NAVAL WAR COLLEGE
Newport, R.I.

MORALE: THE MISSING PRINCIPLE OF WAR

By

Maureen M. Cahill
Commander, U.S. Navy

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: Maureen M. Cahill

16 May 2000

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

20000913 145
8. Title (Include Security Classification):
Morale: The Missing Principle of War (Unclassified)

9. Personal Authors: Maureen M. Cahill, CDR, USN

10. Type of Report: FINAL
11. Date of Report: 16 May 2000

12. Page Count: 23
13. Supplementary Notation: A paper submitted to the Faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.

14. Ten key words that relate to your paper:
Morale, principles of war, objective, command, mass, offense, combat power, digital warfare, digital leadership, future war

15. Abstract:
As the future unfolds and technology expands, maintaining troop morale will be vital to military performance and an important key to success in a digitized warfare environment. To meet this challenge head-on "morale" should be included as a Principle of War in our Joint Doctrine. There are two basic axioms regarding warfare that are relevant for this discussion of morale and the principles. First, warfare has been a means to settle disputes for as long as societies have been organized. Second, war has always and will always involve human endeavor. Several nations include "morale" as a principle of war while U.S. doctrine does not. This paper will look at the human elements of morale and their potential to impact warfare at the operational level. After a brief discussion on how morale might influence combat power, four principles of war that are most dependent on leadership and the rank and file members, objective, unity of command, mass, and offense, and their relation to morale will be reviewed. As it is vital to look forward, digital warfare and the prospects for digital leadership will be examined to determine how success in operations may depend on incorporating a principle of morale into our doctrine.

16. Distribution / Availability of Abstract:

<table>
<thead>
<tr>
<th>Distribution / Availability</th>
<th>Unclassified</th>
<th>Same As Rpt</th>
<th>DTIC Users</th>
</tr>
</thead>
</table>

17. Abstract Security Classification: UNCLASSIFIED

18. Name of Responsible Individual: CHAIRMAN, JOINT MILITARY OPERATIONS DEPARTMENT

19. Telephone: 841-6461

Security Classification of This Page: Unclassified
Battle is the final object of armies and man is the fundamental instrument in battle. Nothing can be wisely prescribed in an army—its personnel, organization, discipline and tactics . . . without exact knowledge of the fundamental instrument, man, and his state of mind, his morale at the instant of combat.

- Colonel Ardant du Picq

**Introduction**

As the future unfolds and technology expands, maintaining troop morale will be vital to military performance and an important key to success in a digitized warfare environment. To meet this challenge head-on “morale” should be included as a Principle of War in our Joint Doctrine.

The nine principles of war, contained in our current doctrine, provide “general guidance for the conduct of war at the strategic, operational, and tactical levels.” By having and applying the principles of war each service component is able to focus peacetime training and subsequent deployment of military assets when and as required to achieve the nation’s political aims. While not a checklist to be strictly followed in each and every military situation, they provide a common mechanism to enhance joint and service planning and most importantly execution of military operations. Joint Doctrine states, “The principles of war represent the best efforts of military thinkers to identify those aspects of warfare that are universally true and relevant.”

There are two basic axioms regarding warfare that are relevant for this discussion of morale and the principles. First, warfare has been a means to settle disputes for as long as societies have been organized. Second, war has always and will always involve human endeavor. One of America’s greatest combat leaders, General George S. Patton, Jr., said prior to World War I that “wars may be fought with weapons but they are won by men. It is the spirit of the men who follow and the man who leads that gains the victory.” Additionally, as noted in the quote at
the start of this paper, Ardant du Picq "recognized that the starting place for the analysis of all things military is the individual soldier and his mental processes at the time of battle."5

As warfare, even if only for defensive purposes, is universal and spans all nations, most militaries around the globe have either codified or follow some set of guides or principles of war. But as each nation is unique, so are their principles and numbers can vary. France has only three principles, Britain and the former Soviet Union each list ten, and we have nine. Fallwell writes, "The differences in the number of principles accepted by the various nations are based, not so much on doctrinal and organizational differences, as they are on the desired degree of emphasis to be given certain concepts."6 One striking difference to note is that militaries of several nations include "morale" as a principle of war while U.S. doctrine does not.

In his analysis of morale and the principles of war, Vaughn notes, "Morale is found among the principles of war of the former Soviet Union and the People's Republic of China."7 In his book, Soviet Naval Tactics, Milan Vego writes, "The Soviets linked party-political work to morale, which they believed to play a major role in determining the outcome of any combat action. . . . and commanders were obligated to take every opportunity to influence the morale of subordinates."8 Morale is included as a principle of war for at least two of our allies and Vaughn indicates that "Great Britain and Australia call it 'Maintenance of Morale,' and the Australian army manual entitled Combat Power devotes an entire chapter to 'morale.'"9 He adds:

The fact that our allies as well as our potential adversaries consider morale worthy of inclusion in the principles of war suggests that reconsideration on our part may be useful. . . . From the U.S. perspective, one could, of course, argue that morale is not included because matters of morale, esprit and public support are so self-evident in the successful conduct of war that they become ever-present considerations in the minds of decisionmakers, both military and civilian.10
This paper will look at the human elements of morale and their potential to impact warfare at the operational level. After a brief discussion on how morale might influence combat power, four principles of war that are most dependent on leadership and the rank and file members, objective, unity of command, mass, and offense, and their relation to morale will be reviewed. As it is vital to look forward, digital warfare and the prospects for digital leadership will be examined to determine how success in operations may depend on incorporating a principle of morale into our doctrine.

**Morale and Its Influence on Combat Power**

According to Webster, morale is “the mental and emotional condition (as of enthusiasm, confidence, or loyalty) of an individual or group with regard to the function or task at hand.... esprit de corps...the level of individual psychological well-being based on such factors as a sense of purpose and confidence in the future.”\(^{11}\) From his monograph, “Unit Cohesion and Morale in Combat”, Cox provides a military perspective when he says, “Morale to the soldier in the field is a state of mind. . . . It is that intangible force that motivates men to give their last ounce of energy, ability, and lifeblood to achieve some goal, regardless of the cost to themselves.”\(^{12}\) In this same vein, our own Army doctrine espouses that warfare remains “a test of the soldier’s will, courage, endurance, and skill.”\(^{13}\)

Two elements important to building and sustaining morale are unit cohesion and esprit de corps. In his book, *Cohesion: The Human Element in Combat*, Henderson relates the importance that unit cohesion can have on an individual’s courage and morale:

The only force on the battlefield strong enough to make a soldier advance under fire is his loyalty to a small group and the group’s expectation that he will advance. This behavior is the consequence of strong personal or moral commitment. It represents the internalization of strong group values and norms that causes the soldier to conform to unit expectations even when separated from his unit.\(^{14}\)
He also believed, "the soldier’s perception that society sincerely values his contribution and sacrifices for the nation can also motivate him and contribute to unit cohesion."\(^{15}\) In his classic work, *The Power of Personality in War*, von Freytag-Loringhoven provides further insight on cohesion and uses the words of Clausewitz to clearly highlight the "value of military *esprit de corps.*"\(^{16}\) In *On War*, Clausewitz notes:

> "One who is seeking a profound understanding of the fundamentals of war, therefore, must understand *esprit de corps*. This spirit is the cement, which binds together all qualities which taken together give an army military value. In the presence of this spirit, the military qualities also unite more freely."\(^{17}\)

It is this concept of “military value” that will help aid our understanding of combat power and how morale might positively or negatively influence it.

Combat power as defined by Rosenberg is "the sum of the quantitative and qualitative factors, both internal and external, that affect the organization’s ability to accomplish a mission."\(^{18}\) At the operational level the goal is to apply overwhelming combat power, "which is the ability to focus sufficient force to ensure success and deny the enemy any chance of escape or effective retaliation."\(^{19}\) A common method of determining whether sufficient combat power is available to accomplish an assigned mission is to assess friendly and enemy combat assets then calculate and analyze force ratios. However, just comparing numbers of weapons, tanks or troops does not give the operational commander a complete assessment of relative combat power as other elements can increase or decrease effectiveness. Rosenberg writes, "Combat multipliers increase one or both sides of the force ratio while the combat reducers, which reflect vulnerabilities and weaknesses, degrade the force ratio in the same manner."\(^{20}\)

Our Marine Corps doctrine provides some additional clarification saying, "Some factors in combat are quite tangible and easily measured such as superior numbers. . . . Some may be wholly
intangible such as morale, fighting spirit, perseverance, or the effects of leadership.”
While it is impossible to completely measure these intangibles, they do matter and are worth addressing with respect to the principles of war that can be or are dependent on the human element of warfare. Australia, as noted in the introduction, includes morale in their principles and goes one step further. As noted by Vaughn, “an Australian army manual refers to morale as ‘the force multiplier’ of combat power.”
Cox also notes that Army researchers contend that “morale or rather ‘human spirit’ as they referred to it, does in fact act as a combat multiplier.” This coincides and follows the previous discussion above that indicated intangible factors such as morale, unit cohesion and *esprit* can contribute to military value. By the same token, the lack of these factors could serve to reduce military effectiveness and combat power particularly in today’s joint and combined warfare environment. This positive and negative aspect associated with morale will be examined using the four principles of war that are most dependent on the relationship between leaders and their rank and file members.

**Principle of Objective**

The purpose of the objective is “to direct every military operation toward a clearly defined, decisive, and attainable objective.” These objectives take root at the national strategic level. Milan Vego wrote, “Nations do not go to war because of military reasons, but to accomplish national aims.”
Clausewitz relates the importance of the civilian populace as an equal partner with the government and the commander by way of his “paradoxical trinity” and notes “the passions that are to be kindled in war must already be inherent in the people.”
Military objectives and missions are developed based on the nation’s, or coalition’s when applicable, political objective. While most other discussions of objective have centered on mission
planning, the intent here is to focus and build on the factors of morale discussed in the previous section by relating objective to mission relevance.

When the decision is made to employ military forces, it is individuals who are called upon to go into harm’s way and risk injury or death. In his article “Leadership on Future Fields: Remembering the Human Factor in War,” LtCol S. J. Eden wrote, “The final bulwark against fear is a soldier’s confidence that what he is doing is part of a well-conceived operations plan. Personal sacrifice is easier to bear if one believes it will contribute to success--but no one wants to die uselessly.” Von Freytag-Loringhoven provides further insight and a historic example of the importance that mission relevance can have on morale and fighting spirit. He writes:

The warlike spirit fades even sooner when there is no inspiring object to fight for and so help soldiers over the hardships of the moment. Cases were known in which British officers captured in the South African War yielded to their fate without resistance. They felt that the cause for which they fought was not, after all, of great national importance, and this may have largely produced this lassitude.  

Having clearly defined national objectives on which to base military planning and clear knowledge that public support is present or forthcoming has become increasingly important since our Vietnam experience. However, due to the ever-changing world political environment and rapid pace of recent operations it may not be possible to determine the political and public mood prior to deployment of U.S. troops. While objective is the key focus for military planning it is just as relevant to the individual soldier. It provides reason and often justification for being placed in the position face-to-face with an enemy who, in addition to possessing conventional warfare methods, may not think twice about unleashing weapons of mass destruction. Thus, if the troops are aware of the relevance of the mission or objective it can enhance their morale and fighting spirit.
Principle of Unity of Command

Joint Publication 3-0 indicates the purpose of the principle of unity of command “is to ensure unity of effort under one responsible commander for every objective.”29 It goes on to add, “Unity of effort requires coordination and cooperation among all forces toward a commonly recognized objective, although they are not necessarily part of the same command structure.”30 LtCol Marshall Fallwell clarifies the concept further when he writes, “Unity of effort—or cooperation in the British Army and United States Air Force—is the desired end or principle, and unity of command is but a means to that end.”31

Warfare is growing in complexity. A wide variety of participants now operate in an increasingly joint, multinational and technological environment. Small units with discrete tasks must operate with relative independence based on their knowledge of the commander’s intent. Success depends on each military unit’s ability to consistently maintain a high level of combat skill, discipline and motivation to accomplish their assigned mission, in support, of the larger objective. Leadership is key to building strong unit cohesion and can help ensure combat units are able to perform to their maximum ability regardless of the surrounding warfare environment and complexity or pace of tactical operations. Spiszer expands on this role and says, “Leaders need to set the conditions prior to combat, influencing soldiers’ morale during combat and assess and adapt methods after a fight to ensure success in the next battle.”32 Unity of effort has the potential to enhance combat power through the combined strength of individual cohesive units and willingness of units and members to work as a cohesive team.

Principle of Mass

The principle of mass, or concentration of combat power, relates closely to the discussion earlier on force multipliers and unity of effort in the previous paragraph. Joint Publication 1 notes
that "synergy results when the elements of the joint force are so effectively employed that their total military impact exceeds the sum of their individual contributions."33 When considering the principle of mass, Fallwell states, "Although numerical superiority is often desirable, there are other factors which may be equally, or more, important in obtaining mass—armor, artillery, air, the state of training, and morale, to mention but a few."34 Brown includes similar intangibles such as "weapons skill, resolution, discipline, leadership, administration and morale to his list of factors that contribute mass."35

With the increased lethality, mobility and improved communications of today’s battlefield environment, our ability to mass effects will greatly extend the battlespace creating a situation that places even more emphasis on our desire and ability to maintain high individual and unit morale. Echevarria and Biever foresee conditions that must be considered by operational commanders. They write, "Extended battlefield dispersion may multiply the physical distance between soldiers, leaders and units heightening their sense of physical and psychological isolation."36 One factor that contributes to strong morale in combat is close proximity of comrades and leaders to inspire and help soldiers overcome fear. Katz writes, "The individual is only spurred to act when his fellow soldiers stand on both sides and behind him, crowded close together and relying on each other. When the lines are breached and one soldier is exposed—even on one side only—a chain reaction begins that turns the battle into a massacre."37

Another reality that can contribute to battle fear and combat paralysis in today’s more lethal environment is that there is no longer a "safe haven" in the rear, even for combat support troops. Eden provides insight into the potential for fear to dampen morale and perhaps serve to reduce combat effectiveness. He writes:
Maneuver warfare's nature intermixes armies amid the swirl of combat so that the whole notion of "forward" and "rear" areas becomes moot. Every action, even minor routine ones performed miles from the enemy, becomes a calculated risk. Thus, fear of death will not be limited to those directly confronting the enemy but will extend throughout the battlefield's depth—a constant, nagging companion of every soldier, 24 hours a day.  

**Principle of Offense**

The purpose of an offensive action is to “seize, retain, and exploit the initiative.” This principle is dependent on the operational commander’s skill and competence as a leader to maximize mission success through planning and prosecuting the offense. By considering specific actions and decisions during planning that enhance unit performance, motivation and morale, military leaders can increase combat effectiveness. Current Army doctrine states, “Offensive plans facilitate transition to future operations, allow rapid concentration and dispersal of units, introduce fresh forces to exploit success, rest other forces, protect the force, and sustain combat operations throughout their duration.”

Exploiting success and resting as well as protecting troops are actions directly related to morale and should be considered as important planning elements by commanders who’s goal is to apply combat power to achieve his objective. Spiszer writes, “Influencing soldiers during combat includes alleviating the negative impact of fear and other combat environment elements on the individual soldier so he can function effectively and, ultimately, fire at the enemy.” Additionally, offensive actions can be their own brand of motivation for combat troops. Fallwell provides this insight “the everyday results of successful offensive action are initiative and high morale. General Patton thought so highly of these that once he forbade dissemination below general officer grade of an order to assume the defense.” Consequently, offensive actions that allow commanders to maximize success can enhance individual and unit morale and improve overall combat performance.
After reviewing multiple studies on morale and combat Vaughn concluded “they all demonstrate that morale is not something to be treated as ‘given’ in the equation of warfare.” As this section has tried to highlight morale and its companion parts unit cohesion and esprit de corps are relevant to at least four existing principles of war and have the potential to either enhance or reduce combat effectiveness. Taking the element of morale one step further, it is important to explore how the elements of morale relate specifically to the unique challenges facing the upcoming generation of soldiers and military leaders who will operate in a digital warfare environment.

**Morale in Future War**

Until combat evolves to the point where every military member has an impenetrable personal “force field” for protection or heads of state can conduct war from their own video game terminals; future wars will still depend on human ability and vulnerabilities. Although written in 1911, Von Freytag-Loringhoven understood the essence of combat’s human element. He said, “In the future, as in the past, war will be conducted man against man; the form will change, the essence will not.” Part and parcel to the essence of war is that the “ultimate purpose of war is the destruction of the enemy’s armed forces and will to fight.” By the same token and quite relevant to our soldiers, the enemy’s goal is to destroy our forces and will. Consequently, fear of death and injury will be with our soldiers as they go, albeit with high technology weapons, into harm’s way to do the nation’s bidding. To minimize the importance of morale in preparing for and executing future warfare would be an error. The two areas most dependent on human commitment and responsibility are “digital warfare” and “digital leadership.” These topics will be examined to determine how morale might enhance or hinder operational abilities.
Digital Warfare

As we continue to progress through today’s Information Age military operations will be conceived and conducted to incorporate and maximize the use of advanced technologies from weapons to communications. With this ongoing revolution in military affairs the battlefield or more commonly referred to as the battlespace, is becoming “digitized.” As James Dunnigan writes, “Digitization comprises the nuts-and-bolts solution for synchronizing the vast amount of communications and sensor equipment armed forces now have.”

Networking the digital information enables connectivity between participating elements throughout the battlespace and will provide leaders the ability to share and process vital strategic, operational, and tactical information. The commander’s intent as well as changes in the tactical situation can be instantly and clearly communicated both up and down the chain of command digitally. Gumbert accurately depicts digitization as a “valuable tool to use in dealing with complex environments” which can in turn “reduce ambiguity and confusion through enhanced situational awareness.” High-speed synchronization of effort throughout the battlespace becomes possible and on face value has the potential to impact application of the principles of mass, unity of effort, and offense.

Small units and even individual soldiers will be connected, or “plugged in,” to leaders by portable and handheld computers making instant communications possible. Eden highlights an advantage when he states, “At the stroke of a light pen and push of a button, fragmentary orders and supporting graphics will be transmitted from leaders to their soldiers, eliminating the need for old-fashioned, time-consuming, face-to-face meetings.” But, is being tethered to leaders and each other by means of digital signals going to improve the soldier’s combat effectiveness? Yes,
however there is also the potential to negatively impact morale factors that also need to be considered to ensure we do not inadvertently reduce combat power.

While there are clearly operational and tactical advantages to planning and prosecuting warfare in this high technology digital environment we must not lose sight of the man behind the weapon or sensor. Reinwald reminds us that “human interaction and imposition remain vital determinants to the efficient application of technology.”50 Heightened levels of speed and mobility will change the relevant common picture of the battlefield frequently and often dramatically.50 Consequently, digital and network technologies that provide increased situational awareness can add fog and friction to a commander’s efforts straining his ability to keep decision-making on pace with battlespace developments. Reinwald provides clarity on this potential drawback by pointing out that with people controlling or benefiting from the technology “individual actions, human imperfections, performance thresholds and varying personalities will still influence and determine a conflict’s outcome.”51 Thus, it appears the weak link in the digital battlespace of the future will be the humans, which brings morale back into view. It would seem prudent to make a conscious effort to strengthen those human vulnerabilities since man is an integral component of warfare.

Even in a digitized battlespace the demoralizing aspects of war will exist and if not adequately countered threaten to degrade combat effectiveness of both soldiers and leaders. Describing just some of the realities soldiers face in future war, Eden writes:

War in the information age will strain the sinews of leadership in ways we can barely imagine. The conventional battlefield will be a place of physical isolation, fluidity and instantaneous destruction inflicted at an unprecedented pace. Soldiers may wield "push buttons" more often than bayonets, but metal will still tear flesh with sickening regularity—often without warning.52
Under battle conditions such as these "sound leadership, competent and courageous soldiers, and cohesive, well-trained units" will be vital to instilling and maintaining strong morale and esprit de corps. If unit cohesion and military spirit should take root during peacetime training where proficiency and skill is developed and soldiers gain confidence in their own abilities. Some negative effects of the combat environment can be mitigated through proper training that counters unrealistic expectations of combat so that the soldier is not overwhelmed by the sights, sounds, smells and feelings of isolation and fear when they occur. Madden writes, "Soldiers who perceived themselves well-trained for combat performed extremely well." Dealing with the physical separation will pose "significant problems for an individual's psychological resilience because soldiers have traditionally coped with danger by drawing confidence from the proximity of comrades and leaders." But, as previously noted, it may be impossible for leaders to be near their troops. On the digital battlefield it will be more likely that command and control aspects are centralized and soldiers dispersed throughout will serve as eyes and ears at the "pointy end of the digitally-linked spear" waiting for the command to fire or advance on the next objective. Leadership will play a decisive role in bolstering soldiers during combat but this presents a new challenge in the digital environment.

**Digital Leadership**

The argument can be made that the digital revolution can replace a leader's physical presence through virtual, electromagnetically transmitted reality. However, as Gumbert writes:

The process of information flow and effective communication includes more than the ability to simply pass data. Leaders must be able to judge the emotional and psychological state of their soldiers. Presently, tactical digital systems do not provide a methodology for transferring this important aspect of communication. Therefore, voice FM and face-to-face communication remain the only way to pass nonverbal information. . . . TRADOC Pam 525-
2000-1 states the matter succinctly: "A soldier's spirit and will to win are lost in the computer processed display."\textsuperscript{58}

The Army Training Document statement above conveys what all great captains of military history had long recognized, the need to "deal with the core issue of morale as a function of leadership."\textsuperscript{59}

This is vital since leadership on the battlefield differs from any other form of leadership because its basic purpose is to induce men to willingly risk injury or death.

In addition to supplying purpose and direction, a leader's most important responsibility, particularly during the fight, is to provide motivation for their soldiers and the organization.\textsuperscript{60}

While today's junior officers may feel quite comfortable operating and controlling actions from a computer terminal they will not be experiencing the same physical and mental stress as the troops, nor have the sense of their morale during combat. As Eden rightly notes, "No computerized icon has been developed yet to signal the leader that his troops are 'freezing up,' cowering or simply needing reassurance. For that, a leader must be with his soldiers."\textsuperscript{61} Trust must be a strong and enduring bond between soldiers and their leaders and this is developed through personal interaction during both training and combat.

The final area of leadership that must never be taken for granted or lost amid electrons in the digital environment involves understanding and respecting the unique dynamics and personal nature of ordering a subordinate into harm's way. Although Gumbert wrote this from an Army perspective, his observation is relevant for all forces. He writes:

... leaders must make it clear that there exists a sense of purpose and meaning to the decision. Soldiers want to hear their commander's voice or sense his presence before committing to battle. The advances in digital communication do not always allow for the complete communication needed by leaders.\textsuperscript{62}
Conclusion

Morale and its related components, cohesion and esprit de corps, will always be vital ingredients to the successful prosecution of combat operations. Four of the nine existing principles of war, objective, unit of command, mass and offense, are dependent on morale in one way or another. While the soldiers of today will follow orders in a professional manner, mission relevance or lack there of can affect a soldier’s perception of value, worth, and commitment. Unit cohesion that is strong and permeates from the bottom and throughout the chain of command can provide motivation to soldiers who must operate as one joint or multinational team for a common purpose. Soldiers who are committed to the cause, confident in the support of comrades, and possess a high level of morale are more apt to maintain their fighting spirit in a dispersed battlefield. Finally, during coordinated offensive actions, soldiers with all of the attributes previously listed stand a better chance of overcoming the negative impact of combat stress facilitating their ability to fire on the enemy.

Although it can not be accurately measured like force ratios, morale, cohesion, and esprit de corps can serve to increase combat power as each of the component parts has the ability to contribute and strengthen the others in a synergistic manner. Military value is increased when cohesion and esprit combine to enhance morale, which in turn can contribute to a soldier’s courage and perseverance.

Operational commanders should strive to build and enhance troop morale while training or preparing for war, during any conflict period, and upon conclusion. This will be of particular importance as digital warfare continues to evolve and encompass all aspect of battlespace operation. We can not be lulled into a sense that technology will make warfare easier, cleaner, or more tolerable. The view on a computer screen that is isolated and tucked away at some
headquarters command may provide situation awareness in three-dimensions, but if morale of the
troops is lost in the "digital maze" the picture is not accurate at all.

We must not forget that leadership is about leading people who are the military's most
valuable asset, the "heart and soul" of our ability to accomplish the operational mission. By
including morale as a principle of war, the spirit, will, and motivation of our fighting forces will
not become secondary to the digital technology, but considered and integral part of its continued
development and employment in the operational environment.
NOTES


5 Zais, 58.


9 Vaughn, 37.

10 Ibid., 37-38.


13 FM 100-5, 1-2.


15 Ibid., 79.


19 FM 100-5, 2-9.

20 Rosenberg, 57.


22 Vaughn, 38.

23 Army Research Institute (ARI) for Behavioral and Social Sciences compiled much research on the importance of unit cohesion and morale. Cox, 5.


28 Von Freytag-Loringhoven, 224.

29 Doctrine for Joint Operations (Joint Pub 3-0), A-2.

30 Ibid.

31 Fallwell, 59.


33 Joint Warfare of the Armed Forces of the United States (Joint Pub 1), IV-2.

34 Fallwell, 57.


38 Eden, 35.

39 Doctrine for Joint Operations (Joint Pub 3-0), A-1.

40 FM 100-5, 8-1.

41 Spiszer, 67.

42 Fallwell, 57.

43 Vaughn, 29.

44 von Freytag-Loringhoven, 276.

45 FM 100-5, 2-4.


48 Eden, 37.

49 Reinwald, 69.

50 Echevarria and Biever, 4.

51 Reinwald, 69.

52 Eden, 35.


54 Spiszer, 67.

55 Madden, 35.

56 Echevarria and Biever, 4.
57 Eden, 36.

58 Gumbert, 19-20.

59 Vaughn, 26.

60 Gumbert, 21.

61 Eden, 37.

62 A battalion commander participating in FOCUSED DISPATCH observed that “Orders to units that require people to go kill other people must be made by voice . . . Platoon leaders want to hear their commander’s voice.” Gumbert, 21.
BIBLIOGRAPHY


