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DO DOCTRINAL BUZZWORDS OBSCURE THE  
MEANING OF OPERATIONAL ART?

A Monograph

by

Major John M. House

Field Artillery

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School of Advanced Military Studies  
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Fort Leavenworth, Kansas

Second Term 88-89

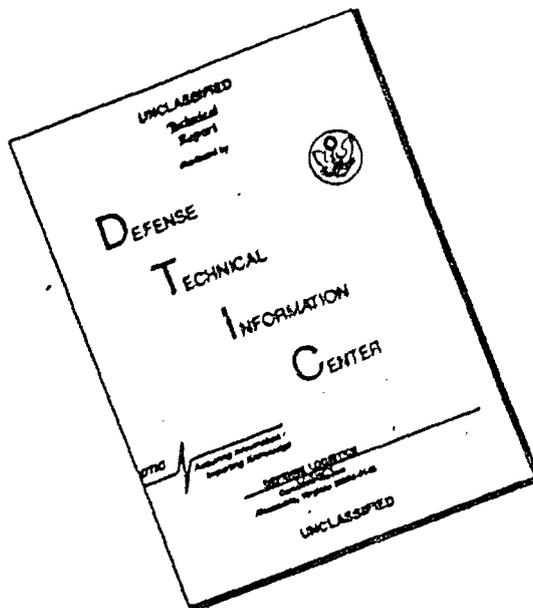
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REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

1a REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b RESTRICTIVE MARKINGS			
2a SECURITY CLASSIFICATION AUTHORITY			3 DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution is unlimited			
2b DECLASSIFICATION/DOWNGRADING SCHEDULE						
4 PERFORMING ORGANIZATION REPORT NUMBER(S)			5 MONITORING ORGANIZATION REPORT NUMBER(S)			
6a. NAME OF PERFORMING ORGANIZATION US Army Command and General Staff College		6b. OFFICE SYMBOL (if applicable) ATZL-SWV		7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code) Fort Leavenworth, Kansas 66027-6900			7b. ADDRESS (City, State, and ZIP Code)			
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (if applicable)		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c. ADDRESS (City, State, and ZIP Code)			10. SOURCE OF FUNDING NUMBERS			
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Do Doctrinal Buzzwords Obscure the Meaning of Operational Art?						
12. PERSONAL AUTHOR(S) MAJ John E. House						
13a. TYPE OF REPORT monograph		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 89/04/21		15. PAGE COUNT 55
16. SUPPLEMENTARY NOTATION						
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)			
FIELD	GROUP	SUB-GROUP	Operational Art Center of gravity Terms			
			Operations Culminating point Terminology			
			Strategy Decisive point Levels of War			
			Tactics Doctrine			
19. ABSTRACT (Continue on reverse if necessary and identify by block number)						
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20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS				21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL MAJ John E. House			22b. TELEPHONE (Include Area Code) (913) 684-3437		22c. OFFICE SYMBOL ATZL-SWV	

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19. ABSTRACT (Continued)

The debate over the terminology obscures the objective of warfare -- the defeat of an enemy. Regardless of the conditions that define success, a commander or planner must determine the sequence of actions necessary to accomplish his mission given the resources available. Terminology that aids this process is useful. Terminology that does not aid this process is useless.

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Meaning of Operational Art?

by

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21 April 1989

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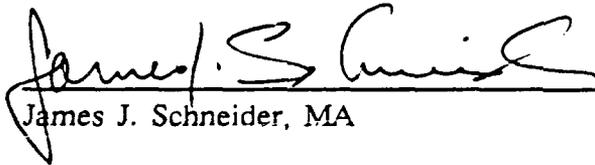
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MONOGRAPH APPROVAL

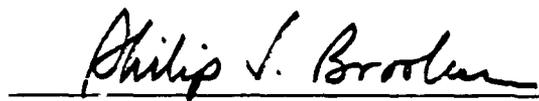
Name of Student: John M. House, MAJ, Field Artillery

Title of Monograph: Do Doctrinal Buzzwords Obscure the Meaning  
of Operational Art?

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Accepted this 15th day of May 1989

ABSTRACT

DO DOCTRINAL BUZZWORDS OBSCURE THE MEANING OF OPERATIONAL ART?  
by Major John M. House, USA, 55 pages

The Army divides war into three levels -- strategy, operational art, and tactics. Each level involves different types of activities, but opinions vary on how to differentiate among them. The debate continues even though seven years have passed since operational art entered Army doctrine through the 1982 Field Manual 100-5: Operations. This paper examines three doctrinal terms that are part of this debate -- operational art, center of gravity, and culminating point.

Operational art is a cybernetic function that links national strategy and tactics. Considering it a level of war sometimes obscures the actions that compose this activity. However, the term is so embedded in Army doctrine, removing it is probably not possible. Center of gravity should be removed from doctrine because the term encompasses too many concepts ranging from the mass of an army to a vulnerable line of communications. Culminating point is sufficiently precise to remain in doctrine, but the need for a special term is not apparent.

The debate over the terminology obscures the objective of warfare -- the defeat of an enemy. Regardless of the conditions that define success, a commander or planner must determine the sequence of actions necessary to accomplish his mission given the resources available. Terminology that aids this process is useful. Terminology that does not aid this process is useless.

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DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/ _____	
Availability Codes	
Dist	Avail and/or Special
A-1	

## ACKNOWLEDGEMENTS

Though an Acknowledgements section is not usually part of a monograph, I feel compelled to write one. The ideas in this paper are the fusion of many thoughts from the sources in the bibliography, the School of Advanced Military Studies (SAMS) faculty, and the discussion in my SAMS seminar. The last two groups deserve special mention.

Three SAMS faculty members had a special impact on this paper. COL L.D. Holder, the Director of SAMS, repeatedly encouraged debate and analysis of doctrinal and theoretical concepts. Academic freedom to question was never in doubt. Professor James J. Schneider guided this monograph effort and developed the SAMS theory course so important to our understanding of doctrine. LTC James G. Snodgrass carefully developed and controlled the debate in my seminar. He also put up with my quiet note-taking.

A special thanks is due to the members of my seminar. This paper would not have been possible without the free exchange of ideas within the group. This should not imply that any of my fellow students hold the opinions expressed here. However, their comments are a part of my memory. I cannot always separate their thoughts from my own. Therefore, I must give a special thanks to MAJ Van-George R. Belanger, MAJ James A. Cope, MAJ Thomas A. Dempsey, MAJ Joseph S. Drelling, MAJ John D. Frketic, MAJ Albert P. Lawson, MAJ Oliver E. Lorenz (USAF), MAJ Richard J. Macak (USMC), MAJ Michael L. Parker, MAJ Matthew L. Smith, MAJ Harry A. Tomlin, and MAJ James F. Wolf.

My wife also deserves my undying thanks. She put up with my poor handwriting and incoherent marginal notes while typing this and all my other papers. No friend is more valuable to me.

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## I. Introduction.

### General.

The Army divides war into three levels -- strategy, operational art, and tactics. Each level involves different types of activities, but opinions vary on how to differentiate among them. Even though seven years have passed since operational art entered Army doctrine in the 1982 Field Manual (FM) 100-5: Operations, the debate continues. This paper examines the meanings of the levels of war and three doctrinal terms that cause confusion -- operational art, center of gravity, and culminating point.

For doctrinal terms to be useful by providing a common understanding, their meanings must be sufficiently precise to reduce needless debate. If they are so imprecise that they increase rather than decrease controversy, the terms are not useful. To bound the discussion within the framework of the levels of war, this paper begins with strategy and tactics. Subsequent paragraphs discuss operational art, center of gravity, and culminating point.

### Strategy.

Strategy has meant various things over the years. Clausewitz defined strategy as "the use of engagements for the object of the war."<sup>1</sup> Jomini defined strategy as "the art of making war upon the map." He defined a related term, grand tactics, as "the art of posting troops upon the battlefield according to the accidents of the ground, of bringing them into

action, and the art of fighting upon the ground, in contradistinction to planning upon a map." Jomini related strategy and grand tactics by stating strategy determined "where to act" while grand tactics determined "the manner of execution and the employment of the troops."<sup>2</sup> These definitions grew from the authors' analyses of Napoleon's conduct of war and guided military thought for years.

Baron von der Goltz explained strategy as the "science of directing armies."<sup>3</sup> When John Burr described warfare during the early years of World War II, he associated strategy with the conduct of campaigns and planning where, how, and with what force to strike an enemy. Burr included an army's movements before contacting an enemy as part of strategy. Strategy was important to position forces to ensure a successful battle.<sup>4</sup>

Other definitions of strategy include managing operations, gaining an advantage during a campaign,<sup>5</sup> or determining whether to use nuclear or nonnuclear forces.<sup>6</sup> Trevor DuPuy describes strategy as planning and managing all types of resources to wage war. He says national strategy includes combining political, economic, psychological, social, and military resources in war and peace to support national policies. Military strategy focuses on using military resources in war to support national policy.<sup>7</sup> Liddell Hart defines strategy as "the art of distributing and applying military means to fulfill the ends of policy." Edward Luttwak states that strategy includes "the conduct and consequences of human relations in

the context of actual or possible armed conflict."<sup>8</sup>

Soviet military theory considers military strategy as "the highest level of military art." It includes studying and preparing for war.<sup>9</sup> Strategy is a combat activity focusing at national and theater level.<sup>10</sup>

The Army has used a variety of definitions of strategy. Before World War II, strategy referred to maneuvering or concentrating forces in a theater of operations to facilitate battle.<sup>11</sup> After World War II, strategy expanded in scope to include a direct linkage between military and national strategy. For example, the 1962 FM 100-5: Field Service Regulations - Operations defined military strategy as using military means to further national strategy.<sup>12</sup> The 1982 FM 100-5: Operations discussed military strategy as using armed forces or the threat of their use to attain national policy objectives.<sup>13</sup>

Today's AirLand Battle doctrine defines military strategy as "the art and science of employing the armed forces of a nation or alliance to secure policy objectives by the application or threat of force."<sup>14</sup> The combination of military objectives, concepts, and force is necessary to meet national security policy objectives.<sup>15</sup> National strategy includes using political influence, economic resources, psychological actions, military power, and national will to achieve national objectives during peace, crisis, or war.<sup>16</sup>

Joint Chiefs of Staff Publication 1 (JCS Pub 1) defines

strategy as "the art and science of developing and using political, economic psychological, and military forces as necessary during peace and war" in support of policies to increase the chance of victory and lessen that of defeat. National strategy focuses on using these elements of power "to secure national objectives." Military strategy concerns using military power to do the same.<sup>17</sup>

What does a standard dictionary say strategy is? Webster's Ninth New Collegiate Dictionary lists several definitions. One definition 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." Webster's also defines strategy as "the science and art of military command exercised to meet the enemy in combat under advantageous conditions." More general definitions include "a careful plan or method" and "the art of devising or employing plans or strategems toward a goal."<sup>18</sup>

As the discussion above shows, strategy means a variety of things based on the context of the term's use. It varies from a general planning process to an activity related to achieving national objectives. To bound this discussion of the levels of war, it is now time to address tactics, the lower end of the heirarchy.

#### Tactics.

The meaning of tactics has remained relatively constant, unlike that of strategy. Clausewitz defined tactics as "the

use of armed forces in the engagement."<sup>19</sup> Jomini viewed tactics as the art of using military forces where they have concentrated.<sup>20</sup> John Burr defined tactics as handling troops in combat.<sup>21</sup>

Other definitions of tactics include managing "military operations in direct contact with the enemy"<sup>22</sup> and the "technique of deploying and directing military forces...in coordinated combat activities against the enemy in order to attain the objectives designated by strategy or operations."<sup>23</sup> Liddell Hart explains tactics as applying strategy "on a lower plane."<sup>24</sup> The Soviets view tactics as that level of combat activity conducted at division and below.<sup>25</sup>

Before World War II, the Army considered tactics to be "the art of executing the strategic movement prior to battle and of employing combat power on the field of battle." Tactics included movement to the battlefield, protecting the army, deploying for the battle, conducting the battle, and reacting to the success or failure of the battle.<sup>26</sup>

This definition differs little from the 1982 Field Manual 100-5: Operations. The manual describes tactics as techniques used by smaller units to win battles and engagements. Tactics includes moving, positioning, and sustaining forces on the battlefield before, during, and after engagements.<sup>27</sup>

Current AirLand Battle doctrine defines tactics as "the art by which corps and smaller unit commanders translate potential combat power into victorious battles and engagements.

Engagements are small conflicts between opposed maneuver forces.... Battles consist of a series of related engagements."<sup>28</sup>

JCS Pub 1 provides two definitions for tactics: "1. The employment of units in combat. 2. The ordered arrangement and maneuver of units in relation to each other and/or to the enemy in order to utilize their full potentialities."<sup>29</sup> Webster's defines tactics as "the science and art of disposing and maneuvering forces in combat."<sup>30</sup>

The various definitions of tactics are similar. All focus on the battlefield and military forces smaller than a nation's entire military structure. Tactics is qualitatively different from strategy, but are two divisions of war enough? Some theorists say we need three. This brings us to the emergence of operational art as a distinct level of war.

#### Another Level.

Warfare changed in the 19th century due to the political, social, and economic turmoil of the times.<sup>31</sup> The rise in population supported mass armies. Political alliances led to multinational armies. The rifled musket, conoidal bullet, breechloading mechanism for weapons, rifle magazine, and smokeless powder increased the tactical depth of the battlefield. The telegraph and railroad increased the strategic depth of armies.<sup>32</sup> These changes led to battles of long duration and great spatial scope.<sup>33</sup> German and Russian theorists began to hypothesize that another level of war

existed between strategy and tactics to address the need to conduct successive battles to defeat an enemy.<sup>34</sup> This recognition of a change in warfare led to the level of war the Army today calls operational art.<sup>35</sup> Before World War II, the Army called these actions strategy.<sup>36</sup>

Two key doctrinal terms associated with operational art are center of gravity and culminating point. As mentioned earlier, debate continues on defining operational art. Center of gravity and culminating point also have unclear meanings. This paper will discuss definitions and useage of these terms and propose new terminology where it lends clarity to the discussion of war.

## II. Operational Art.

### General.

AirLand Battle doctrine views operational art as the essential linkage between strategy and tactics. Without operational art we will fail -- or so the literature would indicate. But what is operational art? Is it a level of war or an activity in war? Is its application different in a campaign than in an operation? The answers to these and other questions will determine whether or not the concept and terminology are useful.

### The Framework.

FM 100-5 defines operational art as "the employment of military forces to attain strategic goals in a theater of war

or theater of operations through the design, organization, and conduct of campaigns and major operations."<sup>37</sup> Several key terms are clear: theater of war, theater of operations, campaign, and major operation.

JCS Pub 1 defines a theater as a "geographical area outside the continental United States for which a commander of a unified or specified command has been assigned military responsibility." However, JCS Pub 1 refers the reader to an area of war for a definition of a theater of war. An area of war is the "area of land, sea, and air which is, or may become, directly involved in the operations of war."<sup>38</sup>

The 1982 FM 100-5 links operational art to a theater of war, but historically the theater of war has always been associated with strategy and not operational art. The 1986 FM 100-5 adds the theater of operations to the operational level but does not clearly define either.<sup>39</sup> However, the 1986 FM 100-5 states that a theater of war may contain more than one theater of operations.<sup>40</sup> FM 100-6: Large Unit Operations (Coordinating Draft) states that a "theater of war is a geographical area within which land, sea, and air operations are directed toward a common strategic aim."<sup>41</sup> Historically, however, the theater of war has been associated with a level of war called grand strategy.

JCS Pub 1 also fails to define theater of operations. Instead it refers the reader to "area of operations" which is "that portion of an area of war necessary for military

operations and for the administration of such operations."<sup>42</sup> FM 100-6 states a theater of war commander may divide his theater of war into multiple theaters of operations if he needs to employ forces on multiple, independent lines of operations. Logistics, political concerns, personal relations with other commanders, or other reasons may make a theater of war commander want to establish subordinate theaters of operations.<sup>43</sup>

Since a theater of operations involves the operational level of war, one author postulates that it "may have its own strategy to support both the strategy of the theater of war and the national military strategy."<sup>44</sup> However, if strategy is a level of war, how can it be part of another level called operational art?

FM 100-5 defines a campaign as "a series of joint actions designed to attain a strategic objective in a theater of war." Simultaneous campaigns may occur when a theater of war contains multiple theaters of operations.<sup>45</sup> FM 100-6 expands this definition to include combined actions.<sup>46</sup> Other texts define campaigns similarly but substitute operations for joint actions<sup>47</sup> or restrict the operations to military ones.<sup>48</sup> Additional sources state that these operations focus on the same enemy force<sup>49</sup> or involve "simultaneous and sequential battles."<sup>50</sup> Webster's defines a campaign as "a connected series of military operations forming a distinct phase of a war."<sup>51</sup> LTC William H. Janes, a seminar leader at the Army's

School of Advanced Military Studies, says planning a campaign and fighting offensively are the "essence" of operational art.<sup>92</sup>

JCS Pub 1 does not define campaign, but it does define a campaign plan as a "plan for a series of related military operations aimed to accomplish a common objective, normally within a given time and space."<sup>93</sup> This plan provides guidance to subordinates on the use of available resources to accomplish strategic objectives.<sup>94</sup> The campaign plan lays out a commander's vision of the sequential and simultaneous operations required to achieve the desired objective.<sup>95</sup>

Operation is another term requiring definition.

FM 101-5-1: Operational Terms and Symbols and JCS Pub 1 define an operation as "a military action or the carrying out of a strategic, tactical, service, training, or administrative military mission; the process of carrying on combat, including movement, supply, attack, defense, and maneuvers needed to gain the objectives of any battle or campaign."<sup>96</sup> Webster's provides a simple definition -- "military action, mission, or maneuver including its planning and execution."<sup>97</sup> FM 100-5 explains major operations as "the coordinated actions of large forces in a single phase of a campaign or in a critical battle. Major operations decide the course of campaigns."<sup>98</sup>

Other definitions expand the meaning of the term to include a group of actions in a theater of war that consists of concentrations, marches, occupying positions, and battles that

follow each other in a logical sequence. Multiple operations make a campaign.<sup>47</sup> Baron von der Goltz explains operations as a "group of actions...composed of marches, the assumption of positions, and combats."<sup>48</sup> Trevor DuPuy defines operations as "the control and direction of large forces (usually armies or army groups) in combat activities within a single, discrete theater of combat."<sup>49</sup>

Operation obviously means action by a military force. Some of the previous definitions tied the term to campaigns, therefore, operational art. However, operation also has a very general meaning that refers to military actions that range from areas of the battlefield (ie., deep, close, and rear operations<sup>42</sup>) to types of military activities (ie., psychological, civil affairs, desert, airmobile, jungle, and river crossing operations<sup>43</sup>). Using the term as a military activity and as a key element in the levels of war hierarchy leads to confusion when describing and understanding war.

Four additional terms that are part of doctrine's operational art are center of gravity, culminating point, branches, and sequels. This paper addresses center of gravity and culminating point as major issues later. Branches and sequels are important concepts requiring a brief discussion here.

FM 100-5 discusses branches which are "options for changing dispositions, orientation, or direction of movement and accepting or declining battle." The manual states that

branches are contingency plans. Branches provide a commander flexibility to react quickly to enemy courses of action.<sup>44</sup>

Sequels are actions taken after a battle. They must address the range of possible outcomes -- "victory, defeat, or stalemate." Planning sequels is a key element of operational plans to minimize the difficulty transitioning to subsequent operations.<sup>45</sup> Sequels trace the path one takes to reach the objective in the campaign plan.<sup>46</sup> The terms branches and sequels are presented as new doctrinal concepts for operational art<sup>47</sup> but sound like contingency plans and plans for future operations to me. They are sufficiently precise to be useful but are not new concepts.

Unfortunately, the discussion over defining operational art is more confusing than the paragraphs above indicate. Sources disagree on the types of activities involved and who performs them. Part of the Army's efforts to develop a doctrine that encompasses operational art comes from the need to strike Soviet forces before they contact friendly units -- deep operations.<sup>48</sup> This concern for deep operations with the corresponding increase in time and space is part of the background of Soviet operational art development as well.<sup>49</sup>

James F. Dunnigan uses battlefield depth as a way to differentiate among air reconnaissance missions for the levels of war: tactical (up to twenty kilometers beyond the forward line of own troops (FLOT)), operational (twenty to hundreds of kilometers beyond the FLOT), and strategic (attacking the

nation's means of conducting war -- armed forces, economic assets, and resources).<sup>70</sup>

Another author claims the operational level of war focuses on the mind of the enemy commander while tactics tries to destroy enemy forces. Operational commanders focus on the future while tactical commanders focus on the present.<sup>71</sup>

Operational art includes time and space considerations that are qualitatively different from those in tactics and strategy. As used today, tactics focuses on near-term events and forces in contact. Strategy focuses on far-term events and national resources. The time and space necessary to marshal and employ resources are obviously different between these levels of war. Operational art fills the void between these extremes. The actions of large forces within the framework of a campaign or major operation require more time and greater space, or depth, than tactical actions require. Such time and space requirements also increase between the operational and strategic levels of war.

Is operational art only a military activity? Opinions differ. The 1982 FM 100-5 states it is the use of military resources and is in simple terms the theory of larger unit operations.<sup>72</sup> FM 100-6 also makes this point of using military forces to reach strategic objectives.<sup>73</sup> Others call it "the highest purely military activity in the three levels of war"<sup>74</sup> or designing military objectives to fulfill strategic needs.<sup>75</sup> Tactics try to win battles but operations try to win

campaigns.<sup>76</sup> One author says an operational level commander must be aware of non-political power but cannot directly apply such power. Strategic commanders use all elements of power. Tactical commanders only use military resources.<sup>77</sup>

Others disagree with a purely military focus as part of operational art. One author feels that the operational level must consider such things as economic assets, means of communication, and air defense zones.<sup>78</sup> Another feels it involves all elements of power including political, economic, psychological, and military resources.<sup>79</sup> Trying to relate the operational level of war to low-intensity conflict further blurs the distinctions between the levels of war because small unit commanders may make decisions that affect strategic considerations.<sup>80</sup> Low-intensity conflict also includes many non-military resources because of the nation-building activities required. Therefore, if operational art applies throughout the spectrum of conflict, it must include non-military resources.

The level of command involved in operational art is another area of controversy. Addressing warfare as having three levels rather than discussing types of activities may be the reason levels of command are sometimes related to levels of war.<sup>81</sup> FM 100-1: The Army states that no level of command equates to operational art. But it also states theater commanders plan and direct campaigns while army groups and armies usually design a campaign's major ground operations. Corps and

divisions usually execute major operations.<sup>82</sup> FM 100-15 states "corps plans and conduct major operations and battles" but that the Army's largest tactical unit is the corps.<sup>83</sup> This seems to differ with the idea that operational art concerns designing operations and conducting campaigns.<sup>84</sup>

If major operations and campaigns are part of operational art, are there two levels of operational art? The FM 100-5 definition provided at the beginning of this section includes major operations and campaigns. But a campaign contains major operations. The activities are different in scope. Therefore, operational art contains two sub-levels -- major operations and campaigns.

Certain authors link specific levels of command to levels of war such as a theater of war commander-in-chief being at the strategic level and a theater of operations commander-in-chief being at the operational level.<sup>85</sup> Another links a unified commander-in-chief to the operational level.<sup>86</sup> FM 100-2-1 links Soviet "levels of combat activity" as: strategy -- national and theater level; operational -- fronts and armies; tactical -- division and below.<sup>87</sup> Chris Donnelly states that the Soviets now divide operational art into three levels: operational - strategic (front), operational (army), and operational - tactical (corps).<sup>88</sup>

Soviet military theory views operational art as "a framework for studying, understanding, preparing for, and conducting war." Its tasks include investigating combat action

rules, developing the means to prepare and conduct combat operations, determining "the function of large units and formations," and specifying "organizational and equipment requirements."<sup>17</sup>

Viewing the operational level of war as a process or activity highlights the point that it seeks to integrate military force actions to achieve a higher goal. It includes selecting the methods necessary to reach "a desired end."<sup>18</sup> Planning, coordinating, and integrating the results of tactical actions (whether victories or defeats) to attain an objective greater than that possible as a sum of the results of the individual engagements is also a description of the operational level of war.<sup>19</sup>

Richard Simpkin believes there are three meanings of the operational level of war. To the Germans and Russians, it means a direct relationship to combat operations as opposed to administration or logistics. A second meaning is that it relates to an organization level from division to theater. However, this use is obsolete since small units have operational capability due to technology. Simpkin's third meaning includes actions that have five criteria: having a mission one step removed from a political-economic aim; having a "dynamic, closed-loop system, characterized by speed and appropriateness of response;" having three components with at least one being the enemy's will; being synergistic so that the value of the whole is greater than the sum of the individual

parts; and being "self-contained within the scope of its mission."<sup>22</sup>

#### Strategy vs Tactics vs Operational Art.

If military strategy is using an armed force to accomplish national objectives and tactics means using military power to win battles and engagements, do we have operational art if one battle determines whether or not the national objective is met? The answer is no if campaigns and operations are the foundation of operational art. The inability to force a decisive battle to meet a strategic objective due to technological and societal changes is why operational art was born. But decisive battles are still possible even though they have changed in form from those of Napoleon's day. The truck bomb at the Marine Barracks in Beirut was a decisive battle that we lost in a low-intensity conflict. The Marines left Beirut. Nuclear weapons could result in such devastation on the battlefield or homeland that the political will of a government could break. Certainly many factors affect such decisions, but the decisions rest in people's minds. People are not necessarily rational. They may think they have lost when they have not. They may not quit when others think they should. A battle is decisive because of the effect it has on the opponent's will, not because of the destruction involved.

Thomas Schelling says strategy includes the "exploitation of potential force," not the application of force. He relates conflict to bargaining because for both the ability to satisfy

one's aims depends on the choice of another participant in the process. Deterrence flows from this potential force because the threat influences an opponent's behavior.<sup>72</sup>

Professor James J. Schneider suggests two additional ways to view war. One explains war as a series of creative activities. The other focuses on the issue of constraint.

The concept of levels of war is confusing. Another way to view war is as a series of creative activities where the commander or planner links means, ways, and ends. Levels of command exist based on the resources available. However, the level of command is not the crucial element on which to focus in describing the art of war. The creative activity is. Any level of command can jump between types of creative activities.

One type of creative activity is command. The purpose of command is to establish the goals or ends. A second activity is logistics -- providing the means, or resources, necessary to achieve the desired ends. Military art is the creative activity that determines how to use the resources. This constitutes the "ways." If "operational art" was not linked to a level of war, it could serve as a useful term describing this last creative activity associated with "ways." One could then use "military art" as the overall concept describing the creative activities of command, operational art, and logistics that compose the art of war.

Constraint is another way to explain war. Each opponent in a conflict attempts to constrain the other from achieving his

ends. Each also tries to reduce the constraints placed upon him by his opponent so as to attain assigned goals as efficiently as possible. The concept of constraint applies in all warfare issues, whether talking levels of war or anything else. At the operational level the means of constraint are maneuvers and engagements. All conflict participants seek freedom of action toward goal attainment while trying to deny freedom of action to an opponent. Constraint is the unifying factor in war. The objective is to devise the appropriate sequence of actions to maximize the constraints on an enemy and minimize the constraints on one's own actions. The Soviets refer to this process as reflexive control and apply it to all levels of war.

Operational art involves the combination of the effects of several events to achieve this constraint upon enemy actions. The results of the battle may not be as important as the use of the results in denying the enemy his campaign objectives.<sup>74</sup> However, combinations of events are also important in those activities called tactics and strategy.

When a battalion commander maneuvers his companies on different axes, passes units through or around others, employs fire support assets before an attack, and performs his many other duties, he is combining sequential actions that in turn constrain the actions by an opponent. He also should have contingency plans to address all enemy capabilities and plans for actions after he reaches his objective. This is not meant

to show that a battalion commander is an operational commander. The point is that tactical commanders must also combine and plan for actions as FM 100-5 states operational commanders do.

Strategy also involves combinations of constraining events. In World War II, the Allies agreed to defeat Germany, then Japan. The sequential combination of actions inherent in defeating Germany and then Japan was necessary to win the war. Nations must also plan for actions to defeat all enemy capabilities or risk defeat by being unprepared. Strategic leaders must perform the same types of tasks as operational level commanders.

The point is that conducting warfare requires the integration of simultaneous and sequential actions by the forces concerned. Attempts to categorize warfare into levels obscures the continuity of this sequencing activity in all military actions. The complexity of this activity increases as the force size and the types of resources increase. However, the dual objectives of constraining an opponent and limiting the constraints on oneself through the integration of simultaneous and sequential actions remains as the conceptual foundation of modern operational warfare.

A final problem in differentiating operational art from other levels of war concerns the word operational. Operational is an adjective referring to operation, a term discussed earlier. But it is also used to describe whether or not a piece of equipment functions properly. When we complicate the

use of the term by associating it with a distinct level of war, we confuse those reading or hearing the term. Multiple definitions of a term where all have military application make the use of the term too complex for it to lend clarity to any discussion of a distinct level of war.

Operational Art Summary.

The term operational art is misleading because the words are not sufficiently precise to avoid confusion. "Operation" and its adjective form "operational" have several definitions. The confusion resulting from imprecise terminology obscures the unifying concept in warfare which is constraint -- constraining an enemy and limiting the constraints on oneself.

Operational art describes a creative activity more than a level of war. The same is true of strategy and tactics. Giving any of these terms a meaning beyond the general definitions in the dictionary is asking for trouble because people will mix the general and specific useage of the terms. This definitional mixing is the problem. We should view strategy as a plan for using available resources to defeat an enemy. Tactics should be the use of available resources to implement the strategy. These definitions correspond to those in general use as given in a dictionary. This provides clarity through simplicity.

Since these definitions do not imply levels of war but do imply cybernetic functions, the same is true of operational art. Once the idea of levels of war falls out, there is no

burning need for the term operational art. Strategy is the plan with tactics being the manner in which a force implements the strategy. Levels do not exist but various agencies and units perform these functions. Using adjectives to describe the types of strategy and tactics provides the terms to describe the activities now attributed to strategy and tactics. The single terms are not sufficiently precise to be useful.

National strategy then is a nation's plan to meet national objectives. Military strategy is the plan for the use of military resources. National tactics includes the specific ways a nation uses all of its resources with military tactics being how military forces act. The plan or requirement drives the methods employed. The linkage between the strategy and tactics is automatic because the plan must prescribe the acceptable methods that ensure meeting the objective.

Operational art is the cybernetic function that commanders must perform in devising their strategy to implement a superior's strategy. As noted earlier, the choice of operational is unfortunate because it has so many meanings.

A better way to describe this activity would be to consider it as planning. Sequencing actions to accomplish a mission is nothing new or extraordinary. It certainly is complex and more difficult as the size of force and types of resources increase. When taking a theater view, considering this function to involve campaigns seems reasonable. The campaign plan describes the strategy for the theater (whether "of war"

or "of operations") to accomplish its assigned mission.

As long as operation means a military action, it is useful in describing this function but in a different way than in the term operational art. Again a simple definition is best. Operation means a military action. Putting an adjective with operation then provides the clarity needed to describe the activities involved. For example, theater operations means activities in a theater. Jungle operations refers to actions conducted in the jungle. These terms are simple and clear. Combining operation with an adjective provides the user the opportunity to be as specific or general as necessary to convey the meaning desired.

Unfortunately, the operational art train may be moving too fast to stop. The Army has used the term for seven years even though its meaning is not clear. Our NATO allies have also been involved in the discussion due to the exchange of ideas between the various nations. Trying to eradicate the term from usage is probably hopeless without years of effort and doctrinal turmoil. However, a modification of the term's meaning is in order.

Doctrine should describe operational art as the cybernetic function that links strategy with the tactics, or methods, used to employ the resources available to the commander. The resources available must include all resources under the commander's control. If these resources are purely military, then this use of operational art is purely military. However,

if the commander controls military and non-military resources, operational art must include the synchronization of the use of all the resources. This is particularly important when viewing low-intensity conflict because of the importance of non-military activities. But it is also important in a theater like Europe facing a major conventional threat due to the importance of host nation support for such activities as unloading ships at ports.

Operational art will probably be with us for a long time. Focusing on it as a creative activity rather than a level of war will reduce the confusion over its definition. However, two important concepts in our doctrinal operational art still require examination -- center of gravity and culminating point.

### III. Center of Gravity.

#### The Concept.

Clausewitz borrowed the term Schwerpunkt, or center of gravity, from physics for inclusion in his theory of war. Unfortunately he uses the term in several ways.

In On War, Clausewitz calls battle the center of gravity of the war because it is the "fight of the main force." He describes a "great battle" as the "provisional center of gravity of the entire campaign." In a later portion of On War, he says the center of gravity "is always found where the mass is concentrated most densely." The cohesion of an armed force helps produce a center of gravity.™

Clausewitz expands the concept in Book Eight of On War to include the idea of the center of gravity being the "hub of all power and movement." He states that "everything depends" on this point and all effort should be focused on it. Then Clausewitz says the center of gravity can be a capital, an ally's army, the interests solidifying an alliance, personalities of leaders, or public opinion.<sup>76</sup> These explanations cause some confusion. Clausewitz appears to state in one place that the center of gravity is the mass of the enemy army where in another place it can be something as intangible as public opinion. FM 100-5 adds to the confusion by using Clausewitz's term but expanding the concept.

FM 100-5 refers to the center of gravity as a source of strength or balance. The center of gravity "is that characteristic, capability, or locality from which the force derives its freedom of action, physical strength, or will to fight." Operations focus on its attack. The manual applies the term at tactical, operational, and strategic levels of war and provides examples of centers of gravity including the mass of the enemy force, a command and control center, a logistical base, a line of communications, the cohesion of an alliance, the mental state of a commander, or a key economic resource.<sup>77</sup> This discussion highlights the difficulty in using the term because it is not precise. A doctrinal center of gravity can be many things.

Another problem may be the translation of Schwerpunkt. Some

authors translate Schwerpunkt as the main effort,<sup>99</sup> point of effort,<sup>97</sup> or thrust-point.<sup>100</sup> These concepts allude to the forces or location where a commander focuses his effort to defeat an enemy. This is more like Clausewitz's idea of a concentrated mass of forces. However, modern firepower allows a greater dispersion of forces to achieve the same power relative to an enemy than in Clausewitz's time. At the same time these renderings of the German term often lead one to equate center of gravity with Jomini's decisive point, a term which is fundamentally different.

This confusion has led to a number of opinions as to what constitutes a center of gravity. For example, two authors studying Great Britain's Falkland Islands campaign arrived at different conclusions as to what was the British center of gravity. One stated it was operational sustainment.<sup>101</sup> Another believed the British aircraft carriers constituted the center of gravity until the amphibious assault. After the assault, the Marine brigade ashore became the center of gravity.<sup>102</sup>

Identifying the center of gravity is an important activity but not an end in itself. A commander must plan a way to attack it and be prepared to change objectives if the center of gravity changes or he discovers his original perception was incorrect.<sup>103</sup> Regardless of whether a planner selects a center of gravity that is a military force or political will or any other concept, the purpose of the analysis remains to select an

objective that will lead to mission accomplishment.<sup>104</sup>

If the center of gravity is a source of strength, it should not be considered a vulnerability. Command and control centers, logistics bases, and lines of communication are not inherently strong physically. The concentrated mass of an army is. These two categories of military elements should not be mixed. A better term to address a portion of this issue is the decisive point which may be vulnerable; therefore, it may be open to an indirect attack.

#### Decisive Points.

Holding, dominating, or denying a decisive point gives one force an advantage over another. Jomini describes several types of decisive points.

Jomini states that every battlefield has a decisive point that "the possession of which, more than of any other, helps to secure the victory." His "fundamental principle of war" includes massing forces at the decisive point to defeat an enemy.<sup>105</sup> This massing force upon a decisive point is similar to Clausewitz's center of gravity concept when it is viewed as the objective a commander should strive to destroy in order to achieve victory.<sup>106</sup> Decisive points can be "geographic," (ie., based on the terrain); thereby, "permanent." They may also be "accidental points of maneuver" due to the relative positioning of the opposing forces. These are generally on an army's flank where an opponent may separate an army from its base of operations or supporting forces. A battlefield's decisive

point depends on the terrain, the relationship of the terrain to the strategic (Jomini's terminology) aim, and the positions of the opposing forces.<sup>107</sup>

As the discussion above shows, decisive points can take several forms. Jomini's decisive point and Clausewitz's center of gravity concepts can be related to one another if you consider the center of gravity to be the "hub of all power" and decisive points as the means to attack it or way stations on a route of attack. Decisive points do not necessarily have to be vulnerabilities but will be much easier to attack if they are. Holding a decisive point may create a vulnerability. They may provide an indirect way to attack a center of gravity and also may change during the course of a campaign.<sup>108</sup> A decisive point forces two decisions on a commander. He must decide whether or not to seize or retain the decisive point. If he decides to do so, he must then decide the amount of combat power to use.<sup>109</sup> Figure 1 portrays a way to view the center of gravity/decisive point relationship (see Figures). The decisiveness of a point ultimately depends on the amount of constraint imposed by its seizure or retention.

Decisive points are the supports on which the center of gravity depends. The figure shows three decisive points for the center of gravity for convenience. There is no magic number of decisive points for each center of gravity. This portrayal should be seen in a dynamic sense: as the forces move through a theater of operations, the relations depicted will change.

Figure 2 (see Figures) shows a way to visualize the center of gravity/decisive point relationship between operations or activities or levels of war or whatever term you prefer to use to describe actions taken by an opponent to defeat another in war. The figure proposes a way to view the World War II Battle of Britain as a campaign composed of several operations. The national strategic objective is to break the British will to resist.

These figures also demonstrate how activities by various sizes and types of forces can occur simultaneously and/or sequentially to complement one another. For example, special operations forces may attack the political will of an opponent's population through psychological operations while conventional forces attack enemy conventional forces. Air forces may attack one decisive point while ground and naval forces attack others. Synchronization of these attacks at different or the same decisive points by different forces is a crucial function in order to maximize the effect of the actions.

#### Center of Gravity Summary.

Since the center of gravity is a term that means many things to many people, it is not a good doctrinal term. Army doctrine should resist using a term that may have been clear to Clausewitz but is not clear to us as Clausewitz used it or with its definition modified in our doctrine. We should use words that describe what we mean.

Center of gravity is used in many ways which blurs its meaning. Rather than use one term for a multitude of concepts, doctrine should use more precise words. For example, when making a point about concentrating combat power to eliminate an enemy's source of strength, use "source of strength" not "center of gravity." When describing a vulnerability or decisive point, use those words. The same concept applies to the ideas of an enemy's mass of forces, main effort, or point of attack. If the desire is to refer to the most important element of the enemy force, decisive mass is a useful term and is consistent with the idea of decisive points. The term center of gravity has little use even though the concepts it represents are extremely important. Doctrine must not ignore them.

#### IV. Culminating Point.

##### General.

AirLand Battle doctrine defines a culminating point as that point in an offense "where the strength of the attacker no longer significantly exceeds that of the defender." An attacker risks defeat if he continues beyond that point. Achieving "decisive objectives" before reaching the culminating point is the "art of attack." The "art of defense" is hurrying an attack's culmination.<sup>110</sup> Webster's states that culminate means "to reach the highest or a climactic or decisive point."<sup>111</sup>

Doctrine provides several reasons for an attacker reaching a culminating point. Combat losses, a lack of sustainment capability, or physical exhaustion are examples.<sup>112</sup> Clausewitz also presents several factors that might cause an attacker to reach a culminating point: losses in battle, lengthening supply lines as the army advances, a change in alliances, or increased enemy resistance.<sup>113</sup> Anything that causes an attacker's strength relative to the defender to decrease so that the defender is superior may cause an attack to culminate.

Another way to look at the concept is in terms of friction, fog, and the superiority of the defense. Friction reduces the strength of a force and may cause culmination. The fog of war can hide the approach of a culminating point which may result in the attacker reaching the point but not realizing he has. A defender normally has the advantages of time to prepare and knowing the terrain which helps him select positions. The relative reduction of the attacker's strength over time brings about culmination.<sup>114</sup> Clausewitz called the concept of culmination the "keystone for most plans of campaigns." Victory depends on one side having superior strength through a combination of physical and psychological means.<sup>115</sup>

#### Offense.

Clausewitz noted that a successful attack depends on superior strength. Therefore, an attacker must stop once his strength is reduced to the point where he is only strong enough to establish a defense and sue for peace. Continuing beyond

that point risks a counterattack by a superior force. Determining the culminating point before reaching it is crucial.<sup>116</sup>

An attacker risks defeat if he continues beyond his culminating point. The attacker's strength is important only in relation to the defender's strength. Therefore, one argument about culminating points states that an attacker does not reach a culminating point if he is successful or the defender fails to act when the attacker is overextended.<sup>117</sup> My interpretation is that the culminating point is an absolute but passing it is immaterial if the defender does not take advantage of the event.

#### Defense.

Clausewitz also discusses a defender's opportunity to defeat an attacker by judging when the attacker reaches his culminating point. He points out that once an attacker sets his mind on a certain course of action, he may not realize he has reached his culminating point. Even if he knows this has occurred, he may find that continuing the attack is easier than stopping. Clausewitz relates this to the difficulty of stopping a horse that is pulling a load up a hill. Stopping is too difficult. This problem provides the defender the opportunity to defeat the attacker.<sup>118</sup>

Though Clausewitz did not explicitly state so, his point of a defender going on the offense -- "the flashing sword of vengeance" -- should be when an attacker reaches his

culminating point. He does state that a defender must be aware of reaching his culminating point because he "must make up his mind and act." There is no reason to continue waiting because there will be no additional advantage in doing so.<sup>117</sup>

The offensive nature of the culminating point concept should also apply to a defender's counterattack. During his counterattack, the defender becomes the attacker. Failure to judge his strength correctly may result in his passing his culminating point and the counterattack failing.

#### Levels of War.

The concept of an attack culminating and reaching a point where the attacker is no longer stronger than a defender is applicable in warfare. However, an action culminating for one level of forces does not necessarily mean actions at the other levels are culminating.

A nation could reach a culminating point due to the will of the people or government breaking while individual military units may still be capable of fighting. Certainly the reverse is true. One tactical defeat rarely ends a war. An example of the former is Vietnam. The US military forces had the capability to continue the war after the political will of the government broke. World War II is an example of the latter. Pearl Harbor and Kasserine Pass did not cause an American surrender.

#### Usefulness of the Term.

The idea of a culminating point seems applicable, but

Clausewitz is not clear regarding the difference between the culminating point in the offense and defense. FM 100-5 portrays the culminating point as a characteristic of the offense that attackers and defenders must attempt to identify.

There is no particular need for the term since the danger of overextending an attack is not a new phenomenon. However, the term's meaning is relatively clear. Any action has a limit. Once resource expenditures or an opponent's ability to accumulate resources results in an attacker losing his power advantage, the attacker should stop. His attack has culminated.

Even though there is no compelling need to rid doctrine of the term because of a lack of clarity, removing it would at least end the attempts to explain it as a critical element of doctrine. The concept of attempting a mission without the necessary resources or continuing an action beyond the point where sufficient resources exist applies to all military actions.

#### V. Conclusions and Recommendations.

##### The Terminology.

Operational art, center of gravity, and culminating point are important concepts, but the words obscure their meanings. Operational art is a cybernetic function that links strategy and tactics. The center of gravity in doctrine is a source of strength or balance but the meaning is unclear when linked to

Clausewitz's explanations and the examples various sources provide. The culminating point of an attack is the point where an attacker's strength no longer exceeds that of a defender. The term is clear but the need for a special term is not apparent.

#### New Terminology.

The terms discussed previously inhibit understanding. Therefore, doctrine needs better terminology. The first step in removing the veil of obscurity is to cease using a discrete term to symbolize a concept that cannot be summarized by one, two, and three words.

The division of war into levels results in people ascribing almost mystical qualities to each. These levels are really creative activities where the scope of action varies. The levels attempt to explain the changing complexity in warfare as one moves from using soldiers to military units to all of a nation's resources to defeat an enemy.

Unfortunately, removing operational art as a level of war from doctrine is probably impossible. Too much time has passed. However, doctrine should focus on the cybernetic function of selecting objectives and sequencing actions to reach those objectives rather than emphasizing that operational art is a new concept or level of war. Warfare has changed over time due to political, economic, social, and technological change. But the basic idea of determining how to defeat an enemy through sequencing actions that lead to gaining some

objective is not new. Constraining an opponent and removing the constraints on oneself are the basic concepts.

Center of gravity is a different story. Doctrine should not include the term because it now implies too many different ideas. Doctrine should point out the cybernetic process of determining what provides an enemy his strength and how best to attack it. Understanding the location of an opponent's mass of combat power is important so a commander can decide whether to attack it or avoid it. Vulnerabilities may provide objectives or routes to take in order to destroy an opponent's strength without confronting it directly. These concepts are sufficiently different so that doctrine should not lump them under one term. Center of gravity, or Schwerpunkt, may have made sense to Clausewitz, but warfare has changed, and he is not here to update his text. His ideas are thought-provoking and a crucial element in a study of the theory of war. However, we should not use a term with an unclear meaning in his text to guide our actions today.

As mentioned earlier, there is no compelling need to retain or discard the culminating point. Doctrine should discuss the concept of culmination but a unique term affords the concept more emphasis than it warrants. There is nothing about warfare today that warrants a discrete term to describe an event that obviously occurs. Any attack can progress too far. The complexity of the interaction of factors that cause the overextension increases as the forces concerned progress from

battalion through a nation's entire military force. But the concept is the same. A discrete term is not needed.

This brings to mind the purpose of war. The intent is to defeat an enemy -- to constrain his actions and prevent his constraint of our activities. Regardless of what the conditions are that define defeat, a commander must determine how to use his resources to seize the objective necessary to achieve those conditions. The course of action implemented must sequence the activities required to destroy an enemy's strength. A direct attack or an indirect attack may be used. These cybernetic activities are inherent in all decisions made with regard to a mission assigned. Doctrine should not include anything that interferes with understanding this basic idea.

Clarity is essential. Simplicity makes understanding easier, which helps provide clarity. Coining new terms does not provide simplicity because the reader must learn the meaning of the new term. A new term can only lend clarity if it is sufficiently precise to represent a concept not adequately expressed in an existing term. Therefore, this paper does not advocate any new terms. Doctrine should drop the center of gravity from the lexicon. Doctrine should also drop the culminating point. There is no reason to include a term that has no value. However, doctrine should address the concepts the terms represent.

Operational art's widespread acceptance makes deleting it from doctrine virtually impossible. However, doctrine should

highlight the cybernetic function involved in sequencing activities to accomplish a superior's goal. Doctrine should not focus on levels of war. It should focus on the actions needed to defeat a thinking enemy. That will allow clarity to exist and support our preparation for war.

FIGURES

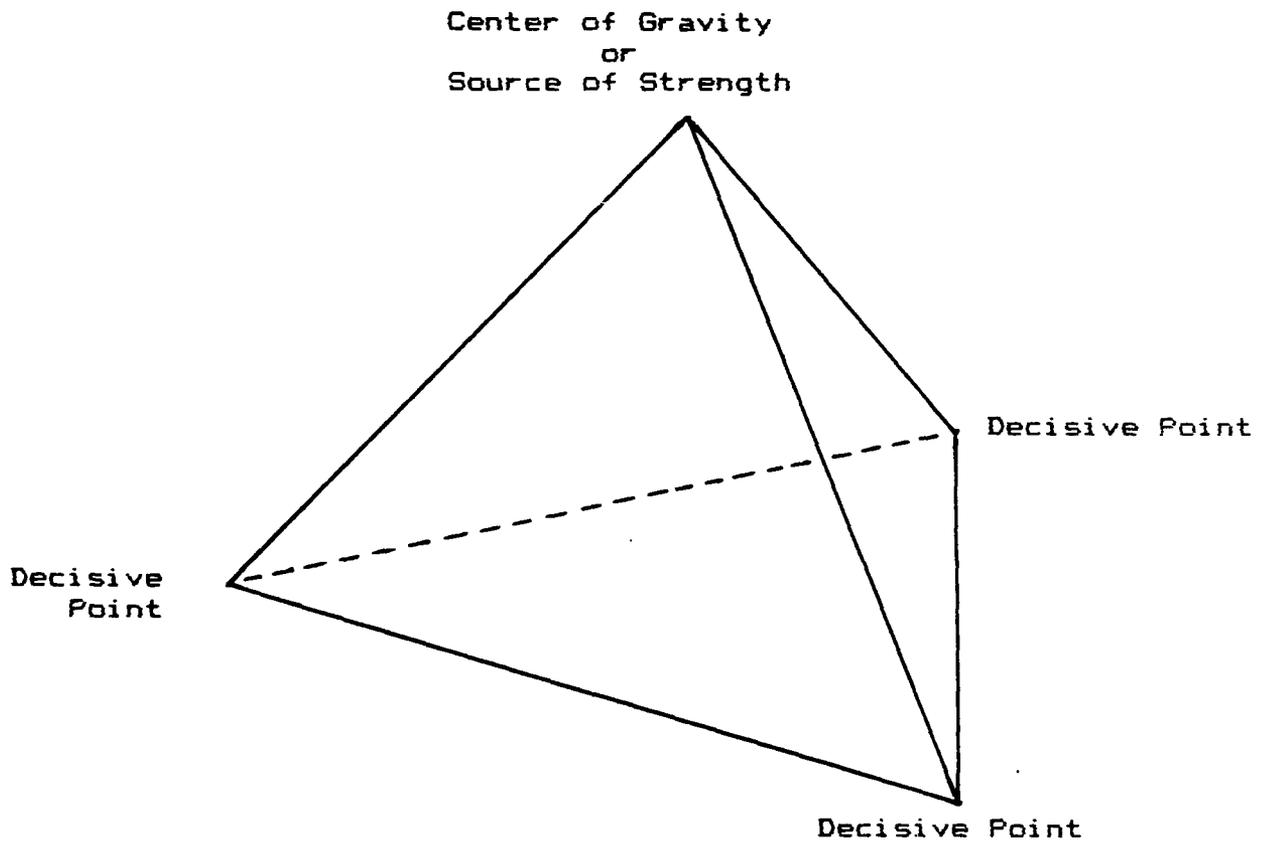


Figure 1. Center of Gravity/Decisive Point Relationship

British Will -- The National Strategic Goal

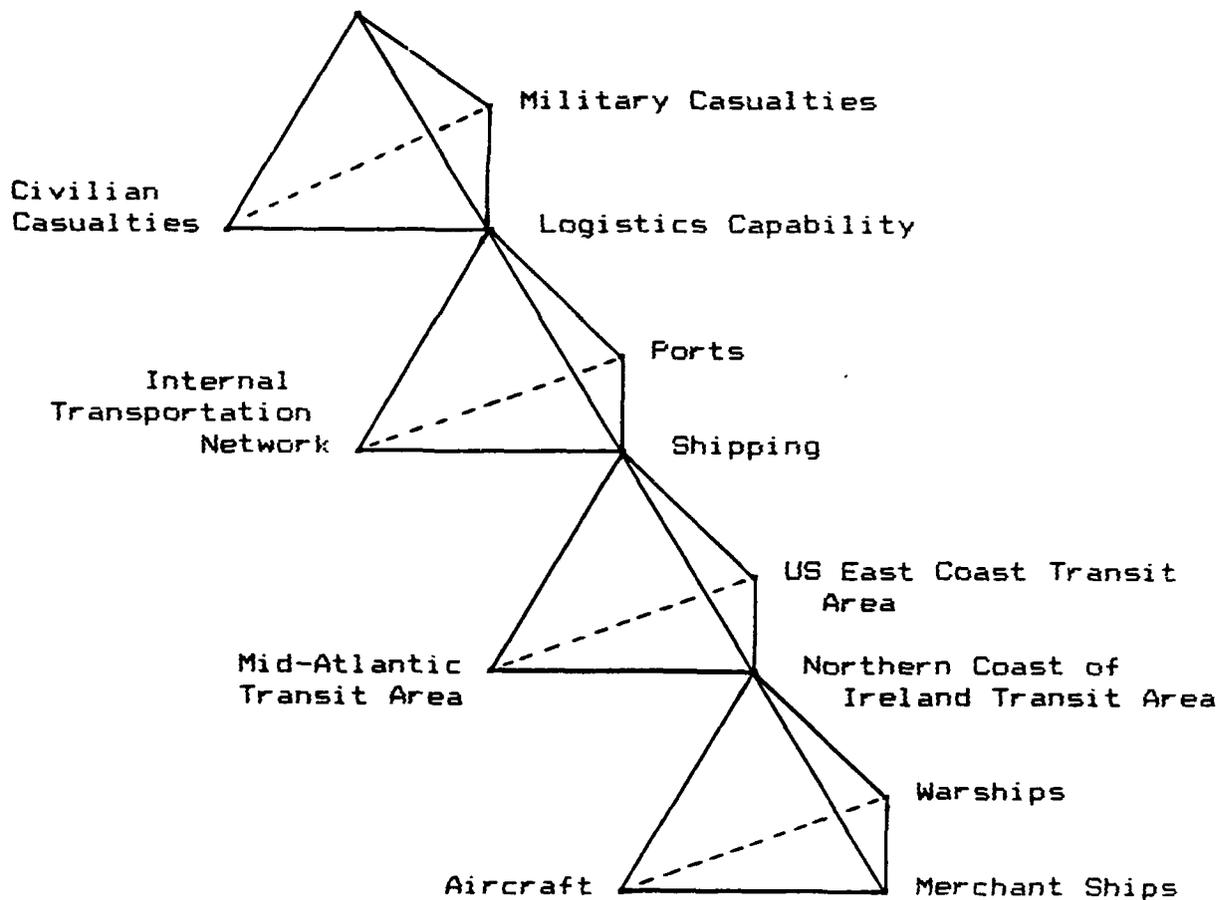


Figure 2. Center of Gravity/Decisive Point Relationship Among Levels of War, Operations, and Activities.

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