

The US Army War College Quarterly: Parameters

Volume 28
Number 1 *Parameters Spring 1998*

Article 4

2-17-1998

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Recommended Citation

Glenn, Russell W.. "No More Principles of War?." *The US Army War College Quarterly: Parameters* 28, 1 (1998). <https://press.armywarcollege.edu/parameters/vol28/iss1/4>

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No More Principles of War?

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From *Parameters*, Spring 1998, pp. 48-66.

"Objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise, simplicity." -- The US Army's Principles of War, 1993

For the moment, America's Army has not one but two sets of principles for military operations. The first is the traditional list of nine, last examined in 1993. The second contains principles for operations other than war. The first formally appeared in US Army documents in 1921 (albeit in a slightly different form); the principles of operations other than war (OOTW) were introduced in the 1993 *Operations* manual. The principles of war have assumed a character of permanence, but soldiers and others have frequently challenged them, believing variously that nuclear weapons, improved understanding of irregular warfare, or the enhanced influence of public opinion and the media had made the list incomplete or no longer of value. The principles have nonetheless changed but slightly. In an army where change is the norm, the principles of war have remained largely unassailable.

Yet the sense of permanence is deceiving, for the history of the current principles of war is a volatile one. Even their presentation as a brief list with concise descriptions is a 20th-century phenomenon. John I. Alger noted:

The term "principles of war" did not always connote the idea of a list of rules intended to facilitate the conduct of war. In fact, two distinct definitions of the term have been widely used. First, the principles of war represented a commonly accepted philosophy concerning the myriad of activities that collectively compose the conduct of war. In the present century, however, the idea that the principles of war are an enumerated list of considerations, few in number, capable of being simply expressed and essential to the successful conduct of war, has become increasingly accepted. The former definition was used by writers on war for centuries, but the latter, though it has become the standard in English-speaking nations, originated in the Napoleonic era--quite possibly with Napoleon himself.[1]

Strategist Bernard Brodie was less reticent when he wrote,

Although Clausewitz himself speaks loosely of certain "principles" to be observed and followed, . . . he specifically rejected the notion that there could be any well-defined body of particular rules or principles that universally dictated one form of behavior rather than another. . . . It was not until the twentieth century that various army field manuals would attempt to encapsulate centuries of experience and volumes of reflection into a few tersely worded and usually numbered "principles of war." Clausewitz would have been appalled at such attempts, and not surprised at some of the terrible blunders that have been made in the name of those "principles." [2]

Perhaps Clausewitz would have been appalled; then again, he seems to have recognized that a few words are far easier to recall after fatigue and stress have blurred a leader's mind. "We must have recourse to the relevant principles established by theory," Clausewitz wrote. "These truths should always be allowed to become self-evident. . . . We will thus avoid using an arcane and obscure language, and express ourselves in plain speech, with a sequence of clear, lucid concepts." [3] Clausewitz, it seems, would have had little problem with the tersely worded principle of "simplicity."

The Army is now revising--for the second time since 1989--its fundamental doctrine. FM 100-5, *Operations*, will have been updated nine times since 1945--on average every six years--when the 1998 version is published. Among the significant changes presented in the initial drafts of the 1998 edition were these: the "principles of operations other

than war" were eliminated, two current principles were revised and two new ones added, and the resulting list was redesignated as "principles of operations." After vigorous debate in the field, with some soldiers strongly favoring the changes and others lending less support, the current draft of *Operations* leaves the "traditional" nine principles unaltered from their 1986 form.

The inquiring mind might wonder at this support for the status quo. Perhaps it was a reaction to seemingly uncontrollable change in the Army. Perhaps there is a belief within the service that the durability of the principles provides an anchor for Army doctrine. Conversely, the choice for constancy may have been made in ignorance of the origins of the principles and their historic mutability.

This article proceeds from the final proposition above. It has three objectives: first, to describe how the "traditional" principles assumed their current form, and second, to explain why eliminating "principles of operations other than war" is essential. Finally, the article suggests that the modifications and additions to the principles of war originally proposed for the next version of the Army's operational doctrine deserve one more look before we commit the Army's active and reserve components to a set of operational principles that may not yet be quite "all they can be."

The Origins of the Principles

The US Army first provided its soldiers a list of principles in 1921. Training Regulation No. 10-5 listed nine principles of war identical to those in use today with the exception that "movement" and "cooperation" stood in the place of "maneuver" and "unity of command," respectively. This first appearance included no discussion of individual principles. The single paragraph that described their purpose and use also declared them to be "immutable." Charles A. Willoughby, who would later make his name as Douglas MacArthur's World War II Intelligence Chief in the Pacific, took the inviolate status of the principles a step further in his *Maneuver in War*. "These principles are basic and immutable," he wrote; "the great commanders have been guided by them, and success or failure has depended upon the extent and manner of their use. They are not subject to exception. Their proper execution constitutes the true measure of the military art." [4] Willoughby published his work in 1939, the same year the principles reentered US Army doctrine. They had disappeared after 1928, only to reappear in the 1939 FM 100-5, *Tentative Field Service Regulations, Operations*.

Willoughby traced the origins of these fundamentals, at the time new to the Army. He quoted Napoleon, who wrote that "Caesar's principles were the same as those of Alexander and Hannibal: (a) to keep his forces in junction, (b) not to be vulnerable in any direction, [and] (c) to advance rapidly on important points." From these, Willoughby believed, "One can hardly fail to recognize (a) the principle of concentration, (b) the principle of security, and (c) the principle of the objective." Willoughby went on to extract what he thought was a comprehensive and concise list of Napoleon's principles by culling them from the emperor's writings, concluding that they included objective, offensive, mass, surprise, security, and movement. [5] British military theorist J. F. C. Fuller did not concur with Willoughby's approach, believing that Napoleon laid "down no definite principles, yet he apparently worked by well-defined ones." [6]

As Alger recognized, Napoleon and other pre-20th-century practitioners and theorists of war believed that war had fundamental rules, but they felt no compulsion to attempt their concise articulation. [7] Nor did these earlier soldiers agree on the extent to which a commander was constrained by such rules. Writing in the first half of the 19th century, Jomini asserted that "the fundamental principles upon which rest all good combinations of war have always existed, and to them all others should be referred for the purpose of arriving at their respective merits. These principles are unchangeable; they are independent of the arms employed, of times, and of places." [8] His contemporary Clausewitz did not share this sense of the principles' universality. Clausewitz concluded that the principles were important as guides rather than Jomini's rules "upon which rest all good combinations of war." Clausewitz continued:

Where the arch of truth culminates in such a keystone this tendency will be underlined. But this is simply in accordance with the scientific law of reason, to indicate the point at which all lines converge, but never to construct an algebraic formula for use on the battlefield. Even these principles and rules are intended to provide a thinking man with a frame of reference for the movements he has been trained to carry out, rather than to serve as a guide which at the moment of action lays down precisely the path he must

take.[9]

Both men agreed that principles of war existed; both discussed them at some length; neither provided the brief list that today's soldiers have come to expect.

Perhaps no Western military writer put more thought into the possibility that war's actions could be characterized by a single set of principles than J. F. C. Fuller. His lists evolved as he mulled over their nuances in many of his books and articles written before, during, and after the First World War. In his 1926 *The Foundations of the Science of War*, he listed three groups of principles, each of which itself contained three principles of war:

- Principles of Control: direction, determination, and mobility
- Principles of Pressure: concentration, surprise, and offensive action
- Principles of Resistance: distribution, endurance, and security

Fuller explained the relationship among the groups as follows: "We thus obtain a threefold order of control springing from a dual order of pressure and resistance, each of these dual forces being in itself a threefold one. Ultimately these three groups form one group--economy of force." [10]

Fuller's contemporary B. H. Liddell Hart joined what was a growing fascination in Western armies with his discussion of maxims. Though Liddell Hart refused to call them principles in his 1932 *The British Way in Warfare* (for his were "practical guides, not abstract principles"), he nevertheless concluded that "the principles of war, not merely one principle, can be condensed into a single word--`concentration.' But for truth this needs to be amplified as the `concentration of strength against weakness.' . . . Here we have a fundamental principle whose understanding may prevent the fundamental error (and the most common)--that of giving your opponent freedom and time to concentrate to meet your concentration." Liddell Hart went on to list his six maxims, saying "four are positive and two negative. They apply both to strategy and to tactics": [11]

- Choose the line (or course) of least expectation.
- Exploit the line of least resistance.
- Take a line of operations which offers alternative objectives.
- Ensure that both plan and dispositions are elastic, or adaptable.
- Don't lunge whilst your opponent can parry.
- Don't renew an attack along the same line (or in the same form) after it has once failed.

With their reemergence in the US Army's 1939 *Tentative FM 100-5*, the nine principles listed in the 1921 Training Regulation 10-5, *Doctrine, Principles, and Methods*, took the form of seven "General Principles" for use during the "conduct of war": [12]

- Ultimate objective
- Concentration of superior forces, which required "strict *economy* in the strength of forces assigned to secondary missions"
- Offensive action, though "a *defensive* attitude may, however, be deliberately adopted as a temporary expedient"
- Unity of effort
- Surprise
- Security
- Simple and direct plans

There was no list of principles in the 1941 FM 100-5. The reader was instead presented with several "doctrines of combat": ultimate objective, simple and direct plans and methods, unity of effort, offensive action, concentration of superior forces, surprise, and security. [13] Only with the arrival of the 1949 FM 100-5 did the principles of war match those in that manual's 1993 counterpart. The current, seemingly sacred, list of nine principles is therefore only 49 years old.

The Principles of War and the Modern Environment of Conflict

Though the purpose and utility of principles of war were apparent to many military theorists in the first half of the 20th century, the introduction of nuclear weapons, increased influence of irregular warfare, and other changes caused some to question their value. Writing during the second decade of the Cold War, John Keegan concluded that "one of the purposes behind the principles has been to make new and strange circumstances comprehensible, to draw a thread from one war to another, to force events into a mold, and to make conflicts obey the dramatic unities. . . . A point is reached in the development of weapon systems beyond which one cannot compare the present and the past." Keegan went on to argue that the principles inherently implied "maximization of means," and therefore they were applicable to neither limited nuclear war nor modern conventional war. The latter demanded "subtle response, patience, self-control, firmness but not ruthlessness, and an ability to settle for something less than total victory,"[14] qualities Keegan implied were not supported by the nine principles of war. That the application of those principles demanded adjustment of the means to the political objective, notably that all principles were ultimately subordinate to that of the "objective," did not enter into Keegan's argument. He seems to have had little faith that Western military leaders of the era could apply the principles with the skill Clausewitz, Fuller, and others required.

At the other extreme were arguments that the principles had universal application, that they were "a collection of concise rules for warfare intended to aid battle leaders from the low-ranking officer to the general. Whether these rules are called principles, maxims, or axioms, they are independent of time, place, and situation." [15] Such an argument was alluring on the surface; it would have been convenient if true, but the principles themselves had changed repeatedly both in appearance and substance since their 1921 introduction. These changes were necessary to ensure that the principles maintained pace with doctrinal changes, changes themselves in part driven by advances in technology, adaptations by adversaries and potential adversaries, better understanding of military theory, and revisions in national strategy. The 1939 principle of "concentration," for example, was altered not only in form (later appearing as "mass"), but in substance over the ensuing decades. Limited ranges and the direct-fire nature of artillery in Napoleon's time meant that concentration required the bringing together of many soldiers and weapons at a given place and time on the battlefield. Later such concentration was not only unnecessary--technology permitted massing effects while leaving the means dispersed--it was potentially counterproductive. Rigid application of the principles, dictated rather than demonstrated by previous applications, was likely to promote failure rather than success.[16]

Writing in *Military Review* in 1991, William C. Bennett understood the need for flexibility in applying the principles. He concluded that the principles of war in fact applied to actions that were outside the traditional scope of what was meant by war. Discussing Operation Just Cause in Panama (1989-90), he noted, "Certain events indicate that when the principles of war are applied to short-duration contingency operations in a [low-intensity conflict] environment, the interpretation of the principles must be viewed within a broader context than normal. The forms that some of the principles may take are likely to be less traditional or 'military' and more 'police' or 'political' in nature." The earliest introduction of the principles in the 1921 training regulations had shared this vision of greater scope during application: "Their application varies with the situation . . . not only in purely military work, but in administration and business operation. . . . All active military operations will be planned and executed in accordance with these principles." [17]

Like those of the Army, the principles of war for other US armed services have changed over time. At one time the Air Force added "timing and tempo," "logistics," and "cohesion" to the list of nine it shared with the Army.[18] The Navy and Air Force currently use the same nine principles of war listed in the Army's 1993 FM 100-5 and Joint Pub 1, but unsurprisingly the definitions and applications vary somewhat.[19] In Fleet Marine Force Manual (FMFM) 1, *Warfighting*, the Marine Corps speaks to "two concepts of such significance and universality that we can advance them as principles: *concentration* and *speed*." Otherwise the manual only alludes to the nine currently in use by the other services in their primary operational manuals.[20] The Marine Corps also refers (in FMFM 1-3, *Tactics*) to "principles of tactics--gaining a decisive advantage, moving faster than the enemy, trapping the enemy, and the goal of all of them, achieving a decisive result." By implication, cooperation appears to be another element in this list.[21]

The US Army's Principles in Application

Virtually all students of war have considered the principles and their applicability to combat operations sometime during their careers. The value of principles to such operations is readily apparent. It is less so, however, when the nature of the operations in question varies from those from which the principles evolved. This is the case when

considering irregular warfare, space operations, weapons of mass destruction, or military activities that fall outside the range of those associated with traditional forms of conventional conflict. Many agreed with Keegan that the principles had little value when considering nuclear war. Others recognized the need for adaptation rather than disposal; John O. Shoemaker concluded, "the principles of war have definite application to the Cold War. . . . In the military profession great stress is laid upon reducing problems to terms that can be easily understood. More important perhaps is the effort devoted to defining objectives, tasks, and desired goals in sufficient detail and clarity that they cannot be misunderstood." [22] Josiah A. Wallace similarly concluded that the principles were sufficiently robust to serve as guides to actions in counterinsurgencies, finding they were an "excellent device for the commander to use in analyzing all aspects of his counterinsurgency plans. If his plans conform to the principles of war, he is on firm ground." [23] James H. Mueller likewise concluded that the principles of war were applicable to air, space, and aerospace doctrine and operations. [24]

Although military requirements and political objectives might differ widely, conclusions that support application of the principles of war to nuclear scenarios, irregular warfare contingencies, and space applications are unlikely to surprise students of conflict. The capabilities needed and technologies applied may differ profoundly from case to case, but the fundamental subordinate relationship of military force to national objectives is still the same as that explained by Clausewitz: "The political object--the original motive for the war--will thus determine both the military objective to be reached and the amount of effort it requires." [25]

The Principles of Not Only War

Similar reasoning makes an apparent oxymoron logical: the application of the principles of war to military operations not involving war. (See Figure 1, page 58.) Many, if not all, of the principles appear to be of value when executing non-wartime operations just as they have been during war. Emory R. Helton concluded that six of the nine principles of war--objective, offensive, security, unity of command, economy of force, and simplicity--applied to Operation Provide Comfort in northern Iraq conducted after the 1991 Persian Gulf War, and that "five of these will probably apply to any future humanitarian operations." [26] There is every reason to believe that mass, maneuver, and surprise would apply to operations that focused on stability or support requirements.

General Pershing perceived this wider application of the principles. There were considerable changes in the character of war over the span of his career, "but the principles of warfare as I learned them at West Point remain unchanged," he wrote. "They were verified by my experience in our Indian wars, and also during the campaign against the Spaniards in Cuba. I applied them in the Philippines and observed their application in Manchuria during the Russo-Japanese War." [27]

More recently, Richard Rinaldo argued that it was counterproductive to separate principles guiding war and operations other than war (OOTW): "This distinction seeks to create independence where there is interdependence, division where there is unity." [28] Rinaldo went on to posit, much as did Pershing, that "the principles of war . . . are robust enough to withstand application across the full range of military operations. . . . OOTW is an unnecessary category for doctrinal treatment in terms of principles and fundamental guidelines." [29] Brodie concurred in this regard, concluding that the principles were "essentially common sense propositions which are generally but by no means exclusively pertinent to the waging of war." [30]

The principles of war have indeed been more robust than a narrow interpretation of their purpose would admit. Their application always demands careful consideration of the requirements unique to a given situation; with adaptation and exercise of the *coup d'oeil* so treasured by Clausewitz, however, this application is feasible even beyond the bounds of the battlefield.

Such adaptation implies flexibility not only in application, but in the definitions of the principles. Roger A. Beaumont believed "the list should be continually reviewed and updated, and used as a working tool for analysis. . . . New technologies of war may alter the balance and make new factors paramount. The military art, like any other, is continually in a state of evolution, with part of its nature formed by the past and the materials, and its essence deriving from the innovative genius of the artist." [31]

Well-considered combinations of the principles have been the recipe for success whether applied to war or operations

in other environments. At times one or several principles have dominated our thinking. In some instances a principle has been irrelevant or of greater value in its violation than in its observation.[32] Again, however, more often than not the force that better applied the wisdom inherent in the principles was the victor:

Successful strategists never knowingly violate the principles of war unless they first evaluate the risks and estimate expenses. . . . Critics notwithstanding, the principles of war *are* utilitarian and they *do* make sense. The record shows that winners, by and large, took heed of the principles. The losers, discounting those who were overcome by sheer weight of manpower and material, by and large did not.[33]

With the publication of its revised doctrine in the 1998 FM 100-5, the Army plans to close the philosophical gap that has developed between combat operations and those not involving overt fighting. That is an essential outcome of this round of analysis of its warfighting doctrine. The first operation conducted by the fledgling US Army under the Constitution was not during wartime; it was an action to restore peace and stability to portions of Pennsylvania affected by the Whiskey Rebellion. Led by President Washington himself, the Army's threatened intervention ended the trouble in an operation that would today be considered a successful operation other than war. The preemptive character of the threat of force did not fundamentally alter the nature of the military action.

Similarly, soldiers preparing in 1998 for operations in Bosnia have had to undergo the same personal and unit readiness training required to prepare for armed conflict. Differences in rules of engagement altered neither the need for thorough preparation nor the utility of the principles during that preparation. Today's operational environment demands an expanded role for soldiers; being a warrior is still a necessary, but no longer a sufficient, qualification for service. The existing two lists of principles simply fail to emphasize what is common to any Army operation in the field.

These two lists imply difference where there is similarity. Simplicity is a principle of war, yet not of OOTW, to which it obviously applies in equal measure. Legitimacy is the reverse, cited as a principle of OOTW but not of war. It seems at first glance that legitimacy ought to be a principle of both war and OOTW, but one must again consider the role of principles. If they are in fact guides to action (rather than unquestioned truths with universal application to every military operation), then legitimacy is far better treated as an essential condition of any operation rather than as a principle. Unlike a principle that a commander can ignore (albeit at risk to success), no commander can reject legitimacy as the fundamental basis for a military operation.

War is one form of military operations, the most demanding, expensive, and traumatic of them all. But recent events reflect the historical experience of the US Army: combat is one of the least common of the kinds of operations conducted by the majority of those in the service. It is by no means the most frequent, and in some respects it can be less complicated than armed interventions in which the actions of a squad leader can have strategic implications. Consequently, one list of principles--and we should call them principles of operations--should serve the full range of military operations. There would be no requirement for every principle to apply in equal measure to every activity, nor for some to apply to given contingencies at all. Yet each element on this established list would merit status as a principle in part because it requires consideration during planning and execution even if it is ultimately not applicable.

Toward Clarity and Synthesis

Review of the long-standing principles of war was a natural starting point for developing a single list of principles of operations. But the recommendations from the field to retain the pre-1993 set of principles of "war" and simply to dispose of the principles of operations other than war misses an opportunity. We have learned lessons in this post-Cold War era that deserve to be incorporated into the Army's next statement of land force doctrine. That we were coping with a flawed premise about the common features of any Army operation, combat or other, in no way invalidates those lessons. This section therefore provides the rationale for continuing on the course previously charted for the next version of FM 100-5, *Operations*: take what's useful from our experiences in all recent operations, identify opportunities to adapt, and do so.

Figure 1, below, lists the principles of war and operations other than war as they appear in Army doctrine in early 1998, and identifies the principles originally proposed for the next version. The discussion addresses principles--new

and modified--that ought to appear among those adopted by the Army in 1998.

Principles of War	Principles of Operations Other than War	Principles of Operations
Objective	Objective	Objective
Offensive	Perseverance	Offensive
Mass	Legitimacy	Massed Effects
Economy of Force	Restraint	Economy of Force
Maneuver		Maneuver
Unity of Command	Unity of Effort	Unity of Effort
Security	Security	Security
Surprise		Surprise
Simplicity		Simplicity
		Morale
		Exploitation

Figure 1. Principles of War and Operations Other than War (as in 1993 FM 100-5, *Operations*) and Principles of Operations as proposed in Initial Draft, 1998 FM 100-5, *Operations*.

Principle of Operations: Massed Effects (modified, previously "mass")

Though "mass" was one of the principles on the original 1921 Training Regulation 10-5 list, by the time FM 100-5 was published in 1939 "concentration" appeared in its stead. The 1993 FM 100-5 guidance regarding mass is clear and pertinent: "Mass the effects of overwhelming combat power at the decisive place and time." [34] Unfortunately, "mass" is frequently neither understood nor applied in this manner. When Phillip Meilinger wrote that "precision air weapons have redefined the meaning of mass. . . . The result of the trend towards 'airshaft accuracy' in air war is a denigration in the importance of mass," [35] he could not have been more incorrect. First, firepower is but one capability that a commander seeks to mass. Second, precision weapons are potentially a critical component of mass as it is construed today: the concentration of effects to accomplish the mission. [36] If one missile, bomb, or artillery projectile can achieve a desired outcome, it is a supremely effective and efficient application of the principle of mass. The principle of "mass" no longer means what the concept seemed to mean in Napoleonic times: [37] to bring together in time and space soldiers or supporting weapons. Such practices now and in the future could create conditions more likely to lead to disaster than to success by creating lucrative targets for an adversary's air and surface fire capabilities.

Nor is mass only the concentration of all fires in time and space. The concept implies the massing of the effects of all pertinent capabilities, military and other: Army assets (armor, artillery, and aviation); joint support (intelligence means, aviation, naval gunfire, and missiles); special forces; psychological operations; electronic warfare, and other means that could contribute to mission success. Whether it is steel, electrons, and convincing words applied to defeat an enemy, or the use of food and water, medical care, and engineering capabilities to aid refugees, the intent is to create and maintain success through the massing of the effects inherent in these capabilities. R. R. Battreall similarly misunderstood the application of the principle of mass when he wrote, "When a sufficient amount of armor is massed at one point, it becomes the critical point." [38] "Mass" has too long been misunderstood; "massed effects" is the better term.

Principle of Operations: Unity of Effort (modified, previously "unity of command")

As has been noted, "cooperation" rather than "unity of command" was among the original principles of war in 1921. Unity of effort, with unity of command and cooperation as supporting concepts, first appeared in the 1939 manual as the preferred statement of this principle. Unity of effort remained the principle in the 1941 *Operations* manual, with subtle changes, but by 1949 the term was unity of command. This change occurred despite the fact that words used to describe it were identical to those used in the 1941 edition.[39] Consider how this principle (or doctrine of combat, in the case of the 1941 manual) was defined between 1939 and 1949 as successive authors struggled with the distinction between the desired form (unity of command) and function (unity of effort) over the 11-year span (emphasis in the originals):

1939: "*Unity of effort* is necessary to apply effectively the full combat power of the available forces. It is obtained through *unity of command*. Where this is impracticable, dependence must be placed upon *cooperation*."

1941: "Unity of command obtains that *unity of effort* which is essential to the decisive application of full combat power of the available forces. Unity of effort is furthered by full *cooperation* between elements of the command."

1949: "Unity of command obtains that unity of effort which is essential to the decisive application of full combat power of the available forces. Unity of effort is furthered by full cooperation between elements of the command. Command of a force of joint or combined arms is vested in the senior officer present eligible to exercise command unless another is specifically designated to command."

The principle of unity of command that appeared in the 1993 FM 100-5 stated that "for every effort," military leaders were to "seek unity of command and unity of effort." Unity of effort under the principles of operations other than war in the same manual directed soldiers to "seek unity of effort toward every objective." [40]

Unity of command has historically been hard to attain. James Winnefeld called it "the single most difficult principle to gain in combined warfare. . . . Relinquishing national command and control of force is an act of trust and confidence that is unequalled in relations between nations. In a coalition it is achieved by constructing command arrangements and task-organizing forces to ensure that responsibilities match contributions and efforts. . . . It is cardinal that compromises not be permitted to outweigh warfighting requirements." [41]

Anthony Rice found unity of command "more honored in the breach than the observance" in recent American wars and joint doctrine. What he called "parallel command" has been far more common, a situation in which nations share common objectives but retain control of their forces. Rice provided several examples, including Douglas Haig's World War I statement in 1915 that "I am not under General Joffre's orders, but that would make no difference, as my intention was to do my utmost to carry out General Joffre's wishes on strategic matters as if they were orders." Haig made that decision following guidance from the British War Minister Lord Kitchener that his command "is an independent one and you will in any case not come under the orders of any allied general." [42]

Rice concluded that unity of command "was never established among the forces arrayed initially against the Nazis." Further, although the United States was the "lead nation" during the Korean War, in Vietnam "the command structure seemed to take a step back in time. . . . A parallel command structure was adopted" instead. During Operation Desert Storm, Rice observed, the coalition "achieved a marked improvement on the command arrangements for Vietnam, but still did not achieve unity of command." [43] The US Army failed to establish local unity of command of even Army personnel in Somalia little more than two years later; the deaths of 18 soldiers in combat on 3-4 October 1993 was in no small part attributable to this failure.

Rice strongly endorsed unity of command despite the historical record and a joint doctrine that emphasized unity of effort. [44] Yet he acknowledged that the emphasis in joint doctrine on unity of effort, despite ground truth that unity of command is the much preferred condition, reflected awareness that the latter has historically been difficult or impossible to achieve. This difficulty has been increased by the lack of clearly articulated national and international objectives during many operations. When military commanders must attempt to define and justify such objectives based on vague guidance or public statements, participants in operations may find it difficult to come to a consensus on

end states, much less on the manner to achieve them.

Finally, there are organizations that may share general goals in a theater of operations but refuse to subordinate themselves to military authority. Some nongovernmental and private volunteer organizations (NGOs and PVOs) might respond to coercion or cajoling, but others will invariably remain autonomous. A commander might consider withdrawing security or other support for these agencies in an attempt to compel compliance, but the strategic implications of casualties among NGO and PVO personnel makes such a policy infeasible.

Unity of command, then, is the preferred form of coordination and control. Unity of effort, the desired effects of which are achievement of a "common purpose and direction through unity of command, coordination, and cooperation," is the operational function that is the prerequisite to success. Without unity of effort, any organization's work can negate the advances made by others. Unity of effort is the function we require for success in any operation; unity of command is the form we should seek to attain it. The operational principle is unity of effort.

Principle of Operations: Morale (new)

In Ardant Du Picq's view, "Hannibal was the greatest general of antiquity by reason of his admirable comprehension of the morale of combat, of the morale of the soldier, whether his own or the enemy's." [45] A lengthy discussion of leadership in the 1939 FM 100-5 asserted that "man is the fundamental instrument in war. . . . War places a severe test on the *moral stamina* . . . of the individual." [46] John Baynes, in *Morale*, the classic study of the 2d Scottish Rifles in World War I, concluded that "the maintenance of morale is recognized in military circles as the most important single factor in war; outside these circles there is sometimes difficulty in appreciating why this is so." [47] Franklin D. Jones provided an explanation for both the soldier's recognition of the paramount importance of morale and his civilian counterpart's lack of appreciation of that importance: "Nowhere in civilian life is the social group of such major and crucial importance in the life of the individual as it is for the soldier in combat." [48]

Maintenance of soldier and unit morale requires the building, maintaining, and restoration of fighting spirit. [49] Morale includes the willingness to work together consistently for a common purpose, which in the Army is frequently the accomplishment of whatever tasks are assigned to the group of which the soldier is a member. Individuals and organizations have morale, and the good morale of both is essential to success in any military operation. The difficulty in building and maintaining this most desirable quality is complicated by its multiple components. Self-confidence is crucial, commitment to the unit essential, willingness to sacrifice for the whole a requirement. Field Marshal Sir William Slim provided additional fundamental elements that included those considered necessary by many others who have studied the subject: [50]

Morale [has] certain foundations. These foundations are spiritual, intellectual, and material, and that is the order of their importance . . .

1. *Spiritual*

- (a) There must be a great and noble object.
- (b) Its achievement must be vital.
- (c) The method of achievement must be active, aggressive.

2. *Intellectual*

- (a) [The soldier] must be convinced that the object *can* be attained; that it is not out of reach.
- (b) He must see, too, that the organization to which he belongs and which is striving to attain the object is an efficient one.
- (c) He must have confidence in his leaders and know that whatever dangers and

hardships he is called upon to suffer, his life will not be lightly flung away.

3. *Material*

- (a) The man must feel that he will get a fair deal from his commanders and from the army generally.
- (b) He must, as far as humanly possible, be given the best weapons and equipment for his task.
- (c) His living and working conditions must be made as good as they can be.

Clausewitz considered victory in hand for the side that imposed its will on the other. That concept applies to the full range of military operations and to all parties who influence--or have the potential to influence--those operations. The importance of robust morale to our own forces is apparent, but other groups have a say in whether American military undertakings will be successful. The first such group is the adversary. If operations truly involve a struggle of wills, then undermining an adversary's morale complements (and could be an alternative to) force destruction as a means of attaining one's political and military objectives. The greater the success of psychological operations, continuous pressure, imposed confusion, maintenance of information dominance, and other assaults on his assurance, the less other means of influence will be needed and the sooner opposition will cease. Successful attacks on morale are likely to prove far less costly than destruction of the personnel and equipment of an opposing force. In an era when even enemy casualties may be counterproductive in achieving a desired end state, undermining morale may be the only means of attaining or exploiting early successes.

Second, noncombatants in an area of operations can be ambivalent toward friendly military activities, can act in support of friendly force efforts, or can actively resist them. The presence of diverse groups of noncombatants means that all three conditions can occur simultaneously, and groups obviously can change behavior over time. History has demonstrated that failure to consider the effects of apparent noncombatants on military operations can prove costly. Napoleon's forces in Spain and Germans in the Soviet Union during World War II paid the price of failing to win the support, or at a minimum the neutrality, of local citizens who later chose to become effective partisans. The principle of morale, then, includes consideration of these noncombatants. Their disposition must be continuously monitored and shaped, if not to ensure support for friendly activities, then at a minimum to foster the ambivalence that denies an adversary their support.

Another essential component of noncombatant considerations is the American public. Clausewitz acknowledged the importance of a nation's populace; one part of his trinity was "primordial violence, hatred, and enmity," which he concluded "mainly concerns the people." [51] Thomas Vaughn wrote that "in a democracy such as ours, morale is also a function of national consensus." [52] Donn A. Starry noted the dangers of an American tendency to call on the military in support of national objectives "without first having laid the requisite groundwork to attain and sustain strong public support for the policy course adopted." [53] Herbert Wolff, writing in 1965, presciently declared "to win in Vietnam we require *public support*" and concluded such backing would prove to be so critical that public support should be "the tenth principle of war." [54] And while the armed forces cannot exert direct influence on the American public, US military leaders at the highest levels are in a position to suggest that political leaders recognize the need to maintain citizen support for their armed forces during an operation.

That morale was a necessary condition to success in military operations was evident to George C. Marshall, who described it as "a state of mind. It is steadfastness, courage and hope. It is confidence and zeal and loyalty. It is élan, esprit de corps, and determination. It is staying power, the spirit which endures to the end--the will to win. With it, all things are possible, without it everything else, planning, preparation, production, count for naught." [55] Morale is a primary concern of commanders in peace and war. It deserves to be a principle of operations.

Principle of Operations: Exploitation (new)

While US military forces have often demonstrated a superb ability to identify objectives and accomplish missions, often they have done less well at capitalizing on resultant successes. [56] Success, be it in the form of military victory

or mission accomplishment in a humanitarian operation, may prove transitory if not seized upon quickly. The military must set the conditions for exploiting successes, whether the exploitation is to be completed through the execution of other American military actions or after a transfer of operational responsibility to others. The principle of exploitation, as it appeared in the initial draft of the 1998 FM 100-5, advised soldiers to "take advantage of and make lasting the temporary effects of battlefield success." [57]

Commenting on an earlier effort to add "exploitation" as a principle of war, Wolff wrote that it failed "to stand on [its] own merits. . . . Exploitation [is] subordinate to the principles of maneuver and objective." [58] He was correct, for exploitation as a type of offensive operation *is* a function of other principles. However, the concept of exploitation presented here has a much broader scope. It is by no means limited to combat operations, for it applies equally to any mission. It also pertains to capitalizing on all successes, and planning to do so even before achievement of success. Too often commanders and staffs develop plans for worst-case scenarios; they too rarely plan for greater success than might normally be expected. The cumulative effects of multiple sequential or simultaneous successes are also seldom wargamed. In discussing exploitation as a potential principle of war, the authors of *Military Strategy: Theory and Application* supported a wider application for the concept:

The principle of exploitation encourages momentum. It makes it possible for friendly elements to expand and consolidate gains, keeping the enemy off balance and on the defensive. Sage strategists follow the lines of least resistance that lead to vital objectives, pour on the pressure when opponents falter, reinforce successes, and abandon failures. Strategic exploitation involves far more than capitalizing on military advantage. It profits equally from political, economic, or psychological primacy and augments technological leads. [59]

These observations apply with equal validity at the operational and tactical levels, in combat as well as noncombat operations. Exploitation, in its broadest strategic and operational context, should be added to the list of principles of operations.

Conclusion

The concept of adopting principles of operations as replacements for principles of war at first glance seems simple, but there is little simple about the conduct of war or any other aspect of the profession of arms. Interventions in Haiti and Bosnia demonstrated that the absence of armed opposition in an operational area does not lessen the rigor of activities demanded of forces committed to such interventions. Principles of operations assist in the study of the profession; understanding them and applying them wisely in the field is in turn possible only after repeated, careful analysis of their purpose and meaning. Experience may partially compensate for lack of study, but application of the principles will likely suffer from the unwilling student's inability to fully understand their value in establishing desired operational end states and achieving national strategic objectives. So too will soldiers suffer in executing the orders of those who have failed to educate themselves.

History reveals that the principles of war have frequently been the subject of long and often inspired debate; their character, number, and definition have changed repeatedly. They took their present form in US Army doctrine only 49 years ago. On the one hand, this span is but a fraction of the years spent in their study. On the other, much has transpired since 1949. One may legitimately ask whether the principles as they stand could meet the needs of US armed forces half a century from now.

The US Army has an unusual opportunity to expand and modify its list of principles of operations. The absence of a major threat to the United States and its allies makes such an effort both timely and feasible; it would complement efforts to determine requirements for force structure and weapon systems for the opening decades of the 21st century. This article restates the need for the synthesis of principles of war and of operations other than war in our operational doctrine, and demonstrates the benefits of acknowledging that the basic tenets of doctrine transcend conflict. As always, our doctrine must prepare us to prevail in war; the next version can and should, however, be expanded to reflect the lessons we have learned since the end of the Cold War.

1. John Irvin Alger, "The Origins and Adaptation of the Principles of War," thesis, US Army Command and General Staff College, Ft. Leavenworth, Kansas, 1975, pp. 2-3.
2. Bernard Brodie, *War & Politics* (New York: Macmillan, 1973), p. 446.
3. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, N.J.: Princeton Univ. Press, 1976), pp. 141, 168.
4. Charles Andrew Willoughby, *Maneuver in War* (Harrisburg, Pa.: Military Service Publishing Co., 1939), p. 26.
5. *Ibid.*, pp. 25, 30.
6. J. F. C. Fuller, *The Foundations of the Science of War* (Fort Leavenworth, Kans.: US Army Command and General Staff College Press, 1993), p. 209.
7. Though Fuller quoted Napoleon as having said, "If one day I can find the time, I will write a book in which I will describe the principles of war in so precise a manner that they will be at the disposal of all soldiers, so that war can be learnt as easily as science." Fuller, p. 209.
8. Marshall L. Fallwell, "The Principles of War and the Solution of Military Problems," *Military Review*, 35 (May 1955), 50.
9. Clausewitz, p. 141.
10. Fuller, p. 225.
11. B. H. Liddell Hart, *The British Way in Warfare* (London: Faber & Faber, 1932), pp. 301-03.
12. US War Department, Field Manual 100-5, *Tentative Field Service Regulations, Operations* (Washington: GPO, October 1939), pp. 27-29.
13. US War Department, Field Manual 100-5, *Field Service Regulations, Operations* (Washington: GPO, 22 May 1941), pp. 22-23.
14. John D. Keegan, "On the Principles of War," *Military Review*, 41 (December 1961), 68-72.
15. Paul Katz, "The Additional Principle of War," *Military Review*, 36 (June 1987), 37.
16. Clausewitz distinguished between an *objective* principle (one that "rests on objective truth and is therefore equally valid for all") and a *subjective* principle ("generally called a maxim" and which "has value only for the person who adopts it"). Though a leader might mold the character of a principle to meet a situation, it could be argued that some have changed little over time, e.g., surprise and simplicity. Others, such as the example of mass used above, have undergone definite, if subtle, changes that go beyond modifications made to meet specific situational demands.
17. William C. Bennett, "Just Cause and the Principles of War," *Military Review*, 71 (March 1991), 13; US War Department, Training Regulation 10-5, *Doctrine, Principles, and Methods* (Washington: GPO, 23 December 1921), p. 2.
18. Stanley E. Griffith, "Principles of War," unpublished paper written for the US Naval War College, 17 June 1988, p. 15.
19. Joint Pub. 1, *Joint Warfare of the US Armed Forces* (Washington: GPO, 10 January 1995), III-1 to III-8; US Army, Field Manual (FM) 100-5, *Operations* (Washington: Headquarters, Department of the Army, May 1986), 173-77; Naval Doctrine Publication 1, *Naval Warfare* (Washington: Department of the Navy, 28 March 1994), pp. 43-50; Air Force Manual 1-1, Volume 1, *Basic Aerospace Doctrine of the United States Air Force* (Washington: Department

of the Air Force, March 1992), pp. 1-2.

20. Fleet Marine Force Manual (FMFM) 1, *Warfighting* (Washington: Department of the Navy, 6 March 1989), p. 31. The two principles are further defined as follows:

"Concentration is the convergence of effort in time and space. It is the means by which we develop superiority at the decisive time and place. Concentration does not apply only to combat forces. It applies equally to all available resources. . . . Similarly, concentration does not apply only to the conduct of war, but also the preparation for war." (p. 31)

"Speed is rapidity of action. Like concentration, speed applies to both time and space. And, like concentration, it is *relative* speed that matters. . . . Superior speed allows us to seize the initiative and dictate the terms of combat, forcing the enemy to react to us." (p. 32, emphasis in the original)

"The combination of concentration and speed is momentum. . . . It follows that we should strike the decisive blow with the greatest possible combination of concentration and speed." (p. 32)

The principles are mentioned with a partial listing in FMFM 1-2, *The Role of the Marine Corps in the National Defense* (Washington: Department of the Navy, 21 June 1991), p. 3-15: "Moreover, amphibious operations, like any other operation, will succeed only if the principles of war are observed. Surprise, security, simplicity, mass and its corollary economy of force, and maneuver in the strategic sense are all key ingredients."

21. FMFM 1-3, *Tactics* (Washington: Department of the Navy, 1 June 1991), p. 77.

22. John O. Shoemaker, "The Principles of War: Sense or Nonsense in the Cold War?" unpublished paper written for the US Army War College, 22 April 1966, p. 17.

23. Josiah A. Wallace, "The Principles of War in Counterinsurgency," *Military Review*, 46 (December 1966), 81.

24. James H. Mueller. "Developing a Foundation for Space Doctrine: Do All the Principles of War Apply to Military Space Operations?" unpublished thesis, US Army Command and General Staff College, Ft. Leavenworth, Kans., 1989, p. 96.

25. Clausewitz, p. 81.

26. Emory R. Helton, "Humanitarian Assistance--A Good Way to Lead the World," unpublished paper for the US Naval War College, 22 February 1993, p. 20.

27. General John Pershing as quoted by Marshall L. Fallwell, "The Principles of War and the Solution of Military Problems," *Military Review*, 35 (May 1955), 52.

28. Richard J. Rinaldo, "Warfighting and Peace Operations: Do Real Men Do MOOTW?" draft of article to be published in *Joint Forces Quarterly*, p. 9.

29. *Ibid.*, p. 20.

30. Bernard Brodie, *Strategy in the Missile Age* (Princeton, N.J.: Princeton Univ. Press, 1959), p. 24.

31. Roger A. Beaumont, "The Principles of War Revisited," *Military Review*, 52 (December 1972), 69.

32. Avraham Ayalon agreed in this regard: "There are principles which are essential and others which are less so. . . . Nevertheless, one should still treat the principles as a package deal. . . . It is obvious that not in every case will *all* of the principles be relevant." Avraham Ayalon, "Advantages and Limitations of the Principles of War," *Military Review*, 67 (July 1967), 44. Emphasis in original.

33. John M. Collins, "The Principles of War," in *Military Strategy: Theory and Application*, ed. Arthur F. Lykke, Jr.

(Carlisle Barracks, Pa.: US Army War College, 1 May 1984), pp. 3-9.

34. Field Manual 100-5, *Operations* (1993), p. 2-4.

35. Phillip S. Meilinger, "Ten Propositions Regarding Airpower," *Airpower Journal*, 10 (Spring 1996), 64.

36. The description of the principle in the 21 February 1997 version of the 1998 FM 100-5, *Operations*, coordinating draft is "mass the effects of combat power in a decisive manner in time and space." (p. II-2-4)

37. Though the massing of capabilities or systems in space and time seems to be a derivative of Napoleonic warfare, Napoleon himself demonstrated awareness that the value of mass was tied to (one form of) effects rather than physical presence of forces alone: "In battle, as in a siege, skill consists in converging a mass of fire upon a single point. After the combat has started, he that has the power to bring a sudden, unexpected concentration of artillery to bear upon a selected point is sure to capture it." From *Napoleon I: Maxims of War* (1831), quoted in Robert Debs Heinl, *A Dictionary of Military and Naval Quotations* (Annapolis, Md.: United States Naval Institute, 1966), p. 186.

38. R. R. Battreall, "Mass: A Principle of War," *Armor* (January-February 1954), p. 24.

39. FM 100-5, *Tentative Field Service Regulations, Operations* (1939), p. 28; FM 100-5 (1941), p. 22. The extract from the 1949 FM 100-5 was quoted in John I. Alger, *The Quest for Victory: The History of the Principles of War* (Westport, Conn.: Greenwood Press, 1982), p. 254.

40. FM 100-5 (1993), pp. 2-5, 13-4.

41. James A. Winnefeld and Dana J. Johnson, "Unity of Control: Joint Air Operations in the Gulf," *Joint Force Quarterly* (Summer 1993), p. 67.

42. Anthony T. Rice, "Command and Control: The Essence of Coalition Warfare," *Parameters*, 27 (Spring 1997), 154, 162.

43. *Ibid.*, pp. 156, 161.

44. *Ibid.*, p. 166.

45. Ardant Du Picq, *Battle Studies*, trans. John N. Greely and Robert C. Cotton (Harrisburg, Pa.: Military Service Publishing Company, 1946; rpt. Fort Leavenworth, Kans.: Combat Studies Institute, 1968), p. 68.

46. FM 100-5 (1939), pp. 29-30.

47. John Baynes, *Morale: A Study of Men and Courage, The Second Scottish Rifles at the Battle of Neuve Chapelle, 1915* (New York: Frederick and Praeger, 1967), p. 92.

48. Franklin D. Jones, et al., *Military Psychiatry: Preparing in Peace for War* (Washington: Office of the Surgeon General, 1994), p. 2.

49. FM 100-5, coordinating draft, 21 February 1997, p. II-2-7.

50. Sir William Slim, *Defeat into Victory* (New York: McKay, 1961), pp. 182-83.

51. Clausewitz, p. 89.

52. Thomas B. Vaughn, "Morale: The 10th Principle of War," *Military Review*, 63 (May 1983), 29.

53. Donn A. Starry, "The Principles of War," *Military Review*, 61 (September 1981), 7.

54. Herbert E. Wolff, "9 + 1 = 10," *Infantry*, 55 (March-April 1965), 33.

55. Lykke, pp. 3-9.

56. A sampling of outcomes that could have been better exploited in recent US history includes the tactical battlefield successes of Vietnam (including Tet 1968) and combat victories during Operation Desert Storm.

57. Coordinating draft, 1998 FM 100-5, p. II-2-6.

58. Wolff, p. 30.

59. Lykke, pp. 3-9.

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Reviewed 18 February 1998. Please send comments or corrections to carl_Parameters@conus.army.mil