment. For the purposes of this monograph, the manuals that will be surveyed are the primary warfighting manual for each tactical organization from corps through heavy task force (battalion) level and a few selected supporting manuals. The assessment criteria will be:

1. Does the warfighting manual define and address the concept of the culminating point?

2. Does the warfighting manual explain its applicability to the tactical commander and staff?

3. Does the warfighting manual provide guidance for use of the concept?

The basis for the selection of this criteria was: if the subordinate warfighting manuals address the concept in a

manner similar to FM 100-5, then the intent that FM 100-5 serve as a foundation has been met. All the manuals surveyed were published or revised after publication of the 1986 version of FM 100-5. For assessment purposes, the derivative manuals were expected to contain a level of detail appropriate to the organizational level for which they were written.

In Appendix B, "Key Concepts of Operational Design", the 1986 version of FM 100-5 notes of its three concepts: "While not new to the U.S. Army in application, they have not been dealt with in doctrinal literature for some time, and their terminology may therefore be unfamiliar to many American soldiers." This may well still be the case.

#### **CORPS LEVEL:**

**FM 100-15, Corps Operations, published 13 September 1989:**

The corps warfighting manual addresses the concept directly in only one place: Chapter 6, Section IV, "Transitioning to the Offense." "This section provides planning considerations . . . based on the following situation: The enemy attack against the corps has reached its culminating point."<sup>48</sup> The manual does discuss at length some of the characteristics of culmination and some of the efforts a unit might



undertake to avoid it. Addressed are sustainment, reconstitution, continuous operations, phased operations and force projection. All these discussions allude to an appreciation of culmination. "Reconstitution consists of those actions taken to return a unit to an acceptable level of combat power."<sup>49</sup> "He [the corps commander] must address both the tangible and intangible aspects of the rebuilding process."<sup>50</sup> In summation, the authors of FM 100-15 address but never define culminating point nor do they provide specific guidance to the commander and his staff for its consideration. The manual does discuss indirectly some of the aspects and characteristics of the concept.

**Assessment of FM 100-15:**

Definition of culminating point: No.  
Address applicability: Yes, but indirectly.  
Provide guidance: Yes, but indirectly.

FM 100-15-1, Corps Operations, Tactics and Techniques (Unedited Coordinating Draft), published 1 April 1991:

FM 100-15-1 indirectly addresses culmination much in the same manner as does FM 100-15 with respect to discussions on continuous operations, sustainment, etc. Although not providing a definition, the manual does directly address the concept in Chapter 13, "Transition of a Corps from Defense to Offense." Section II, while addressing the purpose of the operation, states, "The

intent is to bring the enemy Front Offensive to its operational culminating point."<sup>51</sup> The concept is referred to several other times in that particular chapter.

**Assessment of FM 100-15-1:**

Definition of culminating point: No.  
Address applicability: Yes, but indirectly.  
Provide guidance: Yes, but indirectly.

**CORPS LEVEL SUMMARY:** The manuals do not define or subsequently address the concept of the culminating point adequately enough for the concept to be of use to a commander and staff.

**DIVISION LEVEL:**

FM 71-100, Division Operations, published 16 June 1990:

Much in the same manner as did FM 100-15, the division warfighting manual talks around culmination but fails to address the concept directly. Again continuous operations, sustainment, generation/regeneration of combat power, and maintenance of morale are addressed frequently throughout the manual without reference to culmination. In Chapter 5, "Defensive Operations," the manual quotes Clausewitz: "A swift and vigorous assumption of the offensive - the flashing sword of vengeance - is the most brilliant point of the defensive."<sup>52</sup> Interestingly, the manual does not

continue to explain that, to Clausewitz, this assumption of the offensive was linked directly to the identification of culminating points.

**Assessment of FM 71-100:**

Definition of culminating point: No.  
Address applicability: Yes, but indirectly.  
Provide guidance: Yes, but indirectly.

FM 71-100-1, Armored and Mechanized Division Operations--Tactics and Techniques (Coordinating Draft), published 1 May 1991:

FM 71-100-1, too, addresses culmination but only in an indirect manner. Chapter 3, Section 1, "Continuous Operations," addresses at length the nature of human moral and physical culmination. In this discussion, the authors outline in great detail methods of training to avoid this type of culmination in addition to the symptoms that indicate its onset.<sup>53</sup> Despite this direct coverage of characteristics of the concept, culminating point is never mentioned.

**Assessment of FM 71-100-1:**

Definition of culminating point: No.  
Address applicability: Yes, but indirectly.  
Provide guidance: Yes, but indirectly.

**DIVISION LEVEL SUMMARY:** The manuals do not define or subsequently address the concept of the culminating point adequately enough for the concept to be of use to a commander and staff.

**BRIGADE LEVEL:**

**FM 71-3, Armored and Mechanized Infantry Brigade, published, 11 May 1988:**

The same characteristics that can be found in the division and corps level manuals also apply at the brigade level. Discussions on sustainment, momentum, reconstitution, offensive and defensive operations all allude to the importance of the commander identifying not only his own culminating point but also that of the enemy. The manual, however, fails to explain to the commander how to identify and use the concept.

**Assessment of FM 71-3:**

**Definition of culminating point: No.**  
**Address applicability: Yes, but indirectly.**  
**Provide guidance: Yes, but indirectly.**

**BRIGADE LEVEL SUMMARY:** The manual does not define or subsequently address the concept of the culminating point adequately for the concept to be of use to a commander and staff.

**TASK FORCE LEVEL:**

**FM 71-2, The Tank and Mechanized Infantry Battalion Task Force, published 27 September 1988:**

In addition to discussing the same topics as the higher level manuals, the task force manual introduces another method of indirectly addressing culmination: consolidation and reorganization. Recognizing

Clausewitz' disorganizing effect of victory and the fact that energy is expended in achieving an objective, the authors address, "all measures taken to maintain the combat effectiveness of the unit."<sup>54</sup> Clearly this too is an attempt to discuss actions designed to postpone culmination.

**Assessment of FM 71-2:**

Definition of culminating point: No.  
Address applicability: Yes, but indirectly.  
Provide guidance: Yes, but indirectly.

**TASK FORCE LEVEL SUMMARY:** The manual does not define or subsequently address the concept of the culminating point adequately for the concept to be of use to a commander and staff.

**OTHER SELECTED U.S. ARMY MANUALS AND PUBLICATIONS:**

FM 34-130, Intelligence Preparation of the Battlefield, published 23 May 1989:

This manual also alludes to the importance of identifying the culminating point in discussions on high value targets, named and targeted areas of interest, and priority information requirements. The manual, however, does not define or further elaborate on the importance of the concept.

**Assessment of FM 34-130:**

Definition of culminating point: No.  
Address applicability: Yes, indirectly.  
Provide guidance: No.

**FM 100-10, Combat Service Support, published 18 February 1988:**

**This entire manual addresses how to postpone or avoid friendly culmination; however, it does so without ever defining or directly addressing the concept of culmination or the culminating point.**

**Assessment of FM 100-10:**

**Definition of culminating point: No.  
Address applicability: Yes, indirectly.  
Provide guidance: Yes, indirectly.**

**TRADOC Pamphlet 11-9, Blueprint of the Battlefield, published 27 April 1990:**

**TRADOC Pam 11-9 addresses all three levels of warfare: tactical, operational and strategic and provides descriptions of each. It also specifically defines both center of gravity and lines of operations in its glossary but does not define culminating point.<sup>55</sup> Again, the authors address culmination but indirectly as sustainment, etc.**

**Assessment of TRADOC Pam 11-9:**

**Definition of culminating point: No.  
Address applicability: Yes, indirectly.  
Provide guidance: No.**

**JOINT LEVEL:**

**Many doctrinal manuals have been published since the latest version of FM 100-5 was published in 1986. Among them are several joint publications including Joint Pub 1 (Draft) dated 30 August 1991 and Joint Chiefs of Staff**

(JCS) Pub 3-0 (Test Pub) dated 10 January 1990. Since the culminating point is one of the key concepts of operational design it theoretically applies to joint operations. If this is so, one would expect the joint manuals, although certainly not derivatives of FM 100-5 (the inverse should in fact be the case), to address the concept. Interestingly, neither manual addresses culmination directly while they do address both the concept of center of gravity and lines of operation.

Joint Pub 1 addresses the concepts of center of gravity and lines of operation in Chapter IV "The Joint Campaign."<sup>56</sup> Although addressing the nature of modern warfare, power projection and operational limits set by logistics, the manual does not address culmination specifically. JCS Pub 3-0 similarly addresses centers of gravity and lines of operations going so far as to provide specific definitions of both in its Glossary.<sup>57</sup> Again, however, the concept of culmination is not mentioned. FM 100-5 does not require mention of culmination in joint publications to justify incorporation of the concept into U.S. Army doctrine. If, however, FM 100-5 is correct in identifying the culminating point as key to operational design, the fact that the joint manuals do not mention it indicates perhaps a shortcoming of joint doctrine.

This concludes the assessment of how well the

current U.S. Army tactical warfighting manuals incorporate the concept of the culminating point as introduced in FM 100-5. None of the manuals surveyed defined the concept, although some did refer to it. Generally, all of the manuals alluded to the applicability of the culminating point concept. Most of the manuals did provide some guidance on the use of the concept, but only indirectly.



SECTION V  
CONCLUSIONS

Doctrine provides a military organization with a common language, a common purpose, and a unity of effort.

General George H. Decker, USA

Clausewitz' concept of the culminating point is an important concept. The U.S. Army's keystone warfighting manual, FM 100-5, considers the culminating point "key to operational design." It has had, does have, and will continue to have applicability at the tactical level.

Historically, the U.S. Army has addressed the concept of culmination under many aliases. There may be several explanations for this; there are at least two. First, authors of doctrinal publications desiring to avoid theoretical or academic terms may have intentionally omitted those terms in favor of layman's language. Second, the authors may have been unaware of the existence of a proper term.

The current tactical warfighting manuals surveyed continue the trend. The answer to the question, "How well does U.S. Army tactical warfighting manuals address the concept of culmination?" is "Not well at all!" The result is a lack of both a common doctrinal base and a common professional understanding.

The concept is too important for the profession to

continue to address it in vague, non-specific terminology. A shared common understanding will promote in-depth analysis, permit focused discussion and contribute immeasurably to the profession. Therefore, a common professional definition and understanding is imperative. It is also attainable.

SECTION IV  
RECOMMENDATIONS

**Officers can never act with confidence until they are masters of their profession.**

**General Henry Knox**

The problem identified in this monograph is not a difficult one to solve. In fact, some might suggest that the problem does not require a solution. However, if one agrees with Schneider and Izzo that there is a tremendous need to use doctrinal terms not only correctly but also with a common understanding, the problem must be solved. To this end, the following are offered as specific recommendations for implementation by TRADOC and other agencies as appropriate:

1. Incorporate the FM 100-5 definition and an explanation into all its derivative manuals. This can easily be accomplished as the manuals are reviewed and rewritten. The definition can be incorporated in various manners: in an appendix to the manual as is the case with the current version of FM 100-5; in the glossary; in the body of the manual; in some combination of the above. Similarly an explanation could be incorporated in the same manner. The last alternative is recommended. A definition both in the body of the manual and in the

**glossary, coupled with explanations and guidance in the body of the manual, would adequately address the concept.**

**2. Develop the required supporting doctrine to assist commanders and their staffs in obtaining the fullest use of the concept. For example, the intelligence manuals might identify potential indicators of the enemy culminating point in order to assist commanders in determining such things as the timing of counterattacks, commitment of reserves, etc. Conversely, warfighting manuals should provide tactical commanders with indicators of approaching culmination in their own organizations and with guidance on preventing or postponing the phenomena. An approach similar to that used in FM 71-100-1 is recommended.**

**3. Incorporate instruction on the concept into the curriculum at the branch schools. TRADOC should make an assessment as to the appropriate educational level at which to introduce the concept. As a minimum, it seems appropriate that senior NCO's [ANCOC students] and all officers should receive some instruction on the concept and its ramifications.**

**4. Coordinate with the appropriate joint doctrine agency to include the concept into the joint lexicon.**

5. Provide guidance to the editors of doctrinal publications and other professional publications to incorporate use of the term where appropriate.

In conclusion, the purpose of this monograph was to assess how well the concept of the culminating point, as described in FM 100-5, is incorporated into current U.S. Army tactical doctrine. Although the assessment revealed serious deficiencies, they are correctable. In this monograph, I focused on only one of the three key elements of operational design, the "culminating point." A similar assessment of the other two concepts using the same methodology would be appropriate.

#### ENDNOTES

1. U.S. Army, FM 100-5, Operations (Washington: Department of the Army, 1986), i.
2. FM 100-5 (1986), 179.
3. FM 100-5 (1986), 181.
4. FM 100-5 (1986), 181.
5. FM 100-5 (1986), 181.
6. James J. Schneider, Course Syllabus, Advanced Military Studies Program Course 1, Foundations of Military Theory, AY 91/92, 41.
7. Carl von Clausewitz, On War, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 370.
8. Clausewitz, 370.
9. Clausewitz, 383.
10. Harold W. Nelson, "Space and Time in On War" in Clausewitz and Modern Strategy, ed. Michael I. Handel, (London: Frank Cass and Company Limited, 1986), 138.
11. Clausewitz, 357.
12. Clausewitz, 527.
13. Clausewitz, 528.
14. Clausewitz, 528.
15. For an example of a "combat power model" see: Col Huba Wass de Czege, "Understanding and Developing Combat Power," Course Readings, AMSP Course 2, Tactical Dynamics, Book 1, AY 91/92, 1-54.
16. Hans Rothfels, "Clausewitz" in Makers of Modern Strategy, ed. Edward Mead Earle, (Princeton, NJ: Princeton University Press, 1973), 93-113.
17. Clausewitz, 566.
18. Clausewitz, 570, 572.
19. Clausewitz, 528.
20. Clausewitz, 528.

21. Clausewitz, 383, 370.
22. Clausewitz, 572-573.
23. Clausewitz, 573.
24. Clausewitz, 573.
25. Clausewitz, 121.
26. For an account of the failed attempt see among others: Col. Charlie A. Beckwith, USA (Ret) and Donald Knox, Delta Force (New York: Harcourt Brace Jovanovich, 1983).
27. Charles O. Hammond, Does the Culminating Point Exist at the Tactical Level?, (School of Advanced Military Studies Monograph, Command and General Staff College, Fort Leavenworth, KS, 1990), 29.
28. FM 100-5, 182.
29. There are numerous published accounts of Patton's fuel shortage and the resulting difficulties. One is: Hugh M. Cole, The Lorraine Campaign, U.S. Army in World War II Historical Series (Washington: U.S. Government Printing Office, 1950), 20-25.
30. Although his thoughts on "genius" and "fog of war" can be found throughout On War, most are contained or summarized in Chapter Three of Book One, "On Military Genius" Clausewitz, 100.
31. James J. Schneider and Lawrence L. Izzo, "Clausewitz's Elusive Center of Gravity," Parameters (September 1987): 46.
32. Schneider, 46.
33. See for example: Samuel Padgett, Jr., "Master Fitness Course," Infantry (March-April 1988): 38-39.
34. For example, Infantry Magazine Composite Index 1982-1990 lists 26 separate articles under the heading, "Health and Fitness."
35. As an example see: Alan L. Moloff, "Sleep Loss and its Effects," Infantry (May-June 1990): 22.
36. A search of the Defense Technical Information Center (DTIC) database on October 3, 1991 for entries addressing "continuous operations" revealed 44 separate entries.
37. See for example: Ardant du Picq, Battle Studies; T.E. Lawrence, Seven Pillars of Wisdom; and S.L.A. Marshall, Men Against Fire.

38. See for example: U.S. Army, FM 22-100, Military Leadership (Washington: Department of the Army, 1983).

39. National Military Strategy for the 1990's, Draft, (Washington: JCS, August 1991), 10.

40. For an example of this emerging characteristic see: Mark Adkin, Urgent Fury (Lexington, MA: D.C. Heath and Company, 1989), 293-342.

41. See either: David S. Behar and Godfrey Harris, Invasion (Los Angeles: Penguin Printing, 1990) or Kenneth J. Jones, The Enemy Within (El Dorado, Panama: Focus, 1990).

42. FM 100-5, i.

43. FM 100-5, 109.

44. FM 100-5, 109.

45. FM 100-5, 109.

46. FM 100-5, 131.

47. FM 100-5, 131.

48. U.S. Army, FM 100-15, Corps Operations (Washington: Department of the Army, 1989), 6-13.

49. FM 100-15, 7-14.

50. FM 100-15, 7-14.

51. U.S. Army, Combined Arms Command, "FM 100-15-1 Corps Operations -- Tactics and Techniques," Unedited Coordinating Draft (Fort Leavenworth: Combined Arms Command, April 1991), 13-2.

52. U.S. Army, FM 71-100, Division Operations (Washington: Department of the Army, 1990), 5-14.

53. U.S. Army, Combined Arms Command, "Armor and Mechanized Division Operations -- Tactics and Techniques," Coordinating Draft (Fort Leavenworth, KS: Combined Arms Command, 1991), 3-1.

54. U.S. Army, FM 71-2 The Tank and Mechanized Infantry Battalion Task Force (Washington: Department of the Army, 1988), 3-39.

55. U.S. Army, Training and Doctrine Command (TRADOC) Pamphlet 11-9 "Blueprint of the Battlefield" (Fort Monroe, VA: TRADOC, 1990), 73-75.



56. Department of Defense, Joint Chiefs of Staff (JCS), "Joint Pub 1, Joint Warfare of the US Armed Forces," Draft, (Washington: JCS, 1991), IV-2, IV-6.

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