THE CADRE PAPERS

The Art of Wing Leadership and Aircrew Morale in Combat

Lt Col John J. Zentner, USAF

Our Cover: Combat histories are full of examples of men who rose through the ranks due to their remarkable ability to achieve success in battle. Maj Adolf Galland began his combat career as a lieutenant in the Condor Legion flying ground-attack missions for the German Luftwaffe in the Spanish Civil War. Although he began his Luftwaffe service as an attack pilot, it was his success as a Bf 109 pilot and commander of *Jagdgeschwader* (fighter wing) 26 (*JG*26) in the Battle of Britain that gained him the reputation as Germany's top fighter commander in the Second World War. The US Army Air Forces had its share of successful squadron and group leaders, but one would be hard-pressed to find a more successful combat commander—who was also respected and loved by his men—than Lt Col Joseph Laughlin (shown on the cover as a colonel, his final wartime rank). Culminating in his command of the 362d Fighter Group (FG), XIX Tactical Air Command (TAC), Ninth Air Force, Colonel Laughlin encouraged and led his P-47 pilots from one end of France to the other in support of Gen George S. Patton's Third Army in the summer of 1944. Col James R. McCarthy assumed command of the 43d Strategic Wing on 1 December 1972, just in time for Linebacker II to begin. Faced with an awesome responsibility and paradoxically limited authority, Colonel McCarthy led his wing to success in spite of severe challenges.

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The Art of Wing Leadership and Aircrew Morale in Combat — Zentner

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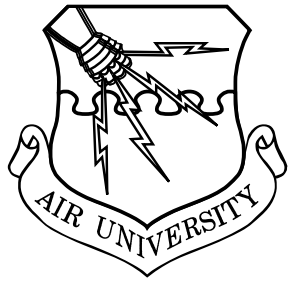

The Art of Wing Leadership and Aircrew Morale in Combat

JOHN J. ZENTNER
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Foreword

Lt Col John J. Zentner's *The Art of Wing Leadership and Aircrew Morale in Combat* addresses the role that the air force wing commander plays in affecting the level of aircrew morale during combat. More specifically, Colonel Zentner's study seeks to identify and define those unique characteristics associated with leading airmen that sustain aircrew morale in the face of significant losses.

Colonel Zentner defines aircrew morale as *the enthusiasm and persistence with which an aviator flies combat missions*. He then offers three historical case studies to establish a framework within which aircrew morale can be assessed. The first case study is of Maj Adolf Galland and *Jagdgeschwader* 26 during the Battle of Britain. The second case study considers Lt Col Joseph Laughlin and the 362d Fighter Group during the invasion of France in the summer of 1944. The third case study examines Col James R. McCarthy and the 43d Strategic Wing during Operation Linebacker II. Drawing heavily on the results of questionnaires and personal interviews, each case study is focused on the importance that aircrews ascribed to three general areas: individual needs, group cohesion, and unit esprit de corps.

Colonel Zentner concludes that aircrew control over development of combat tactics was the single most important element affecting morale. This finding supports one of the fundamental truths about the employment of airpower, centralized control and decentralized execution, that has become embeded in the airman's culture. In each of the three cases studied by the author, morale generally improved when the wing commander either displayed a personal flair for tactical innovation or allowed his subordinates to become innovative. Conversely, morale declined when higher headquarters placed burdensome and unsound restrictions on aircrew tactics. In light of the restrictive rules of engagement that have governed recent applications of American airpower, Colonel Zentner recommends the USAF take steps to modify doctrine and professional military education in order to relate the findings of this study to the combat air forces.

The Art of Wing Leadership and Aircrew Morale in Combat originally was written as a master's thesis for Air University's School of Advanced Airpower Studies. In cooperation with the College of Aerospace Doctrine, Research and Education (CADRE), the Developing Aerospace Leaders Program Office is pleased to support publication of Colonel Zentner's study as a *CADRE Paper* and thereby make it available to a wider audience in the US Air Force and beyond.

CHARLES D. LINK, SES
Major General, USAF, Retired
Director, Developing Aerospace Leaders
Program Office

About the Author

Lt Col John J. Zentner (BSEE, Loyola Marymount University; MBA, University of Phoenix), a senior navigator with 2,000 flying hours, is chief, Synchronization Cell, Seventh Air Force, Osan Air Base, Korea. He was commissioned through the Reserve Officer Training Corps, Loyola Marymount University, in 1987. Graduating from specialized undergraduate navigator training in 1988, he went on to fly the F-111F as a weapon systems officer at RAF Lakenheath, United Kingdom. Colonel Zentner flew 25 combat missions in the 1991 Persian Gulf War and transitioned to the F-15E in 1992. He served a tour at Nellis Air Force Base (AFB), Nevada, in the 422d Test and Evaluation Squadron and an operational assignment in the 366th Air Expeditionary Wing, Mountain Home AFB, Idaho. Colonel Zentner is a graduate of the USAF Fighter Weapons School, Air Command and Staff College, and the School of Advanced Airpower Studies.

Acknowledgments

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Chapter 1

Introduction

I would describe the morale [of US troops] in the desert as adequate.

—Sen. Kay Bailey Hutchison
May 1998

The intensity of aerial combat often masks the brevity of the engagement under examination. The fighting spirit of the combatants must sustain them not only through the brief life-or-death struggles in the air but also through the more mundane and more frequent interludes. Wartime morale is shaped by the various elements to which airmen are exposed.[1] It has been argued that the single most powerful influence on morale is exerted by the commander who leads airmen into battle.[2] This study explores the relationship between air force wing commanders and aircrew morale during combat in which significant losses are experienced.

Leadership and Morale in Air Combat

The post-cold-war leveling-off of American defense spending combined with sharp cuts in aircraft major weapon systems procurement could place the United States at a quantitative disadvantage against a future adversary. Advanced technology traditionally has provided qualitative advantages in combat capability, but aircrew morale has demonstrated in the past that it too has been a combat multiplier.[3] For centuries military commanders have realized that raising troop morale magnifies their combat potential. It stands to reason that competent air force leaders will use every means at their disposal to capitalize on any advantage in war. This study addresses an issue that, in today's USAF at least, often is either ignored or misunderstood.[4]

Uncertainty is another reason that a specific focus on morale during attrition warfare is important. The US military has been both skillful and fortunate in mission execution during combat engagements in the past 10 years. Losses of aircraft and friendly casualties have been extremely low even though aerial warfare has become the preferred means of American coercion. Although USAF leaders expected a far higher level of attrition in the Persian Gulf War, nothing on the verge of attrition-style combat has been waged since Vietnam. However, no one can be certain that in the near future the United States will not become engaged in much riskier scenarios that include significant combat losses. The will to sustain heavy losses rests with the political leaders and people of a democracy, yet the psychological burden of conducting this type of warfare is borne by combat leaders and their subordinates. The time and circumstances surrounding combat often are yielded to the enemy; but by trying to understand the consequences of attrition on morale, future leaders may be prepared for the situation should it arise.

This study was inspired by the author's desire to better understand leadership, especially in combat settings. The ambiguity of morale has always created a somewhat unsatisfying perception of the topic, which was highlighted on a recent rotation to Southwest Asia.[5] The comment in the epigraph at the beginning of this chapter was made by a well-meaning US senator after a trip to the area to assess US troop morale. Some of the deployed aircrew who read the senator's remarks in the newspaper were on their third deployment to the desert in 13 months. Issues involving long-range strategic goals, rules of engagement, and high operations tempo all affected the morale of the deployed airmen. Sen. Kay Bailey Hutchison's perception of adequate morale and that of the airmen involved was not the same.

Existing Thoughts on Military Morale

Asking military commanders, historians, or psychologists for their views about morale in combat situations is akin to the story of three blind men trying to describe an elephant.[6] Each

description is correct based on the individual perception, but each description is also wrong in the larger sense. The thousands of books and papers written on the subject of military morale span the spectrum of interest and depth. While they all touch on aspects of morale, some notable works stand out as hallmark contributions to the body of knowledge regarding military morale.

Accounts relating to actual warfare offer some of the most riveting discussions on morale. As a primer on the most basic concept of morale, Leo Tolstoy's classic *War and Peace* illustrates the importance of the fighting spirit of an army and its ability to increase combat power. Lord Moran dissected morale by studying the human capacity for courage in his World War I treatise *The Anatomy of Courage*. An engaging, though controversial, World War II treatment can be found in S. L. A. Marshall's book, *Men Against Fire*. The unique circumstances of the maintenance of morale for bomber aircrews in World War II have been covered by Mark K. Wells in *Courage in Air Warfare* and Allan D. English in *The Cream of the Crop*. Issues of morale for jet fighter pilots in combat have been vividly recreated by Jack Broughton in his two works, *Thud Ridge* and *Going Downtown*.

The more clinical and abstract viewpoints of psychologists and military theorists have contributed to our understanding of military morale as well. A well-researched study on the motivation of soldiers is presented by Anthony Kellett in *Combat Motivation*. J. F. C. Fuller's exploration of the interaction of various elements in combat relies heavily on morale and the moral domain of war in *The Foundations of the Science of War*. Finally, the seminal work by Ardant du Picq, *Battle Studies*, also stresses the importance of morale and cohesion in combat.

Missing Link

This study addresses an overlooked question connecting the actions of the commander with the fighting spirit of the aircrew: Is it possible to identify those characteristics of leadership that show a noteworthy ability to sustain aircrew morale within a combat environment involving significant losses? For all the focus on morale across the years, very little has been

written about the causal link between the actions of the combat leader and the level of morale in the unit. Most works focus on individual aspects of morale or on clinical treatment of combat stress reactions. Even less has been written about the specific issue of leadership's impact on *aircrew* morale. Where these topics have intersected, the premise is rarely in a historical setting of high combat losses.

Methodology

The approach to this topic involves a historical comparison of the combat experience of units that suffered heavy losses yet continued to function effectively. By studying the actions of the unit's leader and the perception of morale among the unit's aircrew in light of the context of the battle, it may be possible to identify some predominant actions that influenced overall morale. Similarities between cases are scrutinized to determine if some actions can be prescribed universally to raise or sustain morale in the aircrew.

The reason for approaching the study in this way is because historical air battles add flesh to the theoretical skeleton of the concepts of aircrew morale. Certainly the study of history cannot answer all the questions of why airmen in combat are motivated in particular ways, but it can provide a basis to make some general—and, hopefully, useful—observations. The findings of this research synthesizes these observations to provide future air commanders a guidepost for reasoned action. History provides lessons for war fighters. The challenge is finding the correct analogy. This study of history may be no substitute for personal experience, yet it may be the only tutor available for aspiring air force commanders. Honing leadership skills in combat is always necessary but is sometimes very costly. Peacetime offers the best opportunity to consider issues of leadership that have been demonstrated by others in the crucible of combat.

Other research has studied the effects of combat on morale. The emphasis of those works has been on preserving the fighting ability of the warrior in spite of the stresses of combat. This study instead focuses on the effects of leadership on morale.

Col Dale O. Smith summarized the relationship between leadership, morale, and unit effectiveness in the *Air University Quarterly Review* in 1951.[7] Good leadership will lead to good morale, which will lead to good performance, which will reinforce the perception of good leadership, which will lead to good morale, and so on. Figure 1 illustrates this relationship. This study focuses on the mechanism that connects leadership to morale in this chain. Three distinct areas are covered to conduct this research and reach conclusions.

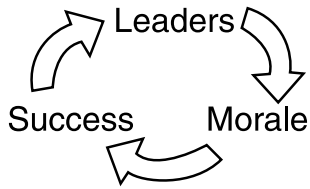

Figure 1. Basic Relationship Model

Morale for Aviators

Clarity must be the goal of any discussion. A workable definition of what morale is and how it is considered in the application of airpower must be established. Although morale may be an intangible quality, the scope of the topic needs to be bounded in order to frame the research and analysis. With this in mind, the concept of morale is specifically defined in a fashion that approaches common sense for airmen.

Three Case Studies

The first case study considers a German Luftwaffe fighter wing in the Battle of Britain in 1940. The replacement of a weak wing commander by a successful one allows some comparative analysis of leadership styles between the two. Additionally, pilot morale during the evolution of the campaign is considered in light of commander actions and the tactical and operational results achieved. Primary source information is employed where possible; however, extensive secondary source material is used to fill in any apparent gaps where necessary.

The second case study follows an American fighter group assigned to support Gen George S. Patton's Third Army as it broke out from Normandy in the summer of 1944. Once again, a replacement of the group commander during this campaign invites comparison of leadership styles. Extensive primary source materials provide the details necessary to analyze the morale implications of the leader's actions. This material is derived from unit histories and also from questionnaires completed by surviving members of the unit and from correspondence between them and the author.

The third case study examines the morale of B-52 aircrews flying over Hanoi during the Linebacker II operation of December 1972. The B-52 wing commander remained the same throughout the brief operation; however, changes in tactics and the important influence exerted by higher headquarters furnish a baseline for understanding the effect of command actions on aircrew morale. Both primary and secondary sources are used to describe the situation and to afford a basis for judgments about the actual versus perceived level of morale. Once again, questionnaires and correspondence are used to supplement unit histories.

Conclusions and Recommendations. The implications of the study are addressed with an emphasis on their relevance to the application of airpower in general and the application of American airpower in particular. Additionally, recommendations are offered to assist the USAF in the development of professional military education (PME) programs and operational doctrine as they apply to the connection between leadership and morale.

Limitations

This is a study of morale in wartime. The factors required to motivate aircrew in peacetime will not be identical to those that are paramount in combat. This study is further limited to the realm of combat that involves suffering casualties in action. Considerations of morale made by a commander under these circumstances may differ from those made by a commander participating in operations other than war.

To facilitate usable conclusions, it is necessary to compare combat units of approximately the same size and complexity. The units selected for the case studies contained herein were wing size (60–120 aircraft and crews). With this in mind, the lessons drawn from group or wing commanders may not be applicable to squadron or flight commanders in air forces today. The value of studying groups and wings is that they represent the largest air force units in which the leader is typically also a tactical war fighter. This perspective allows the wing commander to experience the issues of morale firsthand and still have the span of control to achieve an operationally significant effect on the overall success of a campaign. The quantity and quality of research material available also persuaded the author that more meaningful conclusions might be made from an analysis of cases involving these larger groups. These conclusions hopefully will contribute to the scarce literature available for the study of midlevel combat leadership.

The small number of case studies analyzed is also a limiting factor in this project. The practical length of this study restricted the quantity of cases that could be explored. As a result, no statistical validity can be implied by the conclusions reached. It is worthwhile to repeat that the issues of morale and leadership addressed seek to provide some commonsense understanding of the topic for airpower practitioners. It is meant to add to the existing body of knowledge on the subject, not to be the final word on it.

Along similar lines, the case studies themselves are not complete historical recounts of the events. A brief summary of the context of the battle and the key personalities involved is enough to provide a background for the morale issues explored. The bibliography provides the reader with references that cover the combat details and operational significance of the battles in more depth.

Finally, many of the primary sources used throughout this work contain personal recollections of aircrew who flew combat in these units. Total historical accuracy is not possible in these personal accounts, especially with regard to issues originating from outside the unit. The details most useful from these materials will be individual opinions and perceptions of morale.

Assumptions

A central assumption of this work is that Western air forces are motivated by similar conditions. Also, while air combat experiences among the case studies under consideration are not identical, they do overlap in some areas that influence aircrew morale. These similarities are necessary to compare units of different nationality as well as units of the same nationality participating in different conflicts. This is not to say that the context of battle does not matter—it only implies that it is plausible that Western air combat units placed in the same context may react in similar ways.

It is also assumed in this research that aircrews are motivated and behave differently than ground elements of the same wing. Only an aircrew experiences the environment and dangers of aerial combat. This study does not consider the implications of commander decisions that affect the morale of support troops within an air unit unless those decisions affect the aviators as well.

Findings

The purpose of this research is to understand how some air force leaders kept aircrew morale high in spite of suffering heavy losses in combat. Such understanding could be of real value to future commanders who find themselves in similar situations.

Notes

1. Frederick J. Manning, "Morale, Cohesion, and Esprit de Corps," in *Handbook of Military Psychology*, eds. Reuven Gal and A. David Mangelsdorff (Chichester, U.K.: John Wiley and Sons, 1991), 454.

2. Anthony Kellett, *Combat Motivation: The Behavior of Soldiers in Battle* (Boston: Kluwer–Nijhoff Publishing, 1982), 326. A common theme throughout the literature of military morale is the importance of the leader.

3. Barbara W. Tuchman, *A Distant Mirror: The Calamitous 14th Century* (New York: Alfred A. Knopf, 1978), 584; and Daniel W. Jacobowitz, "Alienation, Anomie, and Combat Effectiveness," *Air University Review*, September–October 1980, 26–27. For example, in the Battle of Agincourt, King Henry V's men were outnumbered three or four to one but used the

combination of superior weapons (the longbow) and superior fighting spirit to defeat a greater French force.

4. Richard I. Lester, ed., AU-24, *Concepts for Air Force Leadership* (Maxwell Air Force Base [AFB], Ala.: Air University Press, 1996); Air Command and Staff College, AU-2, *Guidelines for Command* (Maxwell AFB, Ala.: Air University Press, 1995). There is currently no USAF doctrine, regulation, manual, handbook, or pamphlet that addresses leadership, let alone morale. The only current published guidance is found in two Air University handbooks that compile an eclectic group of leadership articles and command issues from more than one hundred independent sources.

5. The author participated in Air Expeditionary Force VII in Southwest Asia from March 1998 to May 1998 in support of Operation Southern Watch to enforce the United Nations imposed "no fly zone" in southern Iraq.

6. The author is indebted to David R. Jones, M.D., instructor of aviation neuropsychiatry at the USAF Flight Surgeon's School, who brought this analogy to the author's attention. In the story each blind man touches a different part of the elephant to gain knowledge about what it must be like. The man who touches the leg compares the elephant to a tree; the man who touches the side compares the elephant to a house; and the man who touches the trunk compares the elephant to a snake.

7. Dale O. Smith, "What Is Morale?" *Air University Quarterly Review*, Winter 1951–1952, 45.

Chapter 2

The Morale Problem

The art of war is subjected to many modifications by industrial and scientific progress. But one thing does not change—the heart of man. In the last analysis, success in battle is a matter of morale.

—Col Ardant du Picq

The purpose of this chapter is to clarify what morale is and how it applies to airmen in battle. There is a wide range of definitions for morale. Each one is based on the perspective of the author who studied the topic. The impossibility of agreeing on one definition seems evident, but it is necessary to choose one definition as a reference point for the remainder of this work. Fortunately, some common themes about morale have emerged during the last 50 years. The approach taken in this study is selective and seeks to provide a practical guide to understanding morale. Once a common definition is established, a closer examination is made of the underlying physical and psychological factors that contribute to the definition.

Who Is the Leader?

Military leadership is challenging for several reasons. Commanders are selected because of the confidence that senior officers have in their ability, yet every episode of leadership is still essentially an experiment in group behavior. More an art form than a science, most people will agree that leadership is the ability to influence others to behave in ways they might not ordinarily act in order to reach a group goal.[1]

Although there are formal as well as informal leaders in every group, the focus of this combat study will remain on the formal leader.[2] Furthermore, within a given chain of command, every commander (from the flight leader up through the National Command Authorities) should not be considered a

leader of men in combat. Clearly, the flight leader and the squadron commander are the most visible leaders of airmen. However, since the will to fight should not merely rest on personal loyalties to flight leaders or squadron commanders, airmen also need leadership from a higher level.[3] This higher level for airmen resides in the group or wing because the group and wing commanders still exert command and still impart unit identity on aircrews.[4] These larger secondary groups are considered in-depth through the case study analysis yet to come.

The Leader's Role

The primary responsibility of the combat leader must be mission accomplishment because without that purpose, there is no need to have the group. The principal raw materials used to execute the mission are the people who will fly and fight, so the leader's first step is to translate objectives received from higher command authorities into individually accepted goals for each of these aircrews.[5] Of course, that is easier said than done. It is the interaction of the human element in the context of battle that highlights morale as the passageway to victory for the commander. An effective leader must be able to decipher the riddle of morale if the mission is to be achieved.

Morale: The Definition

The terms *morale* and *motivation* are often used interchangeably when discussing why soldiers fight. Behavioral scientists specify that motivation consists of the cost-benefit rationale that soldiers make before taking action.[6] The inputs to this analysis may be physical or psychological, but they are rooted in the way the soldier thinks. Morale, on the other hand, is not so much a process of reasoning but an attitude or feeling.[7] Common sense tells us that morale is likely to be an influence on motivation, but how much of one is left open to debate. The air force commander does not really need to be concerned with a highly academic debate on the issue. It is enough for the commander to understand that the behavior of an aircrew is a manifestation of the intangible qualities of both morale and motivation. For the purposes of this research, the

issue of motivation will be embedded in the concept of morale. For example, if morale is considered high, it will also be assumed that motivation to accomplish the mission is positive. With that in mind, defining morale must at least consider that assumption. But first, the difference in perceptions of morale needs some elaboration.

Many Definitions

Not surprisingly, most attempts to clarify military morale have focused on soldiers and the two-dimensional battlefield. Early twentieth-century instruction by the US Army (USA) defined morale as "that instinctive feeling of strength and superiority; that which at the outset gives a feeling of confidence and an assurance of victory through . . . unconquerable ability."[8] This was similar to the concept of morale discussed by J. C. Baynes in his studies of World War I: "A confident, resolute, willing, often self-sacrificing and courageous attitude of an individual to the functions or tasks demanded or expected of him by a group."[9] Later USA doctrine deemphasized the warrior aspect of morale but kept the emotional aspects intact: "Morale is defined as the mental, emotional, and spiritual state of the individual. It is how he feels."[10]

The USAF is more comfortable discussing factors that affect morale, rather than stating exactly what it is. As a result, the USAF has no doctrinal definition of morale.[11] Instead, early Air Force manuals reflected a peacetime focus on quality of life issues to frame the discussion of morale.[12] That tradition continues today with the periodic USAF chief of staff surveys that poll airmen on operations tempo and perceptions of the amenities they have available. The goal of those surveys is to show areas needing improvement so that steps can be taken to increase satisfaction and, supposedly, morale.

Some within the USAF recognize that morale is more than just a laundry list of comforts. Maj Walter A. Grady uses Fuller's war theory to explain that morale is "the moral force [that] acts to translate desire into action."[13] David R. Jones, M.D., of the USAF Flight Surgeon's School, teaches new flight surgeons that morale is an emotion that connects the individual to the group.[14] Psychologist and organizational behavior

specialists agree along similar lines. Morale is "composed of attitudes dealing with the confidence, enthusiasm, and zeal for persevering toward and attaining a goal."[15] These attitudes translate into determination to accomplish the mission.

Morale for Airmen

The common theme throughout most of these classifications is that morale is an emotional feeling that motivates a person to behave as the group requires. It is the drive and eagerness to see a task through. It is also a feeling about how satisfying accomplishing the mission is to an individual. Dr. Frederick J. Manning is a military psychologist who has specialized in morale for the American soldier, but his work has also appeared in USAF journals. He is concise when he describes morale as "the enthusiasm and persistence with which a member of a group engages in the prescribed activity of that group."[16]

That definition can apply to an army platoon as easily as it can apply to a sales office in any business. To make it specific for pilots and aircrews flying in combat, Manning's definition is adapted here as follows: *aircrew morale is the enthusiasm and persistence with which an aviator flies combat missions*. The simplicity of this statement should not belie the fact that although morale is relatively easy to define, it is very difficult to control. In fact, combat morale does not lend itself to "enhancement policies" that focus on easy fixes.[17]

But now that morale is defined, how should it be studied? Undoubtedly, morale is affected by too many factors to enumerate. Some factors are very important, while others are barely noticeable. Some factors can be evaluated, but others cannot. Here is where the disconnect between ground-centric versions of morale and air-centric versions occurs. Invariably, past efforts to debate morale have centered on discussions of soldiers and have focused on particular factors that are influential to their environment and psyche. It seems intuitive that at least some factors that are important to foot soldiers engaged in hand-to-hand combat are quite different from factors influencing a pilot flying overhead at 20,000 feet. The differ-

ences in morale for airmen lie not in the definition of the concept, but in the elements that contribute to fulfilling that definition.

Instead of traveling down the path of individual morale-influencing factors, the next section establishes a set of simple components of morale that are broad enough to take into account these individual factors.[18] The purpose of classifying the components of morale is to understand more generally what issues affect morale and to provide a sounding board for the analysis of the leadership case studies later in this work.

The Power of Three

The armored warfare pioneer and military theorist J. F. C. Fuller proposed three elements basic to understanding the science of warfare: the physical, the moral, and the mental. Within these spheres the principles of war could be deduced in order to analyze their importance in a given context. Interestingly enough, the concept of morale can benefit from this reductionism as well. Psychologists and historians have analyzed military morale in the past in an effort to uncover the cause and effect relationships that exist. Several of them devised three dominant categories with which to study the individual factors at work.

A study commissioned by the North Atlantic Treaty Organization in 1980 concluded that military morale consists of three dimensions: personal factors related to self-confidence, commitment to the group identity, and concern for the organization's aims.[19] Dr. Manning reached similar conclusions and labeled the three areas: individual factors, cohesion, and esprit de corps.[20] Major Grady's study of pilots' motivation and morale looked at the moral domain from an airman's perspective. He identified three areas within that domain: relationship to self, relationship to others, and relationship to absolutes. What all of these writers have in common is that they have separated the factors of morale into categories of individual needs, group relationships, and higher organizational identity. For the sake of consistency, these will be addressed as individual needs, cohesion, and esprit de corps.

Individual Needs

The individual needs of any airman fall into two categories: physical and psychological. The physical needs consist of the various factors that keep the aviator in fighting condition and ready to meet the enemy. They include proper food, rest, clothing, shelter, training, and useful equipment (aircraft and weapons).

The psychological needs of airmen tend to center on the confidence in their training and equipment. Ultimately, aircrews must feel that they have a fighting chance of engaging the enemy on favorable terms and have a reasonable expectation of surviving the encounter. One of the best ways to build that confidence is for aircrews to experience success.[21] The balancing of courage and fear in combat is assisted by measures that build confidence. Along with confidence, the airmen need to feel that their contributions to unit success are important. Typically this is achieved when airmen know the unit's objective, and they understand how their combat missions help to reach that goal.

The importance of these individual needs will vary among aircrews and situations, but a few observations have already been made about them. There are examples of soldiers with high morale fighting in horrific battle conditions where physical needs were neglected, to say the least. As long as a minimum standard of food and shelter are met, the satisfaction of physical needs tends to be evaluated by soldiers and airmen in relative terms.[22] Of all the physical needs, however, the USAF recognizes that additional rest is the best way to offset sagging morale in times of stress.[23] Even though physical needs tend to withstand the rigors of combat, careful attention must also be given to psychological needs in order to keep morale high. At all times, soldiers or airmen need to feel that they are contributing, that they have an objective, and that they can—and will—succeed.[24]

Combat has a way of putting individual needs in perspective. No one disputes that war is he--, so many soldiers and airmen expect hardship to some degree. Gen Douglas MacArthur once said, "Morale is not necessarily destroyed by hardship, danger, or even calamity"; but when combat losses begin to

mount, the psychological needs of the combatants once again come into play.[25] The influence of combat losses on morale lies not so much in the quantity of losses as it does in the context of the loss. No one wants to die needlessly in battle. Morale is weakened if the soldier or airman feels that there is no "tangible return on the investment of lives."[26] Furthermore, morale is influenced by the perception that sacrifices are being made fairly throughout the unit.[27] In short, with regard to preserving morale in the unit, the perception of the worth of the cause and a sense of shared sacrifice is every bit as important as the level of losses.

Cohesion

Cohesion is the bonding together of soldiers or airmen in such a way as to maintain commitment to each other and to the mission even when under stress.[28] This bonding has been shown to be key to maintaining group morale. Marshall felt that cohesion played the crucial role in maintaining the fighting spirit of World War II soldiers. On both sides, the soldiers' perseverance reflected a commitment to the members of their unit rather than a conscious motivation for reasons of ideology or patriotism.

Cohesion is the by-product of activities among the group that reinforce common experiences.[29] The activities can involve peacetime or combat settings, they can be either on or off-duty, and they can include either positive or negative outcomes. Unit traditions and military discipline also affect cohesion.[30] The bottom line is that cohesion is generally raised when members of the group spend time together. Bonding of this type comes from frequent contact between members of what psychologists call the primary group.

Although cohesion is a powerful morale builder, the primary group involved is generally fairly small because it must allow frequent interaction between the members. In an air force setting, the primary group is a crew, a flight, or perhaps a squadron. Primary groups are those in which the members know the other members on a personal level. Field Marshal Bernard L. Montgomery referred to this as comradeship.[31]

Cohesion among aircrew members is different than among soldiers. The number of aircrew members in an air force is generally a small percentage of the total force size. Standardized training is common among all aircrew members, including pilots. The training is also quite lengthy. It takes approximately two years to train a pilot or navigator to be mission ready. When new aircrews arrive in a unit, they already share an ingrained sense of similarity among the other crews. Throughout their careers, additional flying assignments reinforce this shared background. Even though newcomers to the squadron may have never met the other members, there is still a strong cohesive element in place. It is not necessary for newcomers to have a shared flying background with those in the primary group. Of course, additional activities that involve the new primary group strengthen cohesion even more. Major Grady's research into the factors that motivated F-105 pilots in Vietnam could not discern cohesion as an influence among his pilot group. He suggested that perhaps cohesion was so strong among these aviators that it did not vary, and so he could not measure its effect.[32] The distinct possibility exists that groups of airmen, by nature, have high cohesive tendencies that are resistant to influence.

Combat has a remarkably positive impact on cohesion within armed forces. During wartime, morale in units has been noted to be higher in active combat areas than in areas of inactivity.[33] That may be because the sense of mission is obviously apparent to the soldiers and airmen, but it also may be because combat is a tremendously powerful shared experience that strengthens cohesion. Witness the hundreds of World War II group organizations that have existed for more than a half-century. The experience of combat has united men in bonds that have lasted a lifetime.

Esprit de Corps

Esprit de corps is pride in and devotion to a formal organization beyond the primary group.[34] Montgomery called this regimental spirit. The formal organizations that can contribute to esprit de corps are generally larger units outside the primary group to which the individual soldier or airman belongs.

The reputation of these groups can provide additional self-esteem and confidence. These groups provide a link between the primary groups and the overall national cause and are referred to as secondary groups.

The secondary group is an important factor in morale because identifying with its reputation provides a sense of power, valor, and indestructibility that can help offset fear.[35] Morale hinges on the way that people deal with an internal loss of power, and identifying with a larger group is one way to counteract that.[36] The secondary group also represents the link between primary group goals and the national cause.[37] Although the factors of esprit de corps may be weaker than cohesion and individual needs, they still provide some influence on morale.

Esprit de corps is more important in combat than in peacetime. The effects of defeat on a small unit in combat can be damaging to unit morale, particularly when the primary group leader becomes a casualty.[38] The secondary group serves as a source of identity, but it is "large enough to escape sudden catastrophe at the hands of the enemy."[39] This psychological subtlety may not be a huge factor in maintaining morale, but it does provide some support.

Esprit de corps in airmen is found by identifying with the group, wing, or perhaps the air division or air force to which the aircrew belongs. Unit histories tend to be too distant to provide a useful identity; but recent activities, and certainly current reputation, of these groups is the clearest influence on esprit de corps for the aircrew. The evolving USAF operational concept of air expeditionary forces may some day provide a source of esprit de corps for American airmen who participate in them, but this is a case in which esprit de corps needs to be consciously propagated.[40] Another peculiarity with aircrews concerning esprit de corps is the possible connection between confidence in oneself and pride in the aircraft type that is flown. In some ways, aircrews identify with their equipment so strongly that they in fact draw support from members who belong to that larger group. For example, success by a wing that flies a particular aircraft type can produce pride and identity

with aircrews of a different wing that happen to fly the same aircraft.

Maintaining Control

When taken as a whole, the three elements of morale (individual needs, cohesion, and esprit de corps) have one common theme—they each contribute to providing control in stressful situations such as combat. Good morale indicates control from within.[41] Control is important to the morale of anyone in combat, but aircrews are a unique breed of warriors in that regard. Flying aircraft requires constant internal and external control. To lose control often spells disaster. It is not surprising then that one of the characteristics of most pilots is that they have controlling tendencies.[42] Understanding the pervasiveness of the need for control is the key to understanding morale for aircrews.

Notes

1. Norman Dixon, *On the Psychology of Military Incompetence* (New York: Basic Books, 1976), 214.

2. Mark T. Diebolt, "A Study of Air Force Leadership and Morale" (research study, Air Command and Staff College [ACSC], 1971), 15. The issue of formal authority is clearly the case where military officers are placed in command billets; however, powerful influences can still emanate from informal leaders within the group.

3. Frederick J. Manning, "Morale, Cohesion, and Esprit de Corps," in *Handbook of Military Psychology*, eds. Reuven Gal and A. David Mangelsdorff (Chichester, U.K.: John Wiley and Sons, 1991), 468. Manning asserts that when fighting spirit is connected too closely to small group leaders, then that spirit will wither if the commander is killed. Therefore, a connection to larger group commanders (group, wing, air force) is needed, especially in heavy combat.

4. Anthony Kellett, *Combat Motivation: The Behavior of Soldiers in Battle* (Boston: Kluwer–Nijhoff Publishing, 1982), 45. Kellett addresses these larger group leaders and illustrates that their level of command is different from the small squad leader but no less important to the motivation of the soldier. Others differentiate the larger secondary groups from the small, personal primary groups formed from daily contact.

5. Dale O. Smith, "What Is Morale?" *Air University Quarterly Review*, Winter 1951–1952, 49; Manning, 457–58; and Diebolt, 14.

6. Kellett, 6.

7. Diebolt, 19.

8. J. A. Woodruff, "Leadership and Morale," lecture notes, US Army Field Officer's School, 13 May 1921, United States Air Force Historical Research Agency, file no. 2480401-26, 1.

9. J. C. Baynes, *Morale* (New York: Praeger, 1967); quoted in Manning, 455.

10. Field Manual 22-100, *Military Leadership,* 228; quoted in Manning, 454.

11. David R. Jones, M.D., instructor of aviation neuropsychiatry at the USAF Flight Surgeon's School, telephone interview with the author, 8 March 2000, Maxwell Air Force Base [AFB], Ala. Dr. Jones was unaware of any specific definition of morale used by the USAF in the instruction of flight surgeons. Among other topics, Dr. Jones's course teaches new flight surgeons how to recognize falling morale among aircrews and ways to improve it.

12. Air Force Manual 50-3, *Air Force Leadership,* 104; quoted in Diebolt, 20. Issues addressed by the Air Force included comfortable quarters, mess, mail service, medical attention, and base exchange facilities among others.

13. Walter A. Grady Jr., "The Moral Domain of War: A View from the Cockpit" (master's thesis, School of Advanced Airpower Studies, Maxwell AFB, Ala., 1993), 22.

14. Jones interview.

15. "Psychological Factors in Morale" (research report, US Naval School of Aviation Medicine, 1954), 2; quoted in Diebolt, 19.

16. Manning, 455.

17. Kellett, 336. Although Kellett is speaking about the futility of controlling motivation factors, this concept applies equally to those factors that leaders believe influence morale.

18. The concept of compartmentalizing individual factors of morale is widespread in the literature. The author will use a combination of components addressed by Colonel Smith in "What Is Morale?" and Dr. Manning in "Morale, Cohesion, and Esprit de Corps."

19. Manning, 455. Refers to a study made by I. N. Evonic.

20. Ibid., 456–61.

21. Woodruff, 4; Smith, 48; and Diebolt, 26. Each writer emphasizes that nothing succeeds like success.

22. Manning, 460. Manning uses the term *relative deprivation* to illustrate the fact that soldiers assess their physical needs based upon the conditions of the moment.

23. Jones interview.

24. Manning, 460. Manning refers to these needs as a role, a goal, and self-confidence.

25. Thomas M. Ryan, "A Major Commander Speaks: The Winning Combination," *TIG Brief,* 14 May 1982, 2.

26. Kellett, 268.

27. Diebolt, 24.

28. Manning, 457.

29. Frederick J. Manning, "Cohesion and Readiness," *Air University Review*, January–February 1981, 69–70.

30. Dixon, 178.

31. Steven L. Havron, "Psychosocial Dimensions of Combat Readiness: Leadership, Morale, and Group Cohesion," Research Report no. 84-1195 (Maxwell AFB, Ala.: ACSC, 1984), 10; and Kellett, 46.

32. Grady, 51.

33. Smith, 43.

34. Manning, "Morale, Cohesion, and Esprit de Corps," 458.

35. Kellett, 44.

36. Jones interview.

37. Manning, "Morale, Cohesion, and Esprit de Corps," 465.

38. Kellett, 260–61, 268.

39. Manning, "Morale, Cohesion, and Esprit de Corps," 458.

40. Kellett, 322. Kellett feels that because esprit de corps is focused on a group detached from daily activity, the effort to identify with that larger group would consist of communicating the reputation of (reasons for identifying with) the group.

41. Havron, 9.

42. "Chapter Nine—Aviation Neuropsychiatry," *USAF Flight Surgeon's Guide*, n.d. (E-mail copy received from USAF Flight Surgeon's School, 23 February 2000), 5.

Chapter 3

Maj Adolf Galland: *Jagdgeschwader* 26

Only the spirit of attack borne in a brave heart will bring a success to any fighter aircraft, no matter how highly developed it may be.

—Adolf Galland

Combat histories are full of examples of men who rose through the ranks due to their remarkable ability to achieve success in battle. Maj Adolf Galland began his combat career as a lieutenant in the Condor Legion flying ground-attack missions for the German Luftwaffe in the Spanish Civil War. Within the span of four years, his consistent skill in the air elevated him to the position of senior general of all fighter units in the Luftwaffe. Although he began his Luftwaffe service as an attack pilot, it was his success as a Bf 109 pilot and commander of *Jagdgeschwader* (fighter wing) 26 (*JG*26) in the Battle of Britain that gained him the reputation as Germany's top fighter commander in the Second World War.

Talent at a junior rank does not always translate equally to command potential. Major Galland had the rare quality among combat leaders that elicited success from his men while epitomizing the example he wished them to follow. His aerial accomplishments were the envy of every German fighter pilot. His challenge in the summer of 1940 was no easy task: Britain's Royal Air Force (RAF) was a formidable peer competitor. Heavy losses among his wing's three groups and the sheer exhaustion of his pilots would take their toll. This chapter examines the role that Major Galland played in molding the combat morale of his pilots during the Luftwaffe's first campaign failure of World War II—the Battle of Britain. A first look at the events surrounding the Battle of Britain will place pilot morale in the proper context.

Germany's Battle for Britain

After the string of German conquests stretching from Poland through western Europe, the Luftwaffe was perceived as the most powerful air force in existence. Indeed, the operational lessons that Germany learned in Spain had played a crucial factor in the integration of airpower with both land and naval forces in the early campaigns of World War II. Of course, the one fact that was ignored by foreign intelligence experts as well as German strategists was the nature of the Luftwaffe's power.

The Luftwaffe's early preeminence within the *Wehrmacht* was due to Hitler's vision of the offensive capabilities that the air force could bring to bear on the enemy. Naturally, the bomber received top priority and special prestige because it was the offensive attack weapon. The fighter force *(jagdwaffe)* was merely a subsidiary force designed to enable bomber- and land-force successes. The fighters were designed for three tasks: attacking enemy aircraft, protecting the Luftwaffe's own air formations, and providing home defense.[1] This disparate relationship within the Luftwaffe created a misperception of the strategic strength of the air force. The strength of the Luftwaffe was, in fact, not found in the performance of its bombers but in the cooperation and coordination of both fighters and bombers with the German army.[2] Germany would find this out over time.

After Adolf Hitler defeated France, his next planned military goal was the conquest of the Soviet Union. Before he could turn his attention fully to the east, he needed to secure his western flank. Although Great Britain was at war with Germany, Hitler assumed that he could reach some kind of understanding with Prime Minister Winston S. Churchill. The ease with which Germany rolled up France and the Low Countries must have played a part in Hitler's assessment of his coercive capabilities, and Hitler had never contemplated an all-out war with Britain. However, Hitler's slow escalation of aircraft attacks against English shipping and—finally—the island itself ensured that Churchill would never acquiesce.

The lack of forethought given to war with the United Kingdom (UK) manifested itself in Hitler's plans for the invasion of the island nation, code-named Operation Sea Lion.

Germany's military high command, the *Oberkommando der Wehrmacht (OKW),* embraced the invasion operation only half-heartedly. Hitler directed each branch of the military to develop plans for its contribution to an invasion force, but little overall coordination was imposed by the *OKW*. The result was a bizarre list of preconditions that each service claimed necessary.[3] The Luftwaffe was singled out as the service upon which all possible invasion plans would rest. It would need to achieve total air supremacy over the invasion landing zone and English Channel if the invasion were to be successful.[4]

Hermann Göring had his first taste of failure when his Luftwaffe could not prevent the evacuation of the British Expeditionary Force (BEF) at Dunkirk in May and June of 1940. Determined to redeem himself with Hitler, he accepted the Herculean task required of the Luftwaffe that would evolve into the Battle of Britain. The objectives set for the Luftwaffe varied over time. At first, the blockade of England by air attack of shipping was considered most important in order to isolate the UK from the rest of the world. Next, in preparation for the invasion force, air superiority was required over the landing zone and channel. This meant that coastal artillery and RAF fighter capabilities must be eliminated. Finally, the objective most difficult to achieve—the Luftwaffe was directed to force Britain to surrender through total air warfare.[5] The wide range of air objectives reflected the inconsistency that characterized the entire campaign.

Countersea Operations

In the course of the French campaign, the Luftwaffe attacked British merchant shipping and naval forces in an effort to prevent assistance from reaching the continent. After the last of the BEF retreated from Dunkirk and France signed the armistice, Hitler continued attacks against British shipping in order to keep pressure on the English while he held out for diplomatic efforts to secure a peace deal. The Battle of Britain entered its initial phase in this countersea campaign. Convoys were attacked through July, although the focus of attacks against England would shift toward the end of the month to the RAF fighters themselves.

German fighters were given the initial task of escorting bombers on the convoy raids. The German bombers were fairly successful in their convoy attacks; and their supporting Bf 109 fighters achieved considerable success against the RAF fighters, whose formations and tactics were inferior to those of the Germans.[6] These early victories led the Luftwaffe to believe that the RAF could be beaten in the air through attrition. Since air superiority was a prerequisite for the invasion, the emphasis thus shifted on 24 July to a massive offensive counterair campaign of aerial combat pitting the superior Bf 109 against inferior RAF Hurricanes and near-equal RAF Spitfires.[7] All that was required was to invite the RAF fighters to join the battle.

The Fighter Battle

During the last week of July, the RAF fighters rose to engage the Germans as soon as British radar indicated that enemy aircraft were inbound. The Germans held the upper hand initially as the RAF fighters struggled to reach altitude where the dogfights would occur. The British had a steep learning curve during this period and relocated some of their coastal fighter bases farther inland to allow more time to climb before tangling with the Germans. They were also more selective in choosing to do battle. Soon the Luftwaffe realized that the RAF would not rise to challenge formations devoid of bombers. Small formations of bombers were therefore mixed in with the Bf 109s as decoys to encourage RAF fighters to take off.[8] By 12 August the Luftwaffe concluded that the RAF was near its breaking point. The measured response from British fighters combined with the lack of German intelligence misled the attackers into thinking they were close to achieving air superiority.[9] Unfortunately, the amount of fighting was too limited to make significant gains toward achieving air superiority. Anxious to secure the prerequisites for the invasion, Göring changed his focus as he launched a new operation.

The Air Offensive—*Adlerangriff*

Eagle Day, or *Adlertag*, began an expansion of the offensive counterair campaign on 13 August. This was a concerted ef-

fort between both the German bomber arm and the fighter arm to destroy RAF fighters whether they remained on the ground or took to the air. The bombers targeted fighter airfields in southeastern England, as well as ground organizations and the radar sites. The fighters accompanied the bombers and destroyed as many British fighters as possible in the air.

A heated controversy began within the Luftwaffe during this period over the best fighter tactics to protect the bombers on these missions. The fighter pilots felt that the more freedom they had in formation keeping and maneuvering, the more successful they would be engaging the enemy. The bomber pilots felt that when the fighters flew beyond visual range of their escorts, the bombers became more vulnerable to attack. Four fighter missions were developed or refined as a result of the debate. The close-escort mission strictly required fighters to maintain visual formation around the bombers. The detached escort mission allowed the fighters to follow the general routing of the bombers but with some freedom to engage enemy fighters. The free hunt, or *freie jagd*, mission was the traditional fighter-pilot tactic of sweeping well ahead of the bombers and engaging the enemy before the bombers arrived. Finally, the fighter-reception mission required that fighter escort arrive in time to meet the bombers as they left the target area. Each fighter unit would take turns conducting these tactics on various missions.

The weaknesses of German intelligence capabilities were highlighted again and again as the German *OKW,* Göring, and Gen Hans Jeschonnek, Luftwaffe chief of staff, failed to appreciate the actual effects of the counterair campaign on the RAF Fighter Command. Göring himself intervened to impose tactics on the fighter and bomber commanders to minimize losses, although no changes were really needed.[10] Even though German bomber aircraft and aircrew losses were rising to uncomfortable levels, the RAF was reaching the breaking point by the beginning of September.[11] However, the pressure that Göring was under to produce results by the 15 September invasion date caused him to doubt his commanders in the field.[12] His own frustration at the lack of visible re-

sults—combined with the accidental bombing of London on the night of 24/25 August—caused Göring and Hitler to make the most critical error of strategy in the battle thus far.

Demanding retaliation for the bombing of civilians in London, Churchill launched his own bombers against German cities after he perceived that Hitler had switched to a strategy of bombing the British capital. This move infuriated Hitler, who responded by directing that his own air offensive shift its targeting focus once again, away from the collapsing RAF and onto London itself.

City Bombing

Reprisal raids against London began on 7 September as the Luftwaffe, now under the personal command of Göring, launched massive raids against the city. The new targeting scheme also brought new risks since the large increase in bombers assembling over the French coast were escorted by the same number of German fighters as before. The difficult job of fighter escort became that much more demanding for the Bf 109 pilots.[13] The most critical weakness of the Bf 109 was its lack of range. Extra assembly time for the large air packages meant less aerial combat time for the German fighters. Because of the limited range of the fighters, virtually all bomber routing would become straight lines from Calais to London.

The RAF reacted to the shift in German targeting with surprise and relief. With RAF fighter units and bases able to reconstitute their strength after three weeks of relentless attack, the British formed an excellent counterpunch to the German raids on London. The predictability of German tactics combined with the diminished Luftwaffe fighter engagement times translated to increasing losses for the German bombers. In September alone, the number of German bombers lost or damaged rose some 15 percent over the previous month.[14] Göring was losing bombers and, more importantly, experienced crews faster than he could hope to replace them. The situation came to a head on 15 September when two successive German raids against London were repulsed by British fighters. This event coincided with Hitler's decision that the invasion should be

postponed indefinitely.[15] Nonetheless, he directed the Luftwaffe to continue with air attacks against England.

Fighter-Bomber Operations

Göring held his fighter pilots personally to blame for the losses of Luftwaffe bombers. He often told his senior fighter commanders that a lack of aggressiveness and discipline, on the part of Bf 109 pilots in particular, was the reason for losing bombers over England. In an act of spite and frustration, Göring ordered that one-third of all fighters be converted into fighter-bombers *(jabos)* capable of carrying a 500-pound bomb. In his view, if the fighters were unable to protect his bombers, then they must deliver the bombs on England themselves.[16]

The first *jabo* raids on London occurred on 20 September and met with very little RAF resistance.[17] The British air defense stations identified the incoming aircraft as fighters and did not consider them, by themselves, to be a threat. It was not until the bombs they delivered on London detonated that the RAF fighters were scrambled to intercept the attackers. Subsequent *jabo* raids were not as successful at surprising the English. Although innovative as a new tactic, the *jabo* raids accomplished little since their payloads were insignificant and the untrained fighter pilots were very imprecise in their deliveries. The real effect of the *jabo* raids was to extend pressure on the British while the German bombers were reconfigured and their crews trained for night bombing operations.

Night Bombing

The prohibitive losses taken by German bombers during daylight attacks over England drove Göring to switch to night operations for these aircraft. Some night bombing attacks had been tried earlier in September; but after the 15 September losses, Göring stepped up the night missions. Night raids increased through October, and by 20 October the Luftwaffe essentially flew bomber missions only at night while *jabo* attacks continued throughout the day. German fighters continued their escort duties by day, but deteriorating weather and the

lack of night flying capability severely reduced their operational impact.

Forcing the Germans into primarily night bombing operations signaled to the British that their day fighters had thwarted the German plans for invasion. It was during this night phase of the Battle of Britain that the stalemate became obvious to both sides. When the failure of Operation Sea Lion became apparent, Hitler shifted his focus to the invasion of the Soviet Union. For the Luftwaffe, the Battle of Britain never officially ended.[18] The emphasis devoted to it simply tapered off until such a time as Hitler considered an invasion once again possible. That possibility, however, never materialized.

Jagdgeschwader 26 in the Battle of Britain

*JG*26 was composed of four separate combat flying organizations. Three groups *(gruppen*), each containing three squadrons with a total of approximately 40 aircraft and pilots, formed the bulk of the combat power of the wing. Additionally, the wing staff had the capability to launch a very small flight (separate from the groups) of either two or four aircraft with their assigned pilots. The logistics of each group required that they be located at three separate bases in the Calais area during the Battle of Britain, with the wing staff colocated with Group 1 (I/*JG*26). Command and control was obviously more difficult with this multilocation arrangement, but it was not an insurmountable problem.

The wing commander *(Kommodore)* of *JG*26 was Maj Gotthardt Handrick when the wing began combat operations in the Battle of Britain on 24 July 1940. Major Handrick was an ineffective and indecisive combat commander by some accounts and took a rather passive role in leading his fighter pilots.[19] Göring grew frustrated with the lack of aggressiveness of several of his fighter-wing commanders, and on 22 August he replaced Handrick with the very successful group commander of III/*JG*26, Maj Adolf Galland.[20] Galland had already achieved 22 aerial victories by 15 August in operations during the Battle of France and the Battle of Britain.[21] Galland commanded *JG*26 through the remainder of the Battle of Britain.

The success of each German fighter wing was measured by the number of enemy aircraft claimed shot down compared to the losses that the wing itself suffered in the process. *JG*26 had an impressive kill ratio during the Battle of Britain, as table 1 demonstrates. Even more impressive is the fact that four of the wing's fighter pilots (out of a total of approximately 150 pilots) claimed an astounding 31 percent of all kills.[22] Of further interest is that Major Galland alone claimed 14 percent of the wing's kills.

Table 1

***Jagdgeschwader* 26 Kill Claims and Losses by Month (July–October 1940)**

	July 1940	August 1940	September 1940	October 1940
Kills Claimed	10	126	97	26
Losses	4	21	18	9
Kill Ratio	2.5 : 1	6 : 1	5.4 : 1	2.9 : 1

The aircraft assigned to the wing was the Bf 109 single-engine fighter. The performance of the Bf 109 was superior to the British Hurricane in speed and maneuverability. The British Spitfire was a closer match. Although the Spitfire was 10–15 miles per hour slower than the Bf 109, its turning capability was superior; and in slower fights, it could be a formidable opponent. Several variants of the Bf 109 remained with the wing throughout the battle. The earlier version Bf 109E-1, inadequately armed with four light machine guns, was generally flown by enlisted pilots. The modified Bf 109E-4 had increased lethality, with two of its light machine guns being replaced by two very effective wing cannons. The latest model of the Bf 109 was the E-4/N. It had an improved engine that gave the aircraft greater speed at high altitudes.

Pilot Morale within *Jagdgeschwader* 26

For the purposes of this study, the focus on *JG*26 pilot morale in the Battle of Britain is from July through the end of

October when the battle reached its final, inconclusive stage. Morale among the German fighter pilots during this time was generally good.[23] Raymond F. Toliver and Trevor J. Constable have stated that "there was no lack of stomach for further battle amongst any of the fighter pilots in all the Geschwader on the Channel Front," even by the end of October.[24]

This positive outlook did not remain constant throughout the three-month period. In fact, several factors influenced the fighting spirit of the pilots in *JG*26 during the Battle of Britain.

Individual Needs

Major Galland inherited a fully operational combat wing when he assumed command of *JG*26 on 22 August. Although food and living conditions varied among the different groups that composed *JG*26 throughout its deployment on the channel coast, these factors had little effect on pilot behavior.[25]

Rest, however, was an issue that did affect fighter-pilot morale in *JG*26. Many of the pilots were routinely flying three or four missions per day throughout the campaign.[26] There were only 10 minutes of loiter time over the objective area, and the Luftwaffe lacked sufficient numbers of aircraft and pilots to maintain continual operations against the British.[27] The heavy premium that Göring placed on bomber protection also drove the requirement for frequent fighter-pilot missions to unrealistic expectations.[28] Although Donald L. Caldwell correctly states that "no *JG*26 formation ever suffered such crippling losses that its combat efficiency dropped,"[29] Galland himself recognized the manifest fatigue of his pilots. By the end of September, Galland noticed that "the stamina of the superbly trained and experienced original [cadre of pilots] was down to a point where operational efficiency was being impaired."[30] In early August the German fighter-wing commanders had realized that the strain of combat operations would require giving the pilots a day off after every four or five days.[31] Although this policy might have been helpful in the earlier campaigns of 1940, the Battle of Britain soon required the maximum effort of every experienced pilot. The only real rest periods were those days when operations were cancelled due to poor weather.

Other than weather days, *JG*26 received a total of only four rest days from mid-August through the end of October.[32]

The Bf 109 aircraft was obviously a physical requirement for the pilots of *JG*26. Although *JG*26 losses during the Battle of Britain were fairly low, overall Bf 109 losses for the Luftwaffe during this time were 660 aircraft.[33] If the conservative production figure of 125 fighters per month was valid, then the overall replacement capability for the same period above would have been 625 airplanes.[34]

Training was not a significant detriment to morale for the *JG*26 pilots engaged in the Battle of Britain. Most of the pilots had been experienced veterans of combat action over France, and some had even been active in the Luftwaffe in the Condor Legion, albeit not as part of *JG*26. Sound training therefore should have translated into sound tactics throughout the Battle of Britain. This was not the case for several reasons. First, the Luftwaffe was, for the first time, participating in an air campaign without the synergy of the army or navy engaged simultaneously with the enemy. Second, tactics were directed by Göring, without an appreciation for the actual necessities of strategic air warfare nor of the advantages and weaknesses of Luftwaffe aircraft.[35] The third reason was that replacements arriving in *JG*26 were poorer quality than the original pilots lost.[36] Fourth, although German tactics were initially superior to the RAF fighter units, the British quickly learned to adapt their tactics to best offset the German strengths. This situation led to a conflict between the two significant psychological needs of the fighter pilots—confidence in their aircraft and confidence in their tactics.

Perhaps the most significant psychological need of the *JG*26 pilots that positively influenced morale was the confidence in their aircraft. The success of Bf 109s in the Condor Legion and the campaigns in the west, culminating in the Battle of France, confirmed the relative superiority of that aircraft to the pilots who would fly them in the Battle of Britain. Galland was convinced—after minor engagements with the RAF fighters at the end of the Battle of France—that although the RAF pilots were formidable opponents, the Bf 109 was superior to both the Hurricane and the Spitfire.[37] His view was strength-

ened on entering the Battle of Britain because the Bf 109 was undergoing modifications that would improve its firepower by adding two 20 millimeter (mm) cannons.[38] The pilots of *JG*26 shared Galland's view in the confidence of their machines. Caldwell states that the pilots of *JG*26 believed that their Bf 109s were the best single-engine fighters in the world at that time.[39] When *JG*26 began receiving the new Bf 109E-4/N model on 7 September, morale in the units rose considerably. Even 60 years after the battle, a former *JG*26 pilot related to the author that the arrival of the new Bf 109 within his group was a significant event that improved morale.[40] Clearly, the airplane was a central part of pilot morale within *JG*26.

The most significant psychological need of the *JG*26 pilots—though not met—was for confidence in headquarters-directed fighter tactics. The German fighter pilot at that time very much identified with the original fighter pilot's objectives of the First World War articulated by Baron Manfred von Richthofen: The mission of the fighter pilot is to find the enemy and shoot him down—"anything else is nonsense."[41] The group commander of III/*JG*26 stated that the most important factor to maintaining good morale was the mission type being flown.[42] Of the four fighter missions discussed already, only the fighter-sweep mission was truly satisfying to the pilots because those missions generally yielded the most kills.[43] Another *JG*26 pilot was convinced that "the sole important factor [for pilot morale] was the single success of aerial battle."[44] The close-escort missions protecting the bombers were the most discouraging missions for the pilots. By flying in a nonmaneuvering, defensive position on the wings of the bombers, the fighter pilots lost all of the advantages of the Bf 109 (speed and climbing/diving ability) and actually magnified the vulnerabilities of their aircraft (poor cockpit visibility, limited range, and poor turning capability).[45] More than physical limitations, Galland claimed that fighting spirit was also affected when his pilots were tasked with close-escort missions:

> The worst disadvantage of this type of escort was not aerodynamic but lay in its deep contradiction of the basic function of fighter aircraft—to use speed and maneuverability to seek, find, and destroy enemy aircraft, in this case, those of Fighter Command. The [Bf 109s] were bound to the bombers and could not leave until attacked, thus giving

> their opponent the advantage of surprise, initiative, superior altitude, greater speed, and above all fighting spirit, the aggressive attitude which marks all successful fighter pilots.[46]

When the Battle of Britain exposed the Ju 87 Stuka dive-bomber to heavy losses in the opening phases, Göring ordered that his fighters provide better escort for all bombers. He directed close-escort tactics that, in fact, contributed to further heavy bomber losses.[47] Göring misunderstood the tactical dilemma and blamed the fighter pilots for the losses. The fighter pilots felt like chained dogs when they were required to fly the close-escort missions because they knew they were fighting at a disadvantage.[48]

Göring further compromised pilot morale in September. Göring's decision to refit one-third of all fighter wings as fighter-bombers had an equally damaging influence on the morale of *JG*26. Not only did the pilots of *JG*26 lose confidence in their aircraft they also resented the new bomber mission they were assigned. When the Bf 109 was flown as a *jabo,* it lost climb capability as well as speed and maneuverability. The pilots were eager to get rid of their bomb at the first chance in order to regain performance. They also knew that the small payload they were carrying and the inaccuracy with which it was delivered did not have a significant effect on the enemy.[49] Galland claimed that the fighter pilots did not like this mission and that requiring them to fly as *jabos* ruined their morale. The *jabo* pilots were ordered to fly an inferior machine, in a passive role, which ran contrary to their instinct.[50] Caldwell believed that exhaustion rather than the *jabo* missions contributed toward sinking morale. He states that although the *jabos* carried bombs, once they released them they were free to tend to the traditional fighter-sweep tactics that they enjoyed.[51] However, at least through the end of October, none of the *JG*26 squadrons assigned on *jabo* missions claimed any air-to-air kills, which implies that their fighter-pilot measure of satisfaction (shooting down the enemy) was not met.[52] In sum, the *jabo* missions added to difficulties with pilot morale at a time when it was becoming apparent that the Battle of Britain was not achieving its objectives.

Cohesion

Issues of cohesion within *JG*26 are noticeably absent in the literature regarding the wing in the Battle of Britain. The common experiences that these fighter pilots had throughout the Battle of Britain may have helped bond them to one another, although it is uncertain whether or not this factor played much of a role in the overall morale of the wing. It could be argued that fighter pilots who experience high cohesion within their flights would risk their own lives to protect or assist a vulnerable comrade. If so, the author has been unable to find any mention of the sacrifice required of such commitment in any of the literature of this battle. Nevertheless, the absence of such details does not prove that cohesion in small, primary groups was not important in *JG*26. It merely means that it is impossible to relay any conclusions regarding morale that were generated as a result of these influences.

Esprit de Corps

For the pilots of *JG*26, there were two secondary groups that influenced overall morale: the fighter wing itself, and the political leadership embodied in Göring. The influence of these two sources of support ultimately translated into esprit de corps and affected morale throughout the Battle of Britain. Of these two groups, wing reputation provided a positive boost to esprit de corps, while Göring's impact was negative.

A special reputation was established for *JG*26 even before the war. Originally, the wing was named with not only a numerical designation but also after the name of a national hero, Leo Schlageter. During the French occupation of the Ruhr in 1923, Schlageter fought for German independence in the area and was executed by the French. The letter S was painted on each *JG*26 aircraft and the pilots realized that "the name (Schlageter) was a special responsibility in the National tradition."[53] *JG*26's war reputation complemented that pride.

The reputation and successes of *JG*26 had a significant influence on the esprit de corps of the fighter pilots. Esprit de corps was strengthened by the successes of the wing in three areas: the outcome of the Battle of France, the number of air-

to-air kill claims made, and the relative superiority of the wing in escort duties when compared with other fighter wings. The victory over the French gave the wing their first real unit win and provided the pilots with a tremendous sense of accomplishment. Accordingly, the successes in May and June contributed to very high morale throughout the wing at the beginning of the Battle of Britain.[54] The pilots were very satisfied with their wing's overall performance in France, and the wing was honored by Hitler when asked to provide the combat air patrol mission overhead the armistice negotiations at Compeigne on 20 June.[55] The Battle of Britain continued to bring recognition to *JG*26.

Throughout the Battle of Britain, *JG*26 had become a premier fighter unit with a total of 285 claimed victories at the cost of 56 pilots.[56] The pilots were well aware of their successes and the relative standings of the other fighter wings. Indeed, after Göring replaced several fighter-wing commanders in August with younger, more successful officers, a great competition among the wings began.[57] All pilots wanted to belong to the wing with the highest score. This competition motivated the *JG*26 pilots to achieve great aerial victories; and by the end of the campaign, seven *JG*26 pilots had been awarded the Knight's Cross for their success.[58]

The excellence in the wing also spread to its secondary role as bomber escorts. Although the pilots disliked the escort missions, they were regarded as the best wing for the job. Galland claimed that all the bomber wings would request *JG*26's protection on their raids. Early escort raids bear out the competence of the wing in the escort role.[59] However, later escort missions in which bomber wings lost significant aircraft under the watch of *JG*26 indicate that the performance level could vary dramatically.[60] Even so, the early reputation as a good escort unit formed an opinion that the wing performed the best of any other fighter wing. This reputation may have encouraged the wing pilots to perform a mission to the best of their abilities even though there was no love for the job.

Göring's actions throughout the Battle of Britain drained pilot morale in at least two ways. First, Göring harshly criticized the valor and competence of all the Luftwaffe's fighter pi-

lots. He could not understand why his bombers were being shot down by the British. He assumed that his fighter pilots were failing in their duties to protect the bombers. Whatever his justification for drawing such conclusions, Göring made it a point to chastise the fighter pilots through their chain of command, as well as directly. The fighter pilots and unit commanders were "deeply offended by the tone and by the manifest exaggeration of the accusations" that Göring made.[61]

Second, Göring shifted the focus of the fighter missions frequently and without clarity of purpose. Whether issuing new tactics from his headquarters at Karinhall—or personally directing the shift from one phase of the operation to the next—his erratic taskings undermined pilot confidence. In contrast, the fighter pilots felt that their aerial successes were leading the Luftwaffe and Germany to victory, only to have Göring change tactics and create unnecessary setbacks.[62] The fighter pilots of *JG*26, like the fighter pilots of other Luftwaffe wings, were being affected by Göring's actions. These actions influenced lower morale.

Galland's Influence on Morale

In the words of one of his own men, Galland was a tough commander; but that was expected of him. "Galland was a soldier. He was clear. He was decisive. He was always ready. He was an outstanding flyer and an outstanding marksman. He had outstanding eyesight and was lightning-quick in his reactions and his decisions."[63] Galland was a man of action and discipline. He did not care for the Luftwaffe political intrigue above his wing level. His skill as a fighter pilot was unquestionable. He cared for the well-being of his men, yet he kept a firm hand on them at the same time.[64] He demanded a great deal of his men and chastised them when their performance was below his standard.[65] He emphasized efficiency over military show, but he also expected the utmost in military bearing from the men of his wing.[66] But where Galland demanded much from his men, he also provided the example that he wanted them to follow.

When Galland became the wing commander in August, his pilots were dissatisfied with themselves, the bombers, and—above all—leadership.[67] Although Galland could not change Göring's mind with respect to the bomber-escort mission, he did take immediate actions to improve pilot morale.

The first thing Major Galland did as the new *Kommodore* of *JG*26 was to replace several ineffective group and squadron commanders with younger, more aggressive, and more successful (in terms of aerial engagements) officers in the wing. He also increased the wing staff flight from Handrick's two-ship formation to a more lethal four-ship formation. Galland began leading all *JG*26 packages that were of *Geschwader* size with his new four-ship staff flight. He was not content to lead from behind as his predecessor had been. Instead, Galland became the example for his wing. He flew as often as possible and led the most difficult missions. He firmly believed that a leader of fighter pilots could "only receive full recognition if he asked nothing from his men that he was not prepared to do himself."[68] The visible change in leadership styles was encouraging for his men, but Galland's greater quality was found in his tactical innovation.

The most immediate difficulty was with the escort-mission requirements. Luftwaffe bomber crews wanted visible escorts on their raids, but Galland knew tying the fighters to a rigid formation would raise losses rather than prevent them. He developed a flexible escort system that allowed his pilots constantly to change altitude, airspeed, direction, and distance to the bombers during these close-escort missions. The results were superior to those wings that were locked into static formations around the bombers. The fighter pilots, while not totally pleased with the escort role, realized that Galland's method was "the best escort system possible."[69] By the end of the Battle of Britain, *JG*26 had gained a reputation as one of only two fighter wings that performed escort duties "with consistently low losses" to the bombers they were entrusted to protect.[70] The pilots may not have enjoyed this duty, but they were successful at it; and they still were able to find and shoot down the enemy, if only in reduced quantities. Furthermore, because Galland met almost daily with the other wing com-

manders to accept mission assignments, he was able to ensure that close-escort missions were interspersed with plenty of opportunity for fighter sweeps.[71] The *jabo* mission assignments were another story altogether.

Once Göring was committed to reconfigure one-third of all fighter wings to pick up the fighter-bomber mission, Galland had to accept the decision. If morale among the fighter pilots was indeed greatly affected by this new mission, then Galland must bear part of the blame for that result. His pilots were clearly not enthusiastic about their new aircraft modifications and tactics. Galland's response to the situation was to develop a packaging concept that mixed the Bf 109 *jabos* in with the Bf 109 fighters in an effort to deceive the enemy and confound their intercept plans. This tactic slowed down the *jabo* losses, but the pilots still felt as though they were "being wasted."[72] Galland missed three opportunities to boost morale with regard to the hated *jabo* mission. First, although pilots had some practice with cement bombs, Galland did not capitalize on training opportunities to improve the bombing accuracy of his pilots.[73] Second, he could have disciplined those pilots who were prone to jettison their bombs at the first opportunity. Third, he could have actually participated in the *jabo* missions instead of merely providing escort for them. Any of these actions might have conveyed to his pilots that the missions were important enough to warrant his attention. Instead, he simply let the pilots' contempt for the mission remain unchecked. Most surprising with regard to Galland's dismissive attitude toward the bombing mission was that he once was a ground-attack pilot. He flew He 51s in Spain; and as recently as the Polish campaign in 1939, Galland had flown ground-attack missions in the Hs 123. In essence he violated his own dictum of not asking the men to do something that he himself was not prepared to do.

The most visible action that Major Galland took to raise the morale of his pilots was one that he never consciously had to focus on—his ability to shoot down enemy fighters. His ability to seek out RAF fighters and score victories was almost a daily occurrence. The high-scoring competition that grew between Galland and Werner Mölders was an inspiration to the pilots

of *JG*26. Galland stated that his victories were synonymous with his unit's victories. Certainly, the pride that his fighter pilots took in the wing's aerial victories was a barometer for overall morale. The jubilation that the pilots felt after Galland's 40th victory is evidence of the high esprit de corps generated by his accomplishments.[74] The rising scoreboard for the wing, coupled with the reputation of the wing for escort missions, was enough to convince the pilots that they were successful.

Conclusions

Surprisingly, the level of German aircraft and pilot losses did not significantly lower morale throughout the Battle of Britain. The pilots expected war to be costly, but there were other issues that did sway morale. Galland knew that several demoralizing issues were beyond his ability to change.[75] Even so, his record is mixed on purposefully taking action to raise morale. In the cases where he was able to boost morale, Galland increased the perception of control within his pilots. His implementation of escort tactics satisfied a psychological need that brought greater mission success to each flight member. Additionally, his success in the air connected the individual pilots to the wing at large and created a sense of strength regardless of individual squadron or group successes.

Unfortunately, Galland did not see an opportunity to influence morale when he was forced to deal with fighter-bomber operations. This occurred despite having the attack background to lend credibility to the new mission. He was given the lemons, but in this case he could make no lemonade. This instance of low pilot morale leads one to speculate that tactics cannot be created in a vacuum. Instead, tactical development in combat must serve to attain a national objective, even if that objective is not widely embraced. The benefits of thoughtfully applying tactics to match objectives is obvious insofar as civil-military relations are concerned, but aircrew morale is also served well by such an approach.

Notes

1. Walter von Brauchitsch, interrogated by Ninth Air Force Air Prisoner of War Interrogation Unit, 20 August 1945, Report no. 94/1945, titled "The

Role of the Luftwaffe in the War," United States Air Force Historical Research Agency (hereinafter cited as AFHRA) file no. 533.619-5, 2. Von Brauchitsch was aide and adjutant to *Reichsmarschall* Hermann Göring during the war and provided comments to the Allies during prisoner interrogations of the inner working of the Luftwaffe.

2. Adolf Galland, "Defeat of the Luftwaffe: Fundamental Causes," *Air University Quarterly Review*, Spring 1953, 25.

3. Adolf Galland, *The First and the Last: The Rise and Fall of the German Fighter Forces, 1938–1945*, trans. Mervyn Savill (New York: Henry Holt and Co., 1954), 20. The army asserted that the navy should provide the necessary shipping, landing, and supply vessels; the navy demanded that the Luftwaffe provide total air supremacy over their fleet operations. In other words, the Luftwaffe was held responsible for getting the operation under way.

4. Wilhelm Keitel, field order directive signed by *Feldmarschall* Keitel, *OKW* Staff, 2 July 1940, AFHRA file no. 512.621 VII/21, 1.

5. Adolf Galland, "The Battle of Britain," report compiled and translated by the British Air Ministry, 1953, AFHRA file no. K-512.621 VII/121, 11. This report is a compilation of a series of articles that Galland published in an unnamed Argentine magazine in 1953.

6. Ibid., 13, 15; and Adolf Galland, interrogated by A. D. I. (K) and US Air Interrogation Unit, 15 August 1945, A. D. I. (K) report no. 373/1945, titled "The Birth, Life, and Death of the German Day Fighter Arm," AFHRA file no. 512.619B-30, 14.

7. Ibid., 13.

8. Galland, *The First and the Last*, 25.

9. Len Deighton, *Fighter: The True Story of the Battle of Britain* (New York: HarperCollins, 1977), 209.

10. Hermann Göring, directives issued by *Reichsmarschall* Göring, 15–19 August 1940, AFHRA file no. 512.621 VII/39 trans. British Air Ministry, 20 August 1947, 2–5. Göring specifies the number and type of escort fighters required for each bomber formation and the tactics necessary to follow the dive-bombers through their attacks. He also directs personnel actions regarding the experience level of bomber crews. All these actions were directed to minimize losses while still focusing on the "first aim"—destruction of the RAF fighters.

11. Deighton, 289–90; and Williamson Murray, *Strategy for Defeat: The Luftwaffe, 1933–1945* (Maxwell AFB, Ala.: Air University Press, 1983), 50. German bomber losses in August had been 339 (of all types) with a loss of 251 pilots killed, captured, or missing. Between 24 August and 7 September, the RAF had 466 fighters lost or damaged but was able to offset that deficit with only 269 replacements. RAF pilot losses were more serious—231 lost, wounded, or missing. In any case, by 1 September the Germans were close to achieving air superiority.

12. Alfred Jodl, situation report signed by General Jodl, *OKW* Staff, 13 August 1940, AFHRA file no. 512.621 VII/21, 12; and Wilhelm Keitel, field

order directive signed by *Feldmarschall* Keitel, *OKW* Staff, 1 August 1940, AFHRA file no. 512.621 VII/21, 9. Keitel confirms that the navy has set 15 September 1940 as the earliest date for the invasion and that Hitler will make a decision "8 or 14 days after the launching of the air offensive against Britain" which began on 13 August 1940. Accordingly, Hitler would have needed results from Göring's Luftwaffe by 27 August at the latest to make a decision on the invasion. To make matters worse, Gen Alfred Jodl of the *OKW* Operations Staff (another advisor to Hitler) stated that the Luftwaffe should have achieved their goal within a week.

13. "The Birth, Life, and Death of the German Day Fighter Arm," 16.

14. British Air Ministry, "German Aircraft Losses: September 1939–December 1940," report by the Air Historical Branch, 10 January 1949, AFHRA file no. 512.621 VII/83, 12–13. This report was compiled from original records of the Quartermaster General's Department of the German Air Ministry of aircraft losses throughout the war. In August and September, figures for bombers destroyed or damaged on operations were 310 and 358, respectively.

15. Alfred Jodl and Wilhelm Keitel, field order directive initialed by General Jodl and *Feldmarschall* Keitel, *OKW* Staff, 14 September 1940, AFHRA file no. 512.621 VII/21, 16.

16. Galland, *The First and the Last,* 52.

17. Cajus Bekker, *The Luftwaffe War Diaries* (London: MacDonald and Co., 1967), 178.

18. Galland, "The Battle of Britain," 31.

19. Donald L. Caldwell, *The JG26 War Diary,* vol. 1, *1939–1942* (London: Grub Street, 1996), 33, 53. Handrick failed to maneuver his flight of Bf 109s in response to an imminent Hurricane attack in operations over Dunkirk in May. His inaction resulted in the shoot down of his wingman. By 12 August 1940, Handrick's staff flight was the only combat unit within *JG*26 to have zero kills to its credit in the Battle of Britain. Handrick believed that he could effectively lead his wing on combat missions by taking off after the rest of the wing had launched; however, this position in the formation guaranteed that he would not encounter enemy fighters.

20. Göring, 5.

21. Caldwell, 58.

22. Ibid., 49–84. The individual pilot claims were Galland—36 kills, Schoepfel—19 kills, Muencheberg—13 kills, and Sprick—12 kills.

23. Feldwebel Seeger, of *JG*2, questionnaire reply to author, 30 March 2000, facsimile transcript in the hand of Seeger; and Gerhard Schoepfel, questionnaire reply to author, 30 March 2000, facsimile transcript in the hand of Schoepfel. As group commander of III/*JG*26 during the Battle of Britain, Schoepfel believed that pilot morale was good.

24. Raymond F. Toliver and Trevor J. Constable, *Fighter General: The Life of Adolf Galland* (Zephyr Cove, Nev.: AmPress Publishing, 1990), 129.

25. Caldwell, 47. Caldwell mentions that the men were initially housed either in tents or in billets in local towns, but no further discussion of either

food or shelter requirements is made. Neither Galland, Bekker, nor Josef Priller (all authors of life in the fighter units) mention these factors.

26. Galland, "The Battle of Britain," 15; idem, "The Birth, Life, and Death of the German Day Fighter Arm," 18.

27. Von Brauchitsch, 12.

28. Galland, "The Birth, Life, and Death of the German Day Fighter Arm," 15; and Bekker, 165. The general ratio of fighters to bombers on missions was 3:1. Bomber crews continued to push for a 5:1 ratio on select missions.

29. Donald L. Caldwell, *JG26: Top Guns of the Luftwaffe* (New York: Orion Books, 1991), 70.

30. Galland, "The Birth, Life, and Death of the German Day Fighter Arm," 18.

31. Ibid., 15.

32. Caldwell, *The JG26 War Diary,* 64, 67, 80.

33. British Air Ministry, 11–14. Figure represents destroyed single-engine fighters from July–November 1940.

34. Galland, *The First and the Last,* 14.

35. Bekker, 176.

36. Galland, "The Birth, Life, and Death of the German Day Fighter Arm," 18.

37. Ibid., 21.

38. Ibid., 13.

39. Caldwell, *JG26: Top Guns of the Luftwaffe,* 16.

40. Schoepfel questionnaire. Schoepfel credited the wing commander, Major Galland, with having the new Bf 109s delivered.

41. Toliver and Constable, 105.

42. Schoepfel questionnaire.

43. Galland, "The Battle of Britain," 20.

44. Johannes Naumann, questionnaire reply to author, 26 April 2000.

45. Caldwell, *JG26: Top Guns of the Luftwaffe,* 60.

46. Galland, "The Birth, Life, and Death of the German Day Fighter Arm," 17.

47. Ibid., 15.

48. Caldwell, *JG26: Top Guns of the Luftwaffe,* 60.

49. Galland, *The First and the Last,* 53.

50. Ibid., 54; idem, "The Battle of Britain,"28.

51. Caldwell, *The JG26 War Diary,* 81.

52. Ibid., 80–84. The 3d, 4th, and 9th squadrons only had one kill claim from 10 October, when they became fully operational, until 30 October. This kill was claimed by the 3d squadron on 25 October, but it was during an escort mission and not a *jabo* mission.

53. Naumann questionnaire.

54. Ibid.; and Schoepfel questionnaire.

55. Caldwell, *The JG26 War Diary,* 41.

56. Caldwell, *JG26: Top Guns of the Luftwaffe,* 69–70. Figures cover operations from July through December.

57. Bekker, *The Luftwaffe War Diaries,* 166.

58. Caldwell, *JG26: Top Guns of the Luftwaffe,* 70.

59. Caldwell, *The JG26 War Diary,* 56, 71.

60. Ibid., 75.

61. Galland, "The Battle of Britain," 28.

62. Caldwell, *JG26 Top Guns of the Luftwaffe,* 41; and Wilhelm Goebel, to author, 30 March 2000, facsimile transcript in the hand of Goebel. Mr. Goebel is the head of Germany's *Gemeinschaft der Jagdflieger* (Fighter Pilot's Association) and has previously interviewed many Luftwaffe fighter pilots from the Battle of Britain.

63. Josef Priller, *Geschichte eines Jagdgeschwaders: das J. G. 26 (Schlageter) von 1937 bis 1945* (Heidelberg: Kurt Vowinckel Verlag, 1956), 83.

64. Galland, "The Birth, Life, and Death of the German Day Fighter Arm," 43. Galland made it clear to his fighter pilots that he did not wish them to marry. He felt that none of them had any right to believe they would live through the war and it would be far better to leave a sorrowful sweetheart, rather than a grieving widow and children.

65. Caldwell, *JG26: Top Guns of the Luftwaffe,* 32. As group commander of III/*JG*26, Major Galland was not pleased with the success of his unit during the first week of the Battle of Britain and made it clear to his pilots.

66. Toliver and Constable, 154. Galland sent a highly critical letter to his higher command at *Jafu* 2, commenting on the lack of professionalism he encountered while visiting another base.

67. Galland, *The First and the Last,* 31, 33.

68. Ibid., 35.

69. Caldwell, *JG26: Top Guns of the Luftwaffe,* 48.

70. Ibid., 49.

71. Galland, "The Birth, Life, and Death of the German Day Fighter Arm," 14.

72. Ibid., 18.

73. Priller, 88.

74. Galland, *The First and the Last,* 45. Galland claimed that after the event, the wing was in the best of spirits.

75. Ibid., 31.

Chapter 4

Lt Col Joseph Laughlin: 362d Fighter Group

But soldierly spirit as shown in actual combat, we must remember, is not merely a question of knowledge and skill; it is largely a question of character. [Character-training] and personal influence upon the men in the ranks are of the greatest importance, especially in time of war.

—*Squadron Commander's Manual*
1st Fighter Command, 24 June 1942

When the United States mobilized for the Second World War, its greatest strength was the vast quantity of war materiel it could send to the front. Much has been written of the tremendous production capability, but an equally important strategic reserve held by the United States was the quality of leaders that created and sustained frontline fighting power. The US Army Air Forces had its share of successful squadron and group leaders, but one would be hard-pressed to find a more successful combat commander—who was also respected and loved by his men—than Lt Col Joseph Laughlin.

Culminating in his command of the 362d Fighter Group (FG), XIX Tactical Air Command (TAC), Ninth Air Force, Colonel Laughlin encouraged and led his P-47 pilots from one end of France to the other in support of General Patton's Third Army in the summer of 1944. The men of the 362d FG consistently faced German 40 mm and 88 mm antiaircraft artillery (AAA) as well as sporadic German fighter formations and small arms fire throughout the long summer. Losses of pilots and airplanes were high enough to warrant the group an unofficial nickname, "the 362d Suicide Outfit," but the spirit of the fighter pilots was never in doubt under Laughlin's leadership.

Allied Invasion of France

The invasion of Italy by the Allies in September 1943 began the inevitable ground assault on the continent that would be necessary to defeat the German *Wehrmacht*. While fighting in Italy was fierce, it would not play the primary role in overrunning Germany. Instead, the Allied Eighth and Fifth Armies in Italy would divert as much German strength as possible from the main Anglo–American landing in Normandy, known as Operation Overlord.[1]

D Day and the Breakout

As commander of the Allied Expeditionary Force, Gen Dwight D. Eisenhower orchestrated a large-scale amphibious landing, airborne paratrooper assaults, a complex deception plan, and a persistent air interdiction (AI) operation to gain a foothold on the European continent in northern France.

The focus of airpower on AI missions was an attempt to isolate the intended beachhead from German reserves. By targeting the French railroad system well in advance, airpower helped reduce—but did not eliminate—German resupply. It was not thought possible to totally eliminate all German rail potential. But by severing the larger and more critical rail nodes and arteries, AI would constrict reinforcement attempts and make the surviving lines of communication (LOC) vulnerable to future fighter-bomber attacks.[2] The disruption of French rail operations began slowly in March but built to a massive scale by D minus 30. The resulting effect on the operational capability of the rail system was significant by D day. Overall rail traffic in France was reduced by 60 percent (from the 1 March 1944 amount) and in the critical northern sector, to the east of the planned Normandy landings, rail traffic was reduced by 75 percent.[3] The interdiction effort continued after the invasion on 6 June 1944, but the needs of supporting the assault force shifted airpower priorities. Once the beachhead was secure, the massive logistical task began of building up sufficient men and supplies for the eventual breakout on 25 July 1944. During the next six weeks, the Germans stoutly re-

sisted. Throughout this time, Allied airpower helped to weaken enemy defenses through a variety of missions.

Immediately following the invasion, Allied air forces increased their focus on interdiction targeting and began bombing and strafing enemy motor transport of all kinds.[4] The maintenance of air superiority proved relatively easy because the Allied fighters outnumbered German fighters by no less than five-to-one numerically and a much greater margin in pilot quality. This advantage resulted in Allied tactical aircraft being able to focus more on interdiction and ground-support (close air support [CAS]) missions. German supplies became especially limited in Normandy as a result. The constant attacks on German trucks, rail cars, and equipment prevented the defenders from mounting a counteroffensive while the Allied buildup continued. Initial air operations continued from bases in England; but once the lodgment area in Normandy became secure, fighter groups were moved onto the French coast in order to generate more sorties and to allow more rapid employment when called upon by the ground units. The command arrangements under these moves changed quite fluidly.

Prior to the invasion, the United States Strategic Air Forces in Europe, commanded by Gen Carl A. "Tooey" Spaatz, retained operational control (OPCON) of the Eighth Air Force (AF) and administrative control of the Ninth AF. OPCON of Ninth AF was given to the commander of the Allied Expeditionary Air Force, Air Chief Marshal Sir Trafford Leigh-Mallory. Under this command structure, General Spaatz was never eager to submit his "strategic" Eighth AF to the tactical application of airpower that was directed by General Eisenhower to support Overlord. In contrast, the Ninth AF commander, Gen Lewis H. Brereton, wholeheartedly devoted his tactical air force to support Gen Omar N. Bradley's US First Army as it widened its hold on the Cotentin peninsula. As the ground lodgment grew, General Bradley activated additional field armies—first the US Third Army and then the US Ninth Army. General Brereton created complementary TACs (five to seven fighter groups each) to work in concert with the field armies. The IX TAC would provide primary air support to the original US First Army, XIX TAC worked with the US Third

Army, and XXIX TAC supported the US Ninth Army. While the TACs were not subordinate to the field armies, the TAC commanders were well aware of the special trust placed in them to assist the armies whenever possible. The British established a similar air-ground alignment system with their tactical air forces.

By the middle of July, Allied strength in Normandy had grown sufficiently strong that General Montgomery launched Operation Goodwood, which was designed to capture the city of Caen. Although Montgomery's British and Canadian forces were repulsed by the stubborn German defenders on 20 July, the US First Army prepared to participate in its own offensive—Operation Cobra—designed to punch through German defenses near Saint-Lô. The First Army breakout created a fissure in the German defensive line that allowed the Allied torrent to sweep across France.

Third Army Operations

The US Third Army began arriving in France on 6 July and was immediately included in the First Army's plans for the impending offensive. When Operation Cobra achieved the planned breakthrough, Patton's Third Army came into its own. On 1 August the Third Army became fully operational. Its objective was to sweep south, through Avranches, then swing southwest through Rennes and Fougères to capture Brest and open the Brittany ports.[5] The rapid advance through Avranches led Patton to alter his objectives.

Once south of Avranches, Patton perceived that German defenses throughout France were quickly crumbling. Capitalizing on his rapid advance, Patton tasked his VIII Corps to assume responsibility for the original objective of clearing out resistance in Brittany. With his other three corps, Patton drove south and east in a race for the Seine and, ultimately, Germany. In a 30-day period, Patton had driven to within 60 miles of the German border and had contributed to the defeat of the Germans at the Falaise Gap and to the liberation of Paris.[6] The tremendous speed with which the Third Army captured ground was due in no small part to the air support provided by the XIX TAC.

Historian John Keegan described the air and ground teamwork of Gen O. P. Weyland's XIX TAC and Patton's Third Army as the only true exercise in the blitzkrieg style of warfare achieved by any Western army in the Second World War.[7] The nine fighter groups comprising the XIX TAC flew ground-support and interdiction missions along the full depth of Patton's army—some 350 miles at times. Of greatest significance to the armored divisions was the fighter-bomber tactic of "armored column cover" created by Gen Elwood R. "Pete" Quesada of IX TAC and practiced throughout the Ninth AF.[8] During daylight hours, a minimum of four fighter-bombers—usually P-47 Thunderbolts—flew cover over each of Patton's advancing armored columns. These aircraft generally patrolled up to 35 miles ahead of the armored spearhead and were available for immediate CAS when directed from the air support parties within each division.[9] The ground commanders felt that this tactic stood out as the best method for integrating the advantages of airpower within the armored scheme of maneuver. Most pilots in the Ninth AF agreed.

XIX TAC pilots who were not tasked with armored column cover flew either interdiction or fighter-sweep missions. In time the need for missions dedicated to seeking out German fighters in the air decreased for two reasons. First, the fighting strength of the German air force dwindled in the face of overwhelming opposition. Second, as Allied advances forced the Germans out of forward positions, Luftwaffe squadrons began to relocate within Germany's borders; and they became much more defensive in nature. Interdiction missions continued to be frequently assigned to the fighter-bombers and medium bombers of Ninth AF. Preplanned attacks against fixed targets were only one-half of the interdiction effort. The other portion was classified as armed reconnaissance. Armed reconnaissance missions became synonymous with search and destroy tactics as pilots were given general target types and locations but had discretion to attack any worthwhile enemy targets encountered. The XIX TAC's fighter groups used interdiction targeting to great effect in one of the most unique applications of airpower in the war—screening the Third Army's right flank. With the physical barrier of the Loire River

to the south, General Weyland's fighter-bombers harassed and destroyed enemy ground and air formations before they had the opportunity to attack north and drive in Patton's vulnerable flank. The security enabled the rapid advance of the Third Army.

362d Fighter Group Operations

On 1 June 1944, the 362d FG flew P-47 Thunderbolt aircraft from an airfield in southern England known as US Army Air Force Station 412, Headcorn. It flew primarily escort missions after becoming operational on 8 February 1944; but as D day drew closer, the group was tasked with an increasing number of ground-attack missions.[10] While in England, the 362d was under the administrative control of XIX TAC. This would not change for the duration of the war. OPCON, however, varied over time. While in England the IX Fighter Command of Ninth AF exercised OPCON over the 362d. On 19 July the group relocated to Lignerolles, France, in Normandy; and OPCON was transferred to IX TAC, which was supporting the US First Army. On 1 August—when the US Third Army became operational—OPCON of the 362d was ultimately transferred to XIX TAC, which had also just activated.[11] The group moved two more times prior to November. The next move was on 11 August to Rennes, France, at the eastern end of the Brest peninsula. The third move on French soil was to an airfield near Reims on 23 September.

The original commander of the 362d FG was Col Morton D. Magoffin. He led the group from its activation in March 1943 until he was shot down near Falaise, France, on 10 August 1944. According to many of the young fighter pilots, Colonel Magoffin had been a difficult commander. He was a West Point graduate with an overbearing personality; they believed his focus on mission accomplishment was often at the expense of compassion for his pilots.[12] Many of the men became resentful because of his demeaning approach to discipline. On one occasion, he made three experienced pilots sprint around the airfield perimeter for failing to salute him.[13] In another episode, Magoffin discovered a group of men lining up for the chow hall too early. As punishment he gave them close order

drill and then made the men wait in formation until the rest of the group had been served.[14] Still, Magoffin achieved a solid combat record, and he shared the same dangers as the rest of his men. Before he was shot down and captured, he was credited with five aerial victories and became one of only three aces in the 362d.[15] When Magoffin was shot down, the group "flying exec," Colonel Laughlin, became the group commander until the end of the war.

Apart from the group headquarters, the combat power of the 362d FG rested in three squadrons: the 377th, the 378th, and the 379th Fighter Squadrons (FS). Each squadron was authorized 32 P-47 aircraft and 36 pilots.[16] The maintenance sections of each squadron repaired and serviced an increasing number of battle-damaged aircraft once ground-attack missions became routine. With sustained battle-damage rates, either 12 or 16 aircraft per squadron could consistently be ready to fly on any given mission.[17] The group had the capacity for two full-strength missions per day (roughly 96 sorties), but on some occasions a third mission could be launched.

The P-47, affectionately referred to as the Jug, was originally designed as a pursuit aircraft and had only a 200-mile range without external fuel tanks. With external tanks, its range increased to 350 miles; but this was still much less than the 600-mile range of the P-51 Mustang with external tanks.[18] However, the sturdy construction of the P-47 lent itself to ground-attack missions much more so than the lightweight Mustang. The P-47 was regarded by XIX TAC as an exceptional aircraft for low-altitude operations even though it remained a very capable fighter in air-to-air combat.[19] In addition to .50-caliber ammunition, a normal P-47 weapons load included either one or two 500-pound general-purpose bombs. For special missions, however, the P-47s could also be fitted to carry 1,000-pound general-purpose bombs, 250-pound fragmentary bombs, 100-pound white phosphorous bombs, napalm, or air-to-ground rockets. When employed in the ground-support role, the flexibility in weapon loads was one of the aircraft's greatest advantages.

In the summer of 1944, the pilots of the 362d FG performed missions across the full spectrum of operations tasked to tac-

tical air forces: air superiority, interdiction, and CAS. Most American fighter groups arrived in the European theater of operations (ETO) with minimal, or no, ground-attack experience.[20] The 362d FG was typical of groups that expected to be flying pursuit missions when they arrived in the ETO, but quickly realized that they needed to be experts in the ground-attack role.[21]

Early 362d FG support for Operation Overlord included escorting C-47s towing gliders and flying sweep- or beach-patrol missions. Within days, however, the group was flying armed reconnaissance and fixed-target interdiction sorties against a variety of rail targets, motorized transports, bridges, and troops and equipment in the open. The 362d pilots attacked targets throughout the Cherbourg peninsula and across most of northern France as the Allied armies built up for the Cobra breakout. On 25 July the group joined more than 3,000 Allied aircraft in a concentrated attack on the Saint-Lô–Pèriers highway that opened the door for the Allied onslaught.[22]

Although 12 June marked the first true CAS mission flown by the 362d FG, the majority of CAS would take place after linking with General Patton's Third Army on 1 August. Once Patton broke through at Avranches, the 362d FG spent the next month alternating between interdiction and armored column cover missions. During that time, the group played a key role in supporting the VIII Corps's assault and reduction of the Brest peninsula. Farther to the east, group pilots flew direct support missions for Third Army operations that cut off Hitler's failed attempt to strike a counteroffensive from Falaise to Avranches.[23] In spite of the numerous ground-support missions flown, August was also a successful month for aerial victories in the group. Twenty-four enemy aircraft were destroyed in the air, with two additional probably destroyed, and two damaged.[24] The majority of future enemy aircraft kills for the group would be achieved through ground attack.

Once Brest fell on 18 September, the group devoted its primary attention eastward to armored column cover and interdiction.[25] Soon after completing their work in Brittany, the 362d relocated near Reims and began routinely flying missions into Germany. Interdiction of rail lines and CAS for

ground units continued to be the mainstay of the group's tasks; however, the rapid advance of Patton's army slowed to a crawl. Patton found his first major obstacle in the Moselle River and Germany's West Wall defensive line. From mid-September through mid-November, the front moved very little. Coincidentally, the weather began deteriorating in October; and 362d pilots often had to revert to armed reconnaissance missions rather than their preplanned ones. Several notably successful missions occurred amidst the intermittent weather when the group bombed and strafed two crowded German airfields, destroyed six locks across a canal near Saarebourg, and saved an infantry division by bombing the dam at Dieuze.[26]

Early on, the pilots of the 362d FG earned a reputation for carrying out difficult missions regardless of the cost. By September, XIX TAC was referring to the group pilots as the "fire-eating fighter-bombers of the 362d" because of their tenacity and skill.[27] The number of missions flown by the 362d FG from June through October and its corresponding losses are noted in table 2.

Table 2

362d Fighter Group Attrition by Month (June–October 1944)

	June 1944	July 1944	August 1944	September 1944	October 1944
Sorties	1,515	1,175	1,511	1,208	1,079
A/C Losses	30	9	13	2	5
Pilot Losses	27	7	13	2	5
Casualty %	1.78	0.59	0.86	0.16	0.46

Source: "362d Fighter Group OPREP Reports, April 1944–May 1945," United States Air Force Historical Research Agency file no. GP-362-SU-OP-S(FI), April 1944–May 1945.

Author's Note: Casualty percentage is based on pilots missing in action or killed in action compared to number of sorties flown per month.

When compared to other P-47 groups in Ninth AF, the 362d FG suffered slightly higher than average losses.[28] However, their pilots were well respected throughout the Ninth AF. The group had already earned a Presidential Unit Citation for its successful contribution to defeating the Germans at Brest.

Their aerial combat record from June through October was 49 enemy aircraft destroyed, two probably destroyed, and 11 damaged.[29] Additionally, at the end of 1944, Ninth AF chose their nine best target-killing pilots—four of those selected were from the 362d FG, one of whom was named the best overall fighter-bomber pilot.[30] The most satisfying recognition of all, however, came from the ground commanders of the Third Army. For example, on occasion General Patton would make congratulatory phone calls to group commanders.[31] By 1 November the fighter pilots of the 362d FG formed a premier combat unit by any standard.

Pilot Morale within the 362d Fighter Group

This study attempts to qualify or understand morale within the 362d FG during the June–October period and relies primarily on reviewing personal recollections of group pilots, as well as examining the abort rates of aircraft on missions. The abort rates for this period were in line with the rest of Ninth AF, which suggests that men were not looking for excuses not to fly missions.[32] A common feeling of the pilots was that they wanted to fly "missions, missions, and more missions!"[33] The responses from many of the surviving pilots of the 362d FG indicate that morale during the summer of 1944 was exceptionally high.[34] This assessment is evident after reviewing the factors influencing morale at the time.

Individual Needs

The quality of confidence was the most significant characteristic of the men of the 362d FG during the summer of 1944. Confidence kept pilot morale high in the face of daunting losses. A young 21-year-old pilot—who arrived in the group during the summer—echoed the feelings of many, "We all thought we had the world right under our thumb!"[35] The physical and psychological needs of these fighter pilots were few in number, but the influence of those factors contributed greatly to the high level of morale.

The two most important physical needs of the pilots were their aircraft and the training to use it correctly. P-47 combat

losses and battle damage affected each squadron at different times, but the group as a whole never lost the ability to sustain combat operations.[36] Replacement delivery and in-theater repair of the group's P-47s was satisfactory for the pace of operations. According to Ninth AF records, the replacement rate of P-47s grew faster than operational losses. By the end of the war, Ninth AF had gained 2,766 P-47s for replacement purposes against 2,105 losses. In the tactical units, P-47 fighter groups had at least an 80 percent operational rate for their aircraft from June through October 1944.[37]

The availability of training opportunities was not initially a morale factor for the pilots of the 362d. By the end of the summer, many of the original cadre of pilots had been shot down or were rotating back to the United States after completing their tour.[38] The apparent lack of training for new pilots discouraged at least a few of the pilots, old and new.[39] New replacement pilots stopped off for 30 days of in-theater training in England en route to their frontline unit, but they were still very green on their initial combat missions. Other than that, training opportunities were virtually nonexistent. Some quasi-training missions were attempted while the group was operating in Brittany, but these were few and far between.[40] Combat missions would rectify the deficiency in training, but at a high price.

The other physical needs of the 362d pilots were not very significant in terms of morale. Food and shelter were adequate, at least in relative terms. The pilots always felt that however bad living conditions were for them, the soldiers they were supporting had it even worse.[41] The one interesting comment about living conditions is that they continued to improve for the group as they made their first three moves in France. From field conditions in Normandy, to vacated German barracks in Rennes, to a lavish chateau near Reims—each move incrementally raised the standard of living with a corresponding boost to morale. It seemed that as long as physical needs remained static or improved, morale followed suit. Subsequent experience demonstrated that lowering the standard of living likewise damaged morale.[42]

Neither was rest a detriment to morale throughout the summer. In the five-month period under consideration, the group's daily sortie rate only surged above 100 aircraft on 10 days.[43] Replacement aircraft and pilots were arriving monthly, and most pilots felt that they had sufficient rest between missions. Additionally, once Paris was liberated, the pilots of the 362d were given three-day passes to visit Paris; and in some cases, rest and relaxation (R&R) was authorized to London as well.[44] Undoubtedly, poor weather conditions drove the flying schedule as much as mission requirements. While canceled flights due to weather may have provided some additional rest for pilots, it also lowered individual morale for those eager to fly.[45]

The satisfaction of psychological needs was evidenced by the pilot's confidence in tactics and confidence in their aircraft. Both of these areas rate high. The evolution of tactics in the group was never formalized, nor was there ever a blatant need to make significant changes to existing tactics.[46] The tactics brought back from the Mediterranean theater served as a baseline from which individual flight leaders could deviate to satisfy the needs of missions into France. No one in particular took credit for changing tactics. Changes were simply made as experience showed the way to success. Morale was certainly sustained by knowing that the progression of these tactics was leading toward victory.

Tactics were continually improved as new weapons and new missions were created. Low-altitude tactics were created to deal with the inclement weather and AAA. High-altitude dive-bombing methods were developed. New weapons types were loaded and tested in combat. Safe-escape maneuvers were designed to avoid one's own bomb fragmentation pattern after weapons release. The results of these and other successful tactics were beneficial to pilot morale throughout the war. In the words of one group pilot, "the interactions between the overhead supporting fighters and the controllers on the ground, innovating as necessary to minimize or eliminate German resistance in front of the tank columns, was truly awesome and inspiring."[47] Tactical improvement was a shared responsibility of the flight leaders in each squadron; dissemi-

nation of what worked and what did not was accomplished in the normal mission debriefing analysis.

Much of the confidence in these improving tactics was linked directly to the pilot's confidence in the P-47, which was rated the best attack aircraft in the world by some pilots of the 362d FG.[48] Other more reserved comments still recognized the P-47 as the right aircraft for the job they were given.[49] The men believed in their aircraft. It was an outstanding platform for carrying a large quantity of firepower to the enemy, and it was recognized by all authorities as the best fighter-bomber of the war.[50]

Cohesion

According to the majority of pilots in the 362d FG, cohesion was not considered a very important part of maintaining their fighting spirit. Bonding between pilots and other members of the squadrons obviously took place, but these bonds did not encourage the fighter pilots to fly missions that they otherwise would not have flown. Rather than increasing the pilots' enthusiasm to fly missions, cohesion became linked to the intensity with which they attacked the enemy. When some pilots experienced the loss of a comrade due to enemy fire, they vented their sorrow and anger at future gunners who would dare to open fire on the P-47s.[51] The creation of close bonds did not motivate men to fly their missions, but enemy actions that destroyed these bonds had an influence on performance.

Nevertheless, bonding throughout the squadrons took place on informal levels. Softball games, swimming, and basketball games were all activities in which both flyers and nonflyers participated. The officers had a rudimentary version of an officers' club at most locations, and trips into the local villages as well as opportunities for hunting were available to any interested pilot.[52] The most common experience of all the group pilots was combat flying. However, squadron schedulers did not make an effort to keep the same flight leads and wingmen together in formations.[53] Friendships formed in the squadron as much from individual choices as from any forced living or flying arrangements. In the case of the 362d FG pilots, build-

ing cohesion did not require any special emphasis. One pilot stated simply that "[cohesion] kinda [sic] took care of itself."[54]

The benefits of pilot bonding are difficult to assess in this situation. As far as flying combat missions, comradeship was not a driving factor once the parachute was strapped on. A 377th FS pilot recalled that they were individual pilots who looked only to their flight leaders for supervision.[55] The real role that cohesion played was as a stabilizing influence on morale during nonflying activities. The worst that could have happened was for morale to erode on a daily basis as a result of isolated pilots who did not interact with each other. At best then, cohesion is built through daily contact and acts to prevent or slow down the decay of pilot morale under normal combat conditions. The 362d pilot's experience with cohesion fits into the latter case.

Esprit de Corps

Esprit de corps was a positive component of pilot morale in the 362d FG. Most of the pilots considered themselves fortunate to be part of such an elite organization, and they understood that the group was making "a sizable contribution toward the advance of American armies through France."[56] The Army Air Forces at that time had an active public relations effort throughout the ETO, and it was not difficult to disseminate good information about a successful group such as the 362d. Some pilots who did not have frequent personal contact with the group commander felt that the group was a remote entity, but the majority of pilots identified with the reputation of the group regardless of how often they interacted with the commander.

There were, in fact, two larger (secondary) groups that generated esprit de corps among the pilots: the 362d FG and the US Third Army. To suggest that esprit de corps alone motivated the men into battle is unfair, but their morale was certainly bolstered after each unit success story. The conscious steps taken by the group public affairs office to document and publicize particularly dangerous or successful missions helped to unify the pilots above the squadron level. For instance, the group published a periodic newsletter on the pos-

itive message of the unit's accomplishments.[57] Continuous successes provided a seemingly constant source of strength and mission identity during the summer of 1944. Many pilots believed that the 362d FG was a premier (if not *the* premier) fighter-bomber unit in Ninth AF. This feeling was enhanced by the destruction of thousands of targets each month, but two specific missions stood out as the most publicized. The first was a group mission to Brest on 25 August on which they successfully attacked multiple naval vessels in the harbor and sank a German light cruiser. The second mission was on 20 October when the 378th FS and 379th FS bombed the dam on the River Seille at Dieuze.[58] The results were publicized by the British Broadcasting Corporation and were published in several British and American newspapers.

The army was no less inspirational for the pilots. Ground-attack missions were difficult and costly for the 362d in terms of pilots and aircraft, yet the connection that the pilots felt to the soldiers in the field was vivid. Third Army and XIX TAC kept the 362d updated on the results of their missions, and the positive feedback certainly helped to build this identity with the ground forces.[59] "We were Patton's right flank!" was a common rallying theme.[60] The speed at which Patton advanced convinced the pilots that they were helping to win the war. Their pride was justified. On several occasions XIX TAC or Third Army would specifically call on the 362d to perform a difficult mission.[61] The destruction of the dam at Dieuze was one such occasion.

Joseph Laughlin's Influence on Morale

Colonel Laughlin may have only assumed command of the 362d FG on 10 August, but his presence was a source of encouragement much earlier. Laughlin was the 379th FS commander when the group arrived in the ETO and moved up to become the deputy group commander (or flying executive officer) in April. In addition to being very familiar with this squadron's men, his familiarity with those men in the 377th FS and 378th FS began immediately upon flying with them in April and continued. Laughlin's reputation was very favorable.

The men described him as a fair, even-tempered, personable leader who was an exceptionally talented pilot.[62] Even though Laughlin scored the first aerial victory for the group against a Bf 109 in February, it was his skill in bombing and strafing that was judged most impressive.[63]

The group pilots generally felt that their morale during the spring and early summer of 1944 was at least good under the leadership of the first group commander, Colonel Magoffin.[64] However, most pilots agreed that after Laughlin assumed command in August, morale became even better. The increase in morale was attributed to their rapport with Laughlin which they had lacked with Magoffin. Laughlin got to know the men on a personal level because he wanted them to feel that he was concerned.[65] Of course, Laughlin could not know all the men equally well, but the pervasive attitude among the pilots was that he tried. Other than being well respected as the group commander, Laughlin took specific actions that subsequently raised pilot morale in several key areas.

Most pilots were confident that Laughlin provided all the logistical necessities possible, but one item is salient. When the group moved near Reims, the pilots again had confidence that Joe Laughlin's personal intervention made it possible for all of the group pilots to live in the comfortable château. Even 56 years later, the pilots remember those accommodations as the best they had during the war. Some referred to it as "the Park Avenue of all quarters."[66] The rest and leave policy that the group enjoyed throughout the latter part of 1944 was also attributed to Laughlin's actions. He somehow managed to obtain a worn-out B-26 bomber and a C-47 cargo plane that became part of the group. These aircraft were modified for troop transport and were flown by group pilots to drop off and pick up men from the 362d FG who traveled to London and Paris on short leaves.

Laughlin also was connected to some other confidence-building actions that kept pilot morale high. Group pilots felt that their aircraft were more combat capable than others in the XIX TAC. After Laughlin became commander, the P-47Ds in the 362d FG received some modifications: a bubble canopy improved visibility and increased survivability during a

bailout, and an upgraded propeller—referred to as a "paddle prop"—made the P-47 a much more stable dive-bombing platform.[67] The pilots credited Laughlin with the early conversion of the group's airplanes, although the modifications were initiated above the group level.[68] In addition to the physical improvements to the aircraft in the group, Laughlin presided over the evolution in combat tactics. He was one of the initial pilots who traveled to Italy and flew ground-support missions in Twelfth AF in the winter and spring of 1944. He shared those lessons learned with the group upon his return; thereafter, he was recognized as one of the most competent ground-attack pilots in the group. When he assumed command of the 362d in August, his leadership style encouraged the necessary progression of tactical development among each of the squadrons. During this time, tactical innovation was the result of each pilot gaining experience and possessing the freedom to make appropriate changes.

None of the pilots could recall any influence that Laughlin had on the individual cohesion in the squadrons, but his actions were more evident in building group esprit de corps. Laughlin personally participated in the two most publicized group success stories. On the day of the Brest harbor attack, Laughlin flew two separate missions with the 378th FS and the 377th FS and scored two hits on the German light cruiser.[69] He was ultimately given credit for sinking it. On the second of the highly publicized missions, Laughlin planned and led the attack on the dam at Dieuze.[70] While it was unclear whether his 1,000-pound bomb caused the break in the sluice gate that successfully drained the dam, the unit history indicates that his bomb was delivered closest to the desired impact point. Each of these missions helped to build the strong reputation that the 362d FG enjoyed from June through October.

Laughlin also was the focal point for connecting the group with the Third Army. He made sure that operational updates and army commendations were continually passed to the pilots; in turn, this helped those pilots to understand their part in the greater operation. Laughlin's credentials as a great bomber and his focus on supporting the army demonstrated

to his men what was important to winning the war. Whether or not this leadership style was Joe Laughlin's key influence on pilot morale, they at least appreciated it as a contributing factor.

Conclusions

The fighting spirit of the pilots of the 362d FG was largely the result of their superior individual commitment to the war effort and their mission. Their confidence in success was the primary reason that morale remained high. When Joe Laughlin took command in August, pilot morale improved for a number of reasons. First, the pilots began to clearly see that the end of the war was in sight as soon as Patton's army gained momentum. Second, the men felt that the new commander cared at least as much about them as he did the mission. Third, but most importantly, the pilots were satisfied that the tactics they were using were appropriate.[71] They were effectively destroying the enemy, and they felt they were winning the war. Losses in this context were acceptable.

Laughlin's influence on the level of pilot morale can be narrowed down to one area: he established an atmosphere that encouraged tactical excellence. His individual accomplishments contributed to that atmosphere, but he also nurtured his pilots to create their own success. The residual perception, in the minds of the pilots, was that they were masters of their domain; they credit Laughlin's leadership for making the difference. Laughlin modestly said that he "just did what came naturally, and was lucky if it came out right."[72] In actuality, Laughlin allowed his pilots to assume as much control over their own success as possible: the result was a very motivated group of pilots.

Notes

1. John Keegan, *The Second World War* (New York: Viking, 1989), 319.
2. Eduard Mark, *Aerial Interdiction: Air Power and the Land Battle in Three American Wars* (Washington, D.C.: Center for Air Force History, 1994), 223–25.
3. Ibid., 238.
4. Keegan, 388.

5. "Twelve Thousand Fighter-Bomber Sorties," report, Headquarters (Adv) XIX TAC, 30 September 1944, United States Air Force Historical Research Agency (hereinafter cited as AFHRA) file no. 168.7104-69, The Background, in Brief, 1.

6. Ibid., Introduction, 1.

7. Keegan, 406–7.

8. W. A. Jacobs, "The Battle for France, 1944," in *Case Studies in the Development of Close Air Support,* ed. Benjamin Franklin Cooling (Washington, D.C.: Office of Air Force History, 1990), 271.

9. "Twelve Thousand Fighter-Bomber Sorties," Notes on Organization, Tactics, and Technique, 3.

10. Mauer Mauer, ed., *Air Force Combat Units of World War II* (Washington, D.C.: Government Printing Office, 1961), 244–45; and Dan Gianneschi, ed., *The 362nd Fighter Group History of WW II: Mogin's Maulers* (Chicago: D. Gianneschi, 1981), 71.

11. "Twelve Thousand Fighter-Bomber Sorties," The Background, in Brief, 1–2; "362d Fighter Group Unit History: 1 July 1944–31 July 1944," AFHRA file no. GP-362-HI(FI), July 1944, 1.

12. John L. Hill, questionnaire reply to author, 23 April 2000; John M. Baloga, questionnaire reply to author, 12 April 2000; Robert W. Campbell, questionnaire reply to author, 1 May 2000; Joseph Z. Matte, questionnaire reply to author, 8 May 2000; and Arthur Wildern, telephone interview with author, 4 May 2000, Montgomery, Ala. Fifty-six years after the fact, stories from various former 362d pilots still recount missions where Colonel Magoffin led flights but displayed little "wingman" consideration—running several wingmen out of fuel before they reached their home base, and then taking a cavalier attitude about it later in the officers' club. Also, episodes of Magoffin taking his flight through heavy flak for no apparent reason convinced some men that he was not concerned with their safety. Other pilots in the group responded better to Colonel Magoffin's tough leadership style and had no second thoughts about flying with him.

13. Jack R. Barensfeld, questionnaire reply to author, 31 March 2000.

14. Gianneschi, 157.

15. Ibid., 24.

16. "Statistical Summary of Ninth Air Force Operations: 16 Oct 1943–8 May 1945," report compiled by the 26th Statistical Control Unit, AFHRA file no. 168.6005-85, 8. Fighter groups were allocated 96 aircraft and 108 pilots.

17. Ibid., 8. Actual numbers of aircraft and pilots on hand varied, but in general, an average of 18 aircraft per squadron were mission-capable (operational for combat) on any given day, although pilot availability was much greater. Pilot availability averaged 27 pilots per squadron on any given day, for a crew ratio of 1.5 pilots to aircraft.

18. "Twelve Thousand Fighter-Bomber Sorties," Notes on Organization, Tactics, and Technique, 5.

19. Ibid., 2–3; and Jacobs, 250.

20. Jacobs, 263. Limited training in the United States was part of the problem. The other part was the early preponderance of escort (air-to-air) missions flown in England by fighter groups that would be flying primarily air-to-ground missions later in the summer of 1944.

21. Damon F. Rarey, ed., *Laughter and Tears: A Combat Pilot's Sketchbook of World War II Squadron Life* (Santa Rosa, Calif.: Vision Books International, 1996), 94; and Gianneschi, 445–46. In the spring of 1944, select pilots were sent to Italy to observe ground-attack operations and later disseminate techniques to the group.

22. "362d Fighter Group Unit History: 1 July 1944–31 July 1944," AFHRA file no. GP-362-HI(FI), July 1944, 3–4; and "Twelve Thousand Fighter-Bomber Sorties," The Background, in Brief, 2.

23. "362d Fighter Group Unit History: 1 August 1944–31 August 1944," AFHRA file no. GP-362-HI(FI), August 1944, 2.

24. "362d Fighter Group OPREP Reports, April 1944–May 1945," report compiled of monthly air activity by 362d Fighter Group, AFHRA file no. GP-362-SU-OP-S(FI), April 1944–May 1945.

25. "362d Fighter Group Unit History: 1 September 1944–30 September 1944," AFHRA file no. GP-362-HI(FI), September 1944, 3. Seven thousand German soldiers in the city of Brest surrendered immediately after pilots from the 379th Fighter Squadron (FS) completed their bombing run on 18 September.

26. "362d Fighter Group Unit History: 1 October 1944–31 October 1944," AFHRA file no. GP-362-HI(FI), October 1944, 2–4. The two airfield attacks destroyed 15 enemy aircraft, probably destroyed an additional eight, and damaged six. The Dieuze dam required the pilots to bomb only the gates of the sluice so as not to let all the water out at once. Pilots from the 378th and 379th FSs successfully carried out the mission.

27. "Twelve Thousand Fighter-Bomber Sorties," Air Operations, 10–11.

28. "Commanding General Ninth Air Force, Statistical Data," combat crew casualty report prepared by 26th Statistical Unit [March 1945], AFHRA file no. 168.6005-87. For the period July–October 1944, average P-47 pilot attrition was .475 percent. In the same time period, 362d FG attrition was .518 percent, approximately 10 percent higher than average.

29. "362d Fighter Group OPREP Reports, April 1944–May 1945." In addition to the 49-2-11 aerial record, the 362d claimed 28-8-10 enemy aircraft on the ground. Ninth AF did not count aircraft destroyed on the ground toward overall "ace status," although Eighth AF pilots were able to claim ground "kills."

30. Gianneschi, 162; and Robert B. Searl, telephone interview by author, 29 March 2000, Montgomery, Ala. Those chosen were Frank Peppers, 362d Headquarters (top bridge buster, best overall fighter-bomber pilot); Kent C. Geyer, 377th FS (top rail line cutter); Wilfred B. Crutchfield, 378th FS (top rail car buster); and Carroll A. Peterson, 379th FS (top artillery buster). The five remaining categories were fielded by pilots from the remaining 17 fighter groups.

31. Joseph L. Laughlin, telephone interview by author, 20 March 2000, School of Advanced Airpower Studies (SAAS), Maxwell Air Force Base (AFB), Ala. Laughlin received a phone call the night of 20 October 1944, the date of the Dieuze dam bombing. It was General Patton in a very good mood calling to congratulate his group for the fine work. After a few moments, General Patton told Laughlin that someone else wanted to speak to him—Gen Carl Spaatz came on the line to offer his appreciation as well. Both men were in exceptionally high spirits that evening.

32. "Statistical Summary, Ninth Air Force Operations, 16 Oct 1943–8 May 1945"; and "362d Fighter Group OPREP Reports, April 1944–May 1945." The overall abort rate (including weather, mechanical and other causes) for the 362d FG during this period was 2.6 percent. The overall abort rate during this same period for all P-47s in Ninth AF was also 2.6 percent.

33. Gianneschi, 448.

34. The author sent 38 pilots from the 362d Fighter Group (FG) a set of questions asking for perceptions of morale and leadership during the summer of 1944. Of those, 30 pilots were either interviewed or returned to the author answers to those questions. Twenty of these pilots were present in the group during the transition period when Colonel Laughlin assumed command. The remaining 10 pilots arrived later or were shot down prior to Laughlin becoming the group commander.

35. Paul O'Dell, questionnaire reply to author, April 2000.

36. Sherwin G. Desens, questionnaire reply to author, 29 April 2000.

37. "Statistical Summary, Ninth Air Force Operations, 16 Oct 1943–8 May 1945," 7–8. July 1944 was one exception, when the operational rate fell to 74 percent.

38. The rotation policy was not consistent during this time. The rotation policy before the invasion was based on number of combat hours flown. As D day approached, all rotations were canceled until further notice. By October the older pilots with more than 100 combat missions began rotating back to the zone of the interior for 30 days leave. These pilots generally did not return to their original combat units. Some became flight instructors in the United States, while others were shifted to the Pacific theater at the end of their leave.

39. Desens questionnaire.

40. Searl interview. New pilots were sometimes allowed a few missions against less lethal targets in Brittany. One island in particular just off the coast near Saint Mihiel was used in this way. The Germans held out for many weeks, but the 362d missions against them there were not credited toward combat rotation missions.

41. Searl interview; and Laughlin interview, 20 March 2000.

42. "362d Fighter Group Unit History: 1 September 1944–30 September 1944," 5; O'Dell questionnaire; Barensfeld questionnaire; and Robert J. Racine, questionnaire reply to author, April 2000. The château was a welcome change to the living conditions up to that point. Although a great boost to pilot morale at the time, in November the 362d FG moved again to field

conditions amid rain, mud, and cold at which time morale dropped temporarily due to the stark change in amenities.

43. "362d Fighter Group OPREP Reports," April 1944–May 1945. These days were June 7, 14, 17, and 24; July 8, 26, and 30; and August 8, 9, and 22.

44. Francis A. Connor, questionnaire reply to author, 27 March 2000; Robert D. McKee, questionnaire reply to author, 20 March 2000; Robert A. Mower, questionnaire reply to author, April 2000; and A. David Childs, questionnaire reply to author, April 2000.

45. Clifford R. Saari, questionnaire reply to author, April 2000; and "362d Fighter Group Unit History: 1 June 1944–30 June 1944," AFHRA file no. GP-363-HI(FI), June 1944, 2.

46. Joseph L. Laughlin, telephone interview by author, 8 June 2000, SAAS, Maxwell AFB, Ala. There were no tactics meetings held in the group; however, Laughlin placed experienced pilots from other combat-tested fighter groups equally throughout his squadrons. Captains Peppers, Fuchs, and Bailey were examples of men who had merged into the 362d FG and brought with them tactics from the 56th FG and the RAF Eagle Squadrons.

47. James R. Ashford, questionnaire reply to author, 21 April 2000.

48. Campbell questionnaire.

49. Paul L. Carlisle, telephone interview by author, 30 March 2000, Montgomery, Ala.

50. Jacobs, 250.

51. Wildern interview; and "362d Fighter Group Unit History, 1 October 1944–31 October 1944," 1–2. Wildern lost a good friend to flak in the summer of 1944. After that, he treated each mission much more seriously, and his fighting intensity rose as a result. Many of the pilots held a personal grudge against the antiaircraft artillery gunners and took extra efforts to silence them. Majors Beeson and Kline of the 378th Fighter Squadron were singled out as excelling in this type of operation.

52. "362d Fighter Group Unit History, 1 October 1944–31 October 1944," 6.

53. Hill questionnaire; and O'Dell questionnaire.

54. Campbell questionnaire.

55. O'Dell questionnaire.

56. Connor questionnaire; and Campbell questionnaire.

57. Joseph L. Laughlin, questionnaire reply to author, 22 March 2000.

58. "362d Fighter Group Unit History, 1 August 1944–31 August 1944," 5; and "362d Fighter Group Unit History, 1 October 1944–31 October 1944," 4.

59. "362d Fighter Group Unit History, 1 October 1944–31 October 1944," 4.

60. Baloga questionnaire; and Ashford questionnaire.

61. Searl interview.

62. O'Dell questionnaire. Every questionnaire, letter, or interview received by the author reinforced this assessment. These sentiments were expressed most strongly by the original pilots of the group who had also served under the previous group commander. The newer pilots who arrived after

Colonel Magoffin was shot down agreed that Laughlin was a very likable commander, although some of them did not have much personal experience with him at the time.

63. Searl interview.

64. Hill questionnaire. Some rated morale as fair during this time, but indicated a sharp improvement after August.

65. McKee questionnaire; and Barensfeld questionnaire.

66. Hill questionnaire.

67. Laughlin interview, 8 June 2000.

68. Ibid.

69. "362d Fighter Group Unit History, 1 August 1944–31 August 1944," 5.

70. "362d Fighter Group Unit History, 1 October 1944–31 October 1944," 4.

71. Searl interview.

72. Joseph L. Laughlin, E-mail correspondence with the author, 15 March 2000, Montgomery, Ala.

Chapter 5

Col James R. McCarthy: 43d Strategic Wing

The degree of force that must be used against the enemy depends on the scale of political demands on either side. These demands, so far as they are known, would show what efforts each must make; but they seldom are fully known—which may be one reason why both sides do not exert themselves to the same degree.

—Carl von Clausewitz

In December 1972 US bombers and tactical aircraft launched a brief—but massive—air campaign throughout North Vietnam, with special emphasis on targets in the key cities of Hanoi and Haiphong. The operation, known as Linebacker II, was the last major attempt to compel the North Vietnamese government to reach terms of a peace settlement with the governments of the United States and South Vietnam. After eight years of American air operations in Southeast Asia (SEA), the 11 days of intense bombing during Linebacker II finally signaled the end of the war for America.

Until recently, the tendency has been to generalize the various US airpower missions in Vietnam as inappropriate for combating the type of war waged by the North Vietnamese and Vietcong.[1] Linebacker II, however, was a unique application of airpower in Vietnam. The strategic, operational, and tactical considerations of using B-52s in a series of sustained and overwhelming attacks against the North Vietnamese heartland changed the scope of the war overnight. This section explores the implications of that change on the morale of B-52 aircrews in the 43d Strategic Wing (SW), flying those missions from Andersen AFB, Guam. Col James R. McCarthy assumed command of the wing on 1 December 1972, just in time for Linebacker II to begin. Faced with an awesome responsibility

and paradoxically limited authority, Colonel McCarthy led his wing to success in spite of severe challenges.

End of the Vietnam War: US Withdrawal

After President Richard M. Nixon assumed office in January 1969, he began fulfilling his campaign promise of reducing the American presence in South Vietnam with an eye toward gradual withdrawal from the war. The Vietnamization concept was begun in an effort to reduce US troops in the South and replace them with trained South Vietnamese soldiers who could combat the North Vietnamese on their own. Complementing this strategy were efforts to negotiate a peace settlement that would provide the United States "peace with honor."[2] As American soldiers began redeploying home, American airpower became an increasingly important part of the remaining military force available to the president. In April 1972, with only 69,000 Americans remaining in South Vietnam, North Vietnam launched a full-scale conventional invasion across the demilitarized zone. The American response to the Easter Offensive was to commit USAF and US Navy aircraft in an interdiction and CAS campaign designed to isolate the North Vietnamese and provide relief to the South Vietnamese Army, which was losing the defensive battle.

Several months of American bombing turned the tide for South Vietnam. Interdiction and CAS missions weakened the striking power of the North's attack and brought them back to the negotiation table. By the end of the summer, the South had regrouped and recaptured much of the territory that was lost in April. On 22 October the Office of the Joint Chiefs of Staff (JCS) directed a cessation of bombing north of 20 degrees latitude in North Vietnam, and an apparent peace deal was at hand.[3] As happened on numerous other occasions, the North used this respite to reconstitute its forces; and by 6 November, enemy supplies were again flowing south to reequip the North Vietnamese Army.[4] Peace talks began to deteriorate through November; and on 13 December, the North Vietnamese negotiators once again walked out of the peace conference in

Paris.[5] This time President Nixon's reaction was swift and overwhelming. On 15 December—under direction from the president—the JCS ordered CINCPAC (commander in chief, Pacific Command) and CINCSAC (commander in chief, Strategic Air Command [SAC]) to "prepare a 3-day maximum effort by B-52s and TACAIR against essential military and war supporting targets in the heavily defended Hanoi and Haiphong areas."[6] The bombing campaign would ultimately last through December and become Operation Linebacker II. Its objective was to weaken the will of the North Vietnamese leadership and force them back to the negotiating table.

SAC Operations in SEA

The B-52 is well remembered for its successful strategic bombing missions during Linebacker II; however, SAC had been flying B-52s for years in interdiction and CAS roles in South Vietnam. The 43d SW and 72d SW(Provisional) on Guam and the 307th SW at U-Tapao, Thailand, at one time held more than one-half of the United States's B-52 force. Together, these assets complemented Seventh Air Force tactical fighters, bombers, and support aircraft and the Pacific Fleet's naval aviation assets in ongoing operations in South Vietnam and the surrounding border areas. From 1968 to 1971, SAC bombers supported ground forces by interdicting enemy troops and supplies that were flowing into South Vietnam. As one of the theater's only all-weather attack platforms, B-52s—with their six-man crews—could operate in conditions of heavy cloud cover, day or night.[7] Capitalizing on these capabilities and the large bomb load of the airplane, the commander of Military Assistance Command, Vietnam (MACV) relied upon SAC to plan B-52 operations on a daily basis.

The 307th SW at U-Tapao Royal Thai Navy Air Field in Thailand and the 43d SW at Andersen consisted of the older B-52D aircraft. The "D" model was not equipped with power-assisted flight controls and when fully loaded was a challenge for its pilots to fly.[8] The D model possessed two strong assets in the conventional combat role. First, its electronic countermeasures (ECM) equipment used to degrade the effectiveness

of enemy radar-guided surface-to-air missiles (SAM) and AAA was the most sophisticated in the SAC inventory. Second, the D model could carry up to 108 500-pound general-purpose bombs.[9] In addition the B-52Ds assigned at U-Tapao could reach their targets in and around Vietnam in only two hours instead of the six to seven hours required for the Guam-based aircraft. The 72d SW(P) stationed at Andersen had B-52G aircraft. The "G" model was newer than the D model, was easier to fly, and had more fuel-efficient engines. It had, however, two significant drawbacks. First, its ECM suite had not received the same upgraded jamming transmitters as the D models had.[10] Only half of the G models that would be assigned to the 72d would eventually have the more powerful ECM equipment. Second, the G model was not modified to carry as many conventional bombs as the D model. The G could carry only twenty-seven 750-pound general-purpose bombs.[11]

The chain of command for the B-52 wings operating in SEA was an unusual arrangement in an unusual war. B-52s were considered national assets because of their primacy in SAC's nuclear deterrent role. Therefore, SAC headquarters did not want to lose control of these aircraft in a war that had seen its share of aircraft attrition over the years. Breaking a central tenet of American airpower employment (centralized control/decentralized execution), CINCSAC retained operational and tactical control of the B-52s fighting the war in Vietnam. The chain of command thus went from the NCA, to the JCS, to CINCSAC, to Eighth Air Force, to the Air Divisions (AD)—(57th AD at Andersen, and 17th AD at U-Tapao)—to the operational wings. The normal combat link to the CINCPAC and the USAF command in theater (PACAF) was missing.

Perhaps the greatest organizational difference between SAC units and the tactical air units of Seventh AF was the policy concerning aircrew rotation and the definition of a combat tour. In Seventh AF the fighter pilots, weapon systems officers, and electronic warfare officers arrived in the theater for a permanent change of station (PCS) assignment. Generally, the length of the tour was one year for these aviators, at which time they would receive credit for a remote combat assign-

ment. At the end of the year, crews were rotated back to stateside units for normal assignments.

SAC aircrews had a variety of assignment classifications in SEA. Only a few crews were rotated to Guam and U-Tapao for PCS assignments. Most arrived at these locations on temporary duty (TDY) orders that stated the length of the TDY was not to exceed 179 days. While this was a shorter tour than their fighter counterparts, these SAC crews were at a distinct disadvantage. For one thing, TDY SAC crews could not receive credit for a remote assignment. The minimum number of days in-theater needed to receive remote credit was 180. This meant that SAC crews returning to the United States after a TDY were just as likely to be ordered back to SEA as someone who had never gone in the first place. Although most SAC crews did not stay in SEA for the full 179 days, the general cycle became 120 days in-theater, followed by one month back in the United States, followed by a return to SEA for another 120 days and so on. The specialized D-model crews were hardest hit by this policy because they had no opportunity to "train out of" the D model and into a stateside "H" model.[12] By the spring of 1973, some SAC crews had spent more than a thousand days TDY in the SEA theater.

Arc Light and Bullet Shot

Arc Light was the generic name given in 1965 to B-52 bombing missions that attacked enemy forces in South Vietnam.[13] B-52s and their crews were "fragged" for Arc Light sorties routinely until the war ended in August 1973.[14] Some Arc Light missions actually crossed into the southern portion of North Vietnam, but the main characteristic of Arc Light missions was that they were expected to be low risk to the aircrews. Because they usually were low risk, these missions were low payoff. In other words, the significance of mission success was rarely apparent to the crews. Aircrews sarcastically asserted that the real objectives of these missions were to "bomb monkeys" and "make toothpicks"; however, the official objectives invariably directed crews to "bomb suspected truck parks" or "disrupt suspected troop concentrations."

Bullet Shot was the name given to the systematic increase of B-52s deployed to SEA during 1972 and 1973. The United States observed that in early 1972 the North had stepped up its infiltration of troops into South Vietnam, and the NCA responded by increasing the number of heavy bombers sent to Thailand and Guam.[15] In February the first additional B-52s arrived in-theater, and by December both bases were saturated with bombers and crews. Two hundred B-52s and 348 crews were divided between the two bases, with Andersen carrying the majority of both.[16] Andersen was originally built to support 3,000 personnel, but it later exceeded 10,000.

Linebacker I

Seeking a preemptive blow against the growing strength of the South Vietnamese Army, North Vietnam launched an armored invasion into South Vietnam on 30 March 1972. For the first time in the long war, North Vietnam fought an American-style battle designed to achieve a decisive victory. While initially catching the defending South Vietnamese Army off guard, the North's strategy proved vulnerable to US airpower. Interdiction and CAS missions by tactical aircraft and B-52s successfully blunted the offensive and gave the South time to launch a counteroffensive.[17]

Initially called Operation Freedom Train, the American air attacks into North Vietnam became known by its more familiar name, Linebacker I. Linebacker targeting emphasized interdiction of enemy rail, roads, and war materiel from as far north as the Chinese buffer zone throughout the length of the country. The combination of severing bridges, rail lines, and major roads took time, but eventually US interdiction efforts slowed the resupply of enemy troops on the front. The mining of North Vietnamese harbors and attacks on power supply and petroleum storage targets added to the physical effects of the campaign. By the middle of September, the North was ready to resume negotiations; and South Vietnam appeared in a position to defend itself once again.

In the renewed period of peace talks, American aircraft ceased bombing north of 20 degrees latitude, but Arc Light and Linebacker I missions still continued through the fall.

During this time, SAC aircrews assumed a higher risk posture when headquarters designated certain sorties into North Vietnam as "press on" missions. This meant that aircrews could not abort these missions for reasons of hostile action or aircraft malfunction. It was in this context that the first B-52 was lost to a SAM launched by the enemy on 22 November 1972.[18] The enemy may have been weakened but was clearly not beaten. The success of Linebacker I was in doubt when North Vietnamese negotiators walked out of talks in Paris on 13 December.

Linebacker II

President Nixon once again used airpower to motivate the North Vietnamese to return to the peace talks when he launched Linebacker II on 18 December 1972. For the next 12 days, B-52s and other fighter-bombers relentlessly attacked North Vietnam.[19] The two main differences between previous operations and those conducted during Linebacker II were the intensity and the location of the attacks. The intensity was unique because B-52s became the central weapons platform. Up to 120 B-52s were launched in daily attack packages. Dozens of air-to-air F-4s, fighter-bombers, and suppression of enemy air defense (SEAD) assets were also tied into this packaging concept.

Linebacker II targets were mostly located in and around the two largest cities in North Vietnam—Hanoi and Haiphong. These two cities had enjoyed a relative sanctuary from the war up to this point, but President Nixon wanted to intensify the psychological effect of massive bomber strikes in his new campaign.[20] The types of targets selected were not significantly different from those struck during Linebacker I. However, by bringing the war home to North Vietnam in its heartland, the president wanted to achieve strategic effects rather than the operational effect interdiction normally produced.

The outcome of the Linebacker II bombing missions was largely successful for the limited objectives that the president sought. Ultimately, this series of attacks had the goal of forcing the North Vietnamese back to the peace conference. Underpinning such a return was the prerequisite that the

enemy's will to continue fighting must be weakened and that a quick settlement in Paris was essential. The bombings accomplished that. The agreement reached in January 1973 substantially met the American offer of October 1972, and peace finally was at hand.

43d Strategic Wing Operations in Linebacker II

B-52 crews from the two squadrons of the 43d SW (the 60th Bomb Squadron and the 63d Bomb Squadron [P]) struck a variety of targets during Linebacker II. These included military storage areas, rail yards, warehousing compounds, railroad repair facilities, power plants, SAM sites, and SAM support facilities in Hanoi and Haiphong. In the brief bombing operations, North Vietnam launched every SA-2 SAM and AAA piece they could fire at the B-52s. One estimate put North Vietnamese SAM launches at 884.[21] How many were actually launched at 43d SW aircrews will never be known, but every B-52 lost in Linebacker II was due to successful enemy SAM attacks.

Of the three B-52 wings in SEA, the 43d SW suffered the least number of aircraft losses during the Linebacker II operation. The three wings flew a total of 729 sorties in the campaign, and 15 aircraft were shot down as the result of enemy SAM launches. The 2 percent loss rate was less than the original SAC headquarters estimates given prior to the beginning of Linebacker II.[22] Even so, with the relative absence of combat losses prior to December, B-52 crews viewed the sudden spike in attrition with alarm. The greatest number of losses occurred in the first three days of bombing when missions repeated the same ingress/egress routings and attack times for each wave of B-52s.[23]

Compounding the redundant mission-planning flaws, the weakness in the G-model ECM capabilities became obvious to all who noticed that 66 percent of the losses in the first three days had been G models. SAC directed both Andersen wings to cease Linebacker II missions on 21 and 22 December while an evaluation of the losses was made. An impromptu tactics review conference was held by 43d SW and 72d SW(P) air-

crews, and recommendations were forwarded to SAC for approval and testing. Although the 43d SW flew missions again on 23 December, it was not until 26 December that a complete integration of new tactics was introduced when all three wings once again flew Linebacker II missions.

The single mission on 26 December was historic. Thirty-three B-52Ds from Andersen took part in a total package of 120 B-52s launched from the two bases. This massive formation of aircraft overwhelmed the North Vietnamese defenders by striking targets in Hanoi and Haiphong within a single 15-minute window from multiple attack headings.[24] Two B-52s were lost on the attack, but neither was from the 43d SW. In the final three days of Linebacker II operations, the 43d SW lost only one additional aircraft. These later B-52 attacks were met by ineffective SAM resistance; and, ironically, American air superiority was achieved just as the NCA terminated the bombing campaign.

Table 3 presents the overall mission summary for the 43d SW during the 11 days of bombing. Four factors restricted the 43d SW from launching more sorties than its sister wings. First, the 43d only had 53 aircraft (and 52 crews) compared to 99 G models (and 149 crews) in the 72d SW(P).[25] Second, the average 12-hour mission duration for the 43d crews meant that they could not generate as many daily sorties as their contemporaries at U-Tapao. Third, the 43d SW had to stand down for three days of Linebacker II missions at the direction of SAC. Finally, on 23 December the 43d SW was ordered to transfer 22 B-52D crews to U-Tapao to replace losses and provide some relief to the overworked crews of the 307th SW.

Table 3

43d Strategic Wing Sortie Summary during Linebacker II: 18–29 December 1972

December:	18	19	20	21	22	23	24	26	27	28	29
Sorties	33	27	24	0	0	12	0	33	9	15	17
Aircraft Losses	0	0	1	0	0	0	0	0	1	0	0

Source: "Chronology of SAC Participation in Linebacker II," Air University Library document no. M-U 41115-98, 59–313.

The combined level of effort was 170 sorties for the 43d SW, 219 sorties for the 72d SW(P), and 340 sorties for the 307th SW. The 43d SW sustained a 1.2 percent loss rate compared to 2.7 percent for the 72d SW(P), and 2.1 percent for the 307th SW.[26] Overall, the 43d SW successfully attacked a variety of military targets in and around North Vietnam's two major cities and contributed to the success that Linebacker II achieved. The wing was no more influential than the other two B-52 wings participating in these attacks, but each wing faced its own difficulties sustaining combat effectiveness. Wing leaders struggled to balance the management of such large organizations against the human elements of aircrew morale. Morale was certainly a complex factor in the combat success of the 43d.

Aircrew Morale within the 43d Strategic Wing

There are many myths surrounding the morale of the bomber crews on Guam during Linebacker II. Stories of mutinies against leadership, raucous behavior at the officers' club, and crews refusing to fly combat missions have been significantly exaggerated.[27] Perhaps the rowdy behavior at the officers' club was more fact than fiction; however, lack of communication in the wings was the biggest contributor to misreading actual events. The two wings at Andersen were too large to be effectively led using the standard AF wing/squadron template. In reality the crews at Andersen were professional airmen and carried out the orders given to them, just as they had time and again on previous missions. Duty not involving flying (DNIF) rates, measured by airmen reporting to the hospital, rose from an average of 35 per day before 18 December to 65 per day during Linebacker II.[28] With more than 1,200 crew members at Andersen, the DNIF rate did not affect combat capability and was not alarmingly high considering the shift to high-tempo operations. Regarding outright refusals to fly, only one B-52 crew member—a pilot at U-Tapao—was relieved of flying duties for disobeying a direct order to fly combat.[29] This author could find no information about how many aircrews were

classified as conscientious objectors at Andersen during the time, although some 43d SW aircrews pointed out that those cases existed.[30] Evaluating morale in the 43d SW during this time is therefore no simple task.

Aircrew morale in the 43d SW during Linebacker II must be assessed in context before evaluating the various influences present. The 43d SW was not an ordinary combat unit fighting an ordinary war. The best way to understand the wing's character is to realize that it was a huge TDY organization with members on loan from multiple units back in the United States. Only a few staff personnel were permanently assigned. For the rest, the novelty of being TDY had worn off long ago.

By 15 December 1972, Bullet Shot had inflated the 43d SW to the size of more than three normal stateside B-52 wings. Approximately 325 individual crew members were assigned to the wing, although it is difficult to ascertain the specific number of crews assigned at any one time because it continually changed. New crews arrived daily, while others transferred to U-Tapao and still others deployed back to the United States in unpredictable patterns. Both of the other B-52 wings experienced this same SAC personnel policy that undermined unit cohesion and esprit de corps. Each crew became somewhat of an island unto itself throughout the turmoil of rapid reassignment. Many aircrews did not know the name of their TDY squadron commander or wing commander and would not have recognized either of them in a crowd.

The pattern of previous bombing operations also influenced the morale as they began the Linebacker II campaign. It appeared that their participation in Arc Light missions during the fall of 1972 was meaningless. One aircraft commander described those missions as "practice bleeding" because the crews had grown weary of bombing insignificant targets under heavy political restrictions.[31] This attitude was not confined to the 43d SW. A copilot in the 72d SW(P) also "felt [they] weren't getting much accomplished."[32]

Aircrew morale prior to Linebacker II was quite low in the 43d SW. Boredom and lack of motivation were common, especially among the crews that had been on several other SEA TDYs in recent months. Even official correspondence between

the 57th AD and Eighth Air Force recognized that "in many cases among [the] crews, enthusiasm has diminished."[33] When Linebacker II began, morale improved immediately.

The initial aircrew response to the information received that B-52s were finally going to hit targets in Hanoi and Haiphong was a mixture of apprehension and approval. Capt Gerald T. Horiuchi summed up their overwhelming sentiment in this statement. The attacks were "long overdue and something that needed to be done. Go in, kick a--, and get it over with. The guys were anxious, nervous, even scared, but morale, I think, was generally high."[34] After three days of Linebacker II bombing, morale fell sharply due to heavy losses; but crews were still motivated to fly, even if SAC headquarters was not. The historic 26 December mission brought about a rise in morale that buoyed aircrew spirits through the end of the campaign.

Since the rise and fall of morale over the brief period of Linebacker II was noticeable, evaluating the trend in morale may be as instructive as attempts to measure the subjective level of fighting spirit at any one time. Individual needs, cohesion, and esprit de corps are decisive factors in pilot morale.

Individual Needs

The physical needs of food, clothing, and shelter did not detract from overall aircrew morale within the 43d SW. Although overcrowding was a problem, the aircrews had air-conditioned quarters which most other personnel—living in tents or "tin city"—lacked at Andersen. The issue of rest affected aircrews in various ways. Some crews flew only one Linebacker II mission, while others flew four or five. In addition to Linebacker II sorties, the 43d SW was concurrently tasked to fly Arc Light missions in South Vietnam. On flying days the crew's average duty day was 24 to 26 hours long. They immediately went into crew rest after completing their debriefing, and most crews had at least one day off between missions. A routine developed in which aircrews would fly, land, drink, and sleep in what seemed a constant cycle.[35] One of the recommendations that aircrews made after Linebacker II was to establish "crew rotation and R/R [rest and recreation] on a scheduled basis [in order to] maintain crew morale."[36] Rest did not impair the

morale of the aircrew, but it was a growing concern. Equipment and training had slightly more influence on aircrew morale.

One of the planning assumptions made by SAC in the initial planning stages for Linebacker II was that no increases in spare aircraft or additional equipment would be needed.[37] Although that assumption was based on a three-day maximum effort, by 21 December SAC began flying in replacement aircraft and crews to offset the losses. Some aircrews were concerned that Linebacker II could not continue at the loss rate of the first three days and felt that losses at the time were high.[38] SAC replacement efforts brought 10 additional B-52Ds to Andersen and U-Tapao by 25 December.[39] When considering the much lower loss rate after 22 December, aircrew concerns did in fact subside as the bombing campaign continued.

Training was a morale issue for all members of the wing. Some crews were barely proficient at flying the D model. Although the wing flew the older B-52Ds, the home units of some TDY crews flew G or H models. To prepare them for their assignment to the 43d SW, those aircrews attended a two-week upgrade training program before arriving in-theater in order to be qualified to fly the D. From a morale standpoint, these crews had a difficult time adjusting. After Linebacker II, a SAC staff visit to SEA found that " 'G' crews locked into the 'D' package have major attitude problems. They generally feel like orphans both at home and while TDY. They are also concerned about the problems of upgrading."[40] There were no aircrew comments made concerning this problem during Linebacker II; however, this attitude was likely to have existed before, during, and after the December bombing missions. The equitable opportunity for training is a valid concern for aircrew morale, as is the concept of "training like you intend to fight."

Normal training given to B-52 crews in the United States prepared them for the nuclear-attack role. That training focused on single-ship, low-altitude penetration of Soviet Union air defenses with a particular emphasis on avoiding early warning and SAM radar detection. When they arrived in SEA, the tactics directed from SAC did not mirror what crews had trained for. Instead, the tactics called for high-altitude bomb-

ing by B-52s in three-ship "cells." SAC assessed the low-altitude AAA threat to be much higher than North Vietnamese SAMs and also believed that the mutual ECM coverage of three B-52s would mitigate the SAM threat. The abandonment of previous training directly affected aircrew confidence in the tactics ordered from headquarters and severely lowered morale.[41]

The two psychological needs of 43d SW aircrew (confidence in tactics and confidence in equipment) were inseparably linked. B-52 crews did not specifically address their confidence in the aircraft itself, but rather in the combination of the bomber and the tactics. The 43d SW crew confidence in tactics was low after the first three nights of Linebacker II. Two tactical errors were repeated on each of the first three nights. First, wave after wave of B-52s attacked the same targets from high altitude along similar ground tracks. This predictability gave the North Vietnamese defenders a much higher probability of damaging the B-52s in formation. Second, each B-52 was required to execute a 45-degree bank turn to reverse course immediately after weapons release. This turn not only reduced B-52 ECM transmitter antenna coverage against the SAMS but also turned the B-52s into 100-knot headwinds that kept the aircraft within range of the SAM operators for longer periods.[42] Aircrews attributed low morale to these faulty tactics.[43]

The difficulty with rectifying the tactical problems was not a lack of imagination but the inherent delay caused by SAC planners locking out changes to the daily missions 42 hours before they were executed.[44] As a rule, the farther removed (in distance and hierarchy) the tactical decision makers are from the crews flying the missions, the less flexibility there will be in the planning process. In this case, 43d SW aircrew morale suffered due to poor tactics and their physical loss of control with regard to improving the situation. During the stand-down of 21 December, aircrews recommended changes to tactics that SAC accepted and incorporated as quickly as they could into future mission plans. Not surprisingly, these new tactics may have done more to raise morale than any other factor. When the last Linebacker II mission briefing began on 29 December, the 43d SW commander noticed that morale was at an all-time high:

> As the crews filed into the briefing room, I could sense their rising level of confidence. We were closing in for the kill, and they knew it. . . . I had crews who had just landed hours earlier from the previous night's mission ask to be put in the lineup. . . . One crew even went so far as to file an Inspector General complaint. Their argument was that they, being a less experienced crew, needed the mission for crew proficiency more than the old heads.[45]

Changing tactics directly led to fewer losses as Linebacker II came to a close. The perception of success balanced against bearable losses finally gave 43d SW crews confidence that they could defeat the enemy.

Cohesion

The level at which 43d SW aircrews most closely bonded was with their own six-man crew. With few exceptions, those bonds were formed well before Linebacker II began. Since crews always deployed from their home station together, once in-theater they could focus on specific mission details rather than having to work through new crew coordination techniques with unknown personalities.

Cohesion continues to boost pilot morale. Several of the 43d SW aircrews who commented that they kept the same crew throughout Linebacker II also listed—by name and crew position—the other members of the crew. Their bonding improved morale in at least two ways. First, there are examples of individual crew members that were DNIF just before Linebacker II who, upon notification that Linebacker II was about to begin, demanded that the flight surgeon restore them to flying status because they did not want their crew "going North" without them.[46] Second, some crews were willing to fly aircraft with known malfunctions just so they could accomplish their first mission over Hanoi. In those cases the enthusiasm to fly was a conscious effort to battle the war of nerves felt by those waiting to participate.[47]

Esprit de Corps

The ad hoc nature of the 43d SW, with its two bomb squadrons, did not lend itself to provide a secondary group identity for the aircrews that flew within it. The aircrews

merely were there TDY and did not view themselves as being part of any unit other than their home squadron or wing. As a matter of fact, when questioned about *unit* losses during Linebacker II, many aircrews reflected—not on losses from the 43d SW—but on the losses of B-52s from their home units.[48]

There are a few reasons why this secondary group identity may not have formed. First, the transient nature of the wing did not encourage new members to invest much effort in bonding. Second, most aircrews did not interact with squadron and group leaders. Third, the wing had no visible history or reputation upon which to build. The net result was twofold. Crews never broke the secondary bonds established with their permanent unit back home. Even more serious, the crews viewed many of the officers in authority outside their own crew as detached and unsupportive. The absence of a secondary group left the crews isolated. It is difficult to determine if strong esprit de corps among the aircrews would have improved morale dramatically. It may have provided stability throughout the wing when losses began to rise and before new tactics began to improve morale.

James McCarthy's Influence on Morale

Colonel McCarthy held several other command positions in SEA before assuming command of the 43d SW. As a command pilot he had previously served two combat tours in Vietnam in 1965 and 1968 before returning in March 1972 to assist with the Bullet Shot and Arc Light operations at Andersen. Between March and December 1972, McCarthy moved three times intheater to become the 310th SW commander at U-Tapao, the 4104th Refueling Squadron commander at Korat, and back to Guam to serve as the 43d SW vice commander. While at U-Tapao, McCarthy's KC-135 wing and the B-52 crews of the 307th SW participated in Linebacker I. This participation was his first exposure to employing B-52s in North Vietnam. His second was leading the 43d SW in Linebacker II.

McCarthy took command of the 43d SW not only when aircrew morale was low due to Arc Light missions but also at a time when the wing workload was extremely high because of

the crowding that Bullet Shot had created. The leadership challenge that Colonel McCarthy faced during Linebacker II consisted of several elements. As a wing commander, SAC held McCarthy personally responsible for the success or failure of his unit in the largest use of American bombers since World War II. However, his authority in the operation was not commensurate with that level of responsibility. SAC headquarters retained absolute control. McCarthy felt much pressure. During Linebacker II, he worked 20 hours each day in order to coordinate with Eighth AF and SAC for the upcoming missions, while simultaneously tending to the time-constrained flight planning needs of the crews.[49] The stress may have contributed to his poor health at the time. He contracted pneumonia in mid-December, and the condition worsened throughout Linebacker II.[50]

McCarthy's influences, both positive and negative, on aircrew morale during Linebacker II were indirect. Most crews considered the wing staff detached from daily combat operations and viewed the wing as an administrative tool used to coordinate combat power, not to employ it. McCarthy provided essential logistical support for the crews but was not a combat crew member himself. His major interaction with Linebacker crews was at the mission briefings, but even there it was a brief appearance. Working behind the scenes, however, Colonel McCarthy assisted in organizing and supported the single most important morale issue—the change in combat tactics.

His previous exposure to fighter operations and Linebacker I bomber operations convinced McCarthy that the key to negating the North Vietnamese SAM threat was to keep B-52 cells (three-plane formations) close together to maximize mutual ECM protection.[51] When he learned at the first Linebacker II debrief that some crews were breaking formation to defend against SAM launches, he issued an unpopular verbal order to his pilots: "Anyone who broke formation to dodge SAMs would be court-martialed."[52] His follow-up was a written order that required each aircraft commander's signature.[53] Although crews initially protested, they would later come to conclude that "the integral cell of three mutually supporting aircraft is the best defense against existing threats," and further that

"maneuvering up to the release [of bombs] places self protection above bombs on the target. This is not acceptable."[54] Keeping the B-52 cells together was, in fact, an effective tactic that contributed to the low loss rate of 43d SW aircraft. Colonel McCarthy also supported other tactical changes.

On 21 December during the SAC stand-down at Andersen, staffs from the 43d SW and the 72d SW spent the afternoon "talking to crews and asking for their ideas on how to improve tactics."[55] McCarthy also distributed a three-section questionnaire to each of his crews on the 21st, the purpose of which was "to get [aircrew's] ideas on how to improve Compression type missions."[56] The recommendations from the crews included varying attack headings, decreasing the large turn after the target, varying bomber altitudes, and shortening the attack window. It is unclear where the genesis of the tactics changes originated; however, Colonel McCarthy supported these recommendations and—together with the 72d SW(P) commander—forwarded 43d SW inputs to Eighth AF and then to SAC.[57] Some of the changes were incorporated for the missions flown on 23 December, but all of the new tactics were used on the missions flown on 26 December. Although McCarthy did not have sole authority to change tactics of this significance, he defended his crews by arguing for these changes to SAC. The improved tactics raised morale as soon as the crews saw that they were being used.[58]

Even though morale climbed with the introduction of new tactics, crews did not attribute the changes to Colonel McCarthy's actions. The perception of McCarthy's influence on the lives of the aircrews was skewed by poor communication throughout the wing. Three areas related to aircrew esprit de corps were damaged because of the 43d SW command structure. First, the crews did not have access to Colonel McCarthy on a frequent basis because of the size and complexity of 43d SW operations previously discussed.[59] Aside from specific administrative action, McCarthy's greatest contact was with aircraft commanders.[60] Second, Colonel McCarthy could not contribute to the reputation of his combat wing in the traditional sense—setting the example in battle by piloting an aircraft. Wing commanders in SAC at the time were not members of a

combat crew. Third, even though McCarthy flew as the airborne mission commander (ABC) on 19 December and again on the massive attack on 26 December, he flew in the "seventh" seat on board—one normally occupied by an instructor pilot or evaluator on training missions. The ABC was not a novel duty in SAC, but for Linebacker II it was mandated to be filled by a full colonel who was responsible for the success or failure of that mission. For security reasons, however, SAC was hesitant to grant permission for the wing commanders to fill that role. It reflects a high sense of mission dedication that Colonel McCarthy twice convinced the Eighth AF commander to allow him to fly these missions, even though the flight surgeon strongly protested the decision based on his medical condition. Although McCarthy felt that a commander must share the dangers that he asked his men to endure, the crews looked at it differently. They viewed the ABC as an outsider who might interfere with mission accomplishment as much as contribute to its success. Rather than build a bond between the wing and its individual crews, the ABC role proved to be a source of friction and lowered morale.[61]

Conclusions

The dedicated efforts of the 43d SW were an important factor in the success of Linebacker II which, in turn, helped lead to the release of the American prisoners of war and to the subsequent end of the Vietnam War. The 43d SW history states that "the Wing [did] not lose a mission due to low morale" during Linebacker II. In fact morale was quite high. It is instructive then to look at what caused the noticeable lowering of morale after the third night's missions. Losses alone might have contributed to this drop; however, an equal number of wing losses occurred after 26 December when morale remained high. The only difference between the beginning and the end of Linebacker II was that the aircrews believed they had more control of the environment because SAC planners had followed their tactical recommendations. Their confidence was high as a result.

Colonel McCarthy's actions during the period in which tactics changed allowed his aircrews a forum for voicing their opinions. The 43d crews ultimately felt vindicated once they realized that their ideas were being heeded, but they did not recognize that McCarthy's support for their ideas was equally as important as the ideas themselves. Instead, the SAC wing structure—inappropriate for operations in SEA—created a block between the crews and wing staff that prevented the normal promotion of esprit de corps. Poor communication, lack of rumor control, and low visibility of the wing commander contributed to this problem. In the end a sense of esprit de corps may not have increased mission effectiveness, but it would have increased enthusiasm for flying the missions during those periods when aircrews expressed doubts about the wisdom of their chain of command.

Notes

1. Mark Clodfelter, *The Limits of Air Power: The American Bombing of North Vietnam* (New York: Free Press, 1989). Clodfelter discusses various successes and failures of individual air campaigns in the Vietnam War.

2. Ibid., 148. Nixon proposed a peace settlement that would see the removal of US troops from South Vietnam, a prisoner-of-war exchange, and a cease-fire throughout Vietnam.

3. Strategic Air Command (SAC), SAC/HO, "Chronology of SAC Participation in Linebacker II, 12 August 1973," USAF Air University Library document no. M-U 41115-98, 13.

4. Ibid., 14.

5. Karl J. Eschmann, *LINEBACKER: The Untold Story of the Air Raids over North Vietnam* (New York: Ivy Books, 1989), 73.

6. "Chronology of SAC Participation in Linebacker II," 19.

7. The crew consisted of an aircraft commander (pilot), a copilot, a radar navigator (bombardier), a navigator, an electronic warfare officer, and a tail gunner. All were officers except the enlisted gunner.

8. James R. McCarthy and George B. Allison, "Linebacker II: A View from the Rock," USAF monograph working papers, 42d Air Division SAC, 15 February 1978, United States Air Force Historical Research Agency (hereinafter cited as AFHRA) file no. K416.04-13, vol. 1, 6–29.

9. James R. McCarthy and Robert E. Rayfield, *B-52s over Hanoi: A LINEBACKER II Story* (Fullerton, Calif.: California State Fullerton Press, 1996), 14.

10. "Chronology of SAC Participation in Linebacker II," 60.

11. Ibid., 90.

12. "History of 43d Strategic Wing, 1 January 1973–30 June 1973, Volume 2," AFHRA file no. K-WG-43-HI, January–June 1973, V-2, exhibit 128. Official correspondence between 72 SW/CC, 43 SW/CC, and 57th AD/CC, subject: Aircrew Morale.

13. McCarthy and Rayfield, 13.

14. In this context, the term *fragged* refers to the daily mission order that outlined each unit's required combat role for the day. Typically, each combat wing did not see the overall mission flow for all assets in the theater—they merely were issued a fragment of the complete order containing their aircraft tasking.

15. McCarthy and Rayfield, 13.

16. Ibid., 15. Figures were given by the Eighth AF commander, General Johnson. Andersen Air Force Base (AFB) had 155 B-52s by December 1972, with the remaining 50 aircraft at U-Tapao.

17. Eschmann, 11.

18. "Chronology of SAC Participation in Linebacker II," 15.

19. A one-day stand-down was granted for Christmas day, so the total number of bombing days was 11.

20. Targets in Haiphong were struck in April 1972 by B-52s but only very briefly. The target set was petroleum storage, and the intent was to destroy it before it could reach the front.

21. "Chronology of SAC Participation in Linebacker II," 315. This figure was based on Air Force Special Communications Center signals intelligence collected during the operation.

22. McCarthy and Allison, 7-6; and James R. McCarthy, questionnaire reply to author, 4 April 2000. The predicted loss rate due to enemy defenses was between 3 and 5 percent. Colonel McCarthy's own personal opinion was that losses might be as high as 10 percent. Other unnamed senior officers thought the loss rate could reach 15 to 20 percent during Linebacker II.

23. "Chronology of SAC Participation in Linebacker II," 69–135. Nine B-52s were lost by the third day—three aircraft on 18 December and six aircraft on 20 December.

24. Ibid., 222.

25. Ibid., 29.

26. Ibid., 59–313.

27. Earl H. Tilford, *Setup: What the Air Force Did in Vietnam and Why* (Maxwell AFB, Ala.: Air University Press, 1991), 269. Tilford counters claims that the crews mutinied at any of the wings.

28. SAC/HO, "SAC Historical Monograph #204: SAC Bomber Operations in the Southeast Asia War, Volume IV," unclassified excerpts, AFHRA file no. 85-TS-AFHRC-29, K416.01-204, V-4, 836.

29. Ibid., 837.

30. Jack C. Hawley, questionnaire reply to author, 28 April 2000; and William F. Stocker, telephone interview by author, 16 April 2000, Montgomery, Ala.

31. Hawley questionnaire.

32. Ed Wildeboor, questionnaire reply to the author, 26 April 2000.

33. "History of 43d Strategic Wing, 1 July 1972–31 December 1972, Bullet Shot—Part II, With Emphasis on Linebacker II, Volume 3," 24 May 1973, AFHRA file no. K-WG-43-HI, July–December 1972, V-3, exhibit 157. Message dated 2 October 1972 from 57th Air Division (P) to Eighth AF/DP, subject: Impact of Bullet Shot/Constant Guard on Morale and Welfare.

34. Gerald T. Horiuchi, questionnaire reply to author, 24 April 2000; and James M. Short, questionnaire reply to author, 12 May 2000.

35. Hawley questionnaire.

36. "History of the 43d Strategic Wing, 1 January 1973–30 June 1973, Volume 2," exhibit 123. Official memorandum from 43 SW/CC and 72 SW/CC to 57 AD/CC and 8AF/DO, 7 January 1973, subject: Crew Comments and Recommendations on Tactics Used on Compression Missions.

37. "Chronology of SAC Participation in Linebacker II," 39.

38. Bill Beavers, questionnaire reply to author, 25 April 2000; and Roger A. Klingbeil, questionnaire reply to author, 27 April 2000.

39. "Chronology of SAC Participation in Linebacker II," 154.

40. SAC/DOTN and SAC/DOXTB, "Operations Staff Visit with B-52 Aircrew Members TDY to SEAsia," n.d., photocopied memorandum to General Allen provided to author by William F. Stocker. In addition to leading several Linebacker II missions, Major Stocker traveled to SEA from 25 June 1973–13 July 1973 to update aircrews on future SAC presence in the area.

41. John S. Sherman, questionnaire reply to author, 9 May 2000. Although Captain Sherman flew with the 72d SW(P), his opinion of SAC training is relevant. He stated, "I believed that the on-the-shelf plans (that we trained for) should have been employed vs. [sic] the high altitude bombing (that we hadn't been trained to do)."

42. The ALT-28 transmitter antennas on the bottom of the B-52 are fixed and rotate their jamming patterns as the aircraft is maneuvered. The most predictable coverage possible is when the aircraft is straight and level.

43. Horiuchi questionnaire, 24; Dwight A. Moore, questionnaire reply to author, 26 April 2000; and Wildeboor questionnaire. Horiuchi's opinion was shared by members of each of the three B-52 wings.

44. Harry Cordes to James R. McCarthy, n.d., AFHRA file no. K416.04-13, 77/05/12-78/01/04, V-12; and McCarthy and Allison, 4–7. The letter from General Cordes, SAC/DCS for Intelligence, explained the decision-making process at SAC during Linebacker II mission planning. To graphically depict the time-consuming process, staff planners had to draw a 20-foot-long time line to illustrate all the specific actions necessary to produce one day's mission.

45. McCarthy and Allison, 6-36, 6-37.

46. Horiuchi questionnaire.

47. Steve Kovich, questionnaire reply to author, 28 April 2000. His crew had been performing "manned spare" duty for the first few days of the cam-

paign. The bar talk from crews returning from missions began to make them all a bit nervous. Kovich knew that his crew needed a combat mission under their belt to settle their nerves; and so once they were on the schedule, he elected to fly his B-52 even though it had lost an alternator on the ground.

48. Horiuchi questionnaire; and Hawley questionnaire. A poorly worded question by the author could also be responsible for this confusion.

49. "History of the 43d Strategic Wing, 1 January 1973–30 June 1973, Volume 1," 7 December 1973, unclassified excerpts, AFHRA file no. K-WG-43-HI, January–June 1973, V-1, Appendix II: Commander's Summary, 2.

50. Ibid., 4, 9.

51. Ibid., 5.

52. Ibid., 6.

53. "History of 43d Strategic Wing, 1 January 1973–30 June 1973, Volume 2," exhibit 179, memorandum from 43 SW/CC, subject: Air Discipline, 2 January 1973.

54. "Briefing for General Johnson: How B-52 Crews Would Plan an Attack against the Hanoi/Haiphong Complex Were Such Attacks Again Necessary," 21 February 1973, AFHRA file no. K416.04-13, 72/12/01-73/04/25, V-13, 5–7. Aircrews were tasked to draw up lessons learned from Linebacker II to present to the Eighth AF commander.

55. McCarthy and Allison, 4-6; and McCarthy and Rayfield, 104–5.

56. "History of the 43d Strategic Wing, 1 July 1972–31 December 1972: Bullet Shot—Part II, with Emphasis on Linebacker II, Volume 3," exhibit 168. Commander, 43SW/72SW(P) memorandum to aircraft commanders, subject: Compression Mission Questionnaire, 21 December 1972.

57. "History of 307th Strategic Wing, October–December 1972, Volume 1," AFHRA file no. K-WG-307-HI, October 1972–December 1972, V-1, 51. The unit history of the 307th SW at U-Tapao states that Col Bill Brown, the vice wing commander, initiated his own tactics conference on 20 December 1972 and submitted recommendations to Eighth AF afterward. The 43d SW tactics reviews occurred either simultaneously or shortly after Eighth AF received the recommendations from U-Tapao.

58. McCarthy and Rayfield, 128. The aircrews viewed the changes with relief during the briefing for 26 December.

59. William F. Stocker, questionnaire, 11 May 2000. Those few crew members that did have frequent contact with McCarthy recognized his positive involvement with regard to supporting the crews with tactics changes and providing beer for mission debriefs. Also mentioned is the fact that McCarthy tried to meet as many aircrews returning from missions as possible, but that mission briefings provided the most common contact with the crews.

60. Robert A. Clement, "A Fourth of July in December: A B-52 Navigator's Perspective of Linebacker II" (research report, USAF Air Command and Staff College, 1984), 25; and McCarthy and Allison, 5-5. On 17 December only pilots could attend the initial announcement briefing that Linebacker II was about to begin. Even small social engagements such as

Christmas eve dinner tended to include only aircraft commanders. Colonel McCarthy and SAC viewed the aircraft commander as a link in the chain of command.

61. Beavers questionnaire; Joe Bynum, questionnaire reply to author, 27 April 2000; and Sherman questionnaire. The crews from both Andersen wings shared this sentiment.

Chapter 6

Conclusions

While fighting is a physical act, its direction is a mental process. The better your strategy, the easier you will gain the upper hand, and the less it will cost you.

—Sir Basil Henry Liddell Hart

Because the military is an authoritarian organization, management and leadership isssues confront the military commander. Management of the unit deals with the administration and logistics of war—how to feed, house, and supply the force. In theory it is very simple to understand what physical items are required to sustain the troops, given the nature of the engagement and resources available.

Leadership is complex and should never be reduced to mathematical formulae or prescriptive regulation. There are many approaches to perfecting this complex concept. With this appreciation, a brief analysis of leadership is addressed. Yet even though there are unique aspects of each of the previous case studies, there are also some common threads that run through them.

Similarities in Aircrew Morale

Of the three general areas that contributed to aircrew morale (individual needs, cohesion, and esprit de corps), the satisfaction of individual needs stands out as the most important with regard to maintaining high morale. Cohesion—as it related to motivating aircrews to fly—was irrelevant for both German and American fighter pilots and only slightly influential when it came to B-52 crews. Even esprit de corps, which was strong in the first two cases, was not singled out by the pilots as a paramount cause of their motivation. Esprit de corps was totally lacking in the case of the 43d SW, so it could

not have had any influence on the periods of high morale for those bomber crews.

By looking further into the category of individual needs, the two subsets (physical needs and psychological needs) are not equally as important. Physical needs for these airmen were always kept at least at Dr. Manning's minimum acceptable level; but in the case of the 362d FG, a trend was noticed. When conditions improved over time, morale improved; but when conditions declined over time, morale generally suffered. Both *JG*26 and the 43d SW displayed no significant changes in physical needs over the periods studied.

Psychological needs were clearly more important influences on aircrew morale than any other category. The confidence that was developed from valid training and the perceived superiority of their aircraft kept aircrew enthusiasm high. Since tactics is the process of matching training and equipment against a particular opposing capability, it is not difficult to see that for the aircrews the influence of tactics during these three air campaigns had a direct impact on morale. During the Battle of Britain, the air-to-air success of *JG*26 pilots was a result of innovation and standardization of tactics created within the wing. The initial high fighting spirit of these pilots only dropped once the close escort and *jabo* missions were dictated by Göring. Even so, after the wing improvised new tactics for escorting bombers, morale stabilized. The *jabo* missions, however, led to the most dramatic decrease in morale because the wing chose not to develop tactics commensurate with the new role. In Manning's own terms, the *jabo* pilots had neither a goal nor self-confidence.

The P-47 pilots of the 362d FG had a more consistent experience with tactics. Although they arrived in Europe thinking they would be employed in the pursuit role, they quickly adjusted to ground-attack missions. The squadrons not only sought experience from the veterans of the Italian campaign but they also measured success primarily by the number of enemy ground positions destroyed. Aerial victories became a secondary measure of success. The validity of their CAS tactics was reinforced by the rapid advance of the army they were assigned to assist. The wide variety of missions tasked to the

group led very naturally to a flexible attitude toward employing airpower. With this perspective, they developed new tactics as the situation warranted.

The B-52 crews of the 43d SW displayed the most noticeable correlation between morale and the selection of tactics. The apparent inflexibility of tactics during the first three days of bombing lowered crew morale because they did not believe that losses needed to be as high as they were. The distant imposition of these tactics further alienated the crews who were risking their lives to complete the missions. Once the tactics recommended by the aircrews were reflected in the later missions of the campaign, crew morale once again became high.

Morale, Wing Leadership, and Combat

The wing commander holds a unique position in combat. He is close enough to his individual pilots and aircrews that he understands their concerns on a personal level. Nevertheless, he is also an important link to higher headquarters and must understand the greater part that his unit plays in meeting national goals. His job is to satisfy headquarters' requirements by executing his management and leadership responsibilities. The motivation of his people becomes a prime leadership concern in this endeavor, and maintaining high morale is an obvious necessity. If—as it seems from these three case studies—aircrew morale is primarily concerned with the tactics used to fly combat missions, then a wing commander must be involved in that discussion. Each of the three commanders studied had an influence on aircrew morale via tactics.

Major Galland was the father of most of the improvements in tactics within *JG*26. By developing his own close-escort tactics and amply demonstrating his successful air-to-air tactics throughout the wing, he helped to sustain the morale of his men. However, the deficiency in *jabo* tactics was also directly attributable to Galland. He never accepted Göring's objectives for the *jabos;* therefore, he placed little emphasis on succeeding at the mission. Instead, he formed tactics that helped to protect the Bf 109 *jabos* on their attacks rather than demanding tactics that helped those pilots place bombs on target.

Since the mission was not deemed worthwhile, his pilots grew frustrated with the tactics, and morale declined.

The pilots of the 362d FG had fewer complaints with tactics than the other two units under consideration. It is, therefore, not as obvious to evaluate Laughlin's influence on the evolution of tactics. He was, however, one of the pilots who traveled to Italy to learn ground-attack tactics and returned to England to pass on the lessons learned. In this regard, Laughlin was one of the progenitors of all 362d FG ground-attack tactics. His direct involvement in the attacks on ships in the Brest harbor and on the Dieuze dam demonstrated how closely he was connected with executing new tactics in the group as the war progressed.

Colonel McCarthy found his previous B-52 experience while at U-Tapao a valuable asset in the fostering of new tactics from within the 43d SW. In addition to emphasizing the importance of three-ship cell integrity in degrading SAM effectiveness, he also was responsible for the tactics review sessions held during the Linebacker II stand-down period. He saw the value in the aircrew recommendations and used his influence with higher headquarters to argue for those tactical improvements in future missions. The incorporation of these changes added to the complexity of future missions but also significantly raised aircrew morale.

Lessons for the Commander

The purpose of this study was to attempt to identify characteristics of wing leaders that were able to sustain aircrew morale in spite of heavy losses in combat. Each of the three commanders studied had different individual characteristics and leadership styles, and it became obvious that no all-inclusive analysis could be made. Even so, one behavioral characteristic did stand out: a wing commander must be flexible enough to encourage tactical innovation in combat if he wishes to maintain a high level of aircrew morale, regardless of how heavy losses may be. This effort allows the pilots and aircrews under his command to exercise additional control over the combat situation. It appears likely that as combat losses increase, this level of control must also increase, or else morale will slip.

Based on the three case studies, there are two paths that wing commanders can take toward improving tactics. One method is the personal involvement of the wing commander in creating new tactics himself. This may be the most responsive method to achieve results (as with *JG*26,) but it requires that the commander possess excellent tactical awareness and a reputation that translates to mission success and aircrew acceptance. The second method is to rely on the individual squadrons and aircrews in the wing to design new tactics. Fostering this approach may be most appropriate when aircrew morale is already weakened (as with the 43d SW) and the commander wishes to raise the perception of control among the crews. Neither method is necessarily preferred; and in some cases, a combination of the two will be most useful, as it was with the 362d FG.

Implications for Airpower

Based on the morale areas addressed in this study, there are four implications for airpower employment in future conflicts. First, morale affects airmen differently than soldiers. General Marshall indicated that cohesion was a paramount concern for soldiers in World War II. For airmen, however, cohesion hardly matters at all. All that really matters to create the enthusiasm within the airman to fly missions is the means (aircraft) to execute the mission and a confidence in his ability to succeed.

Second, morale is an issue affected by the context of the operation. Although the definition of morale does not change, the context of combat versus operations other than war will influence the issues most important to airmen. It is not accurate to say that tactical innovation equally influences aircrew morale in conventional battle settings as it does to patrolling no-fly zones. This distinction becomes relevant across the broad spectrum of the utility of airpower.

Third, aircraft and aircrew losses do not necessarily destroy aircrew morale. In only two cases (*JG*26 and 43d SW) were losses mentioned in connection with reduced morale, and both of those instances occurred during periods of poor or slow tac-

tical innovation. The issue of losses becomes important when tactics are not responding to the environment. Otherwise, losses are generally acceptable as long as success is being achieved.

Fourth, wing commanders will sometimes need to innovate in combat for missions that their units have not trained for in peacetime. Such was the case for Galland, Laughlin, and McCarthy. The commander, therefore, must possess an expert knowledge of the missions, technologies, and limitations of the aircraft and personnel in his unit. This will be necessary to evaluate mission success in light of old and new tactics. It may seem an obvious statement, but the wing commander should be a competent crew member in the aircraft assigned to the unit.

Recommendations for the USAF

There are several recommendations that can benefit the USAF with regard to the issue of morale and wing commander responsibilities. The two areas affected are doctrine and the PME system.

USAF Doctrine

Since the Air Force has recently taken a renewed interest in doctrine, it should consider addressing the following issues in the next revision of Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine,* and operational level documents —AFDD 2 series.

Define Morale. Basic Air Force doctrine needs to clarify the meaning of morale and then spread its meaning throughout the service. As a suggestion, Manning's general definition is simple and is applicable to all areas of the Air Force in times of peace or war.

Create a Doctrine Document for Command. Current operational doctrine focuses on Air Force missions but should also include special volumes for such areas as command. This effort would need to consolidate the various commander regulations and pamphlets that currently exist and also address the morale issues discussed in this study.

Military Education

The PME system in the USAF is the crucible for discussions concerning leadership issues. The Air Command and Staff College (ACSC), Air War College (AWC), and various commander schools are all appropriate venues to look into aircrew morale and the role of the wing commander in combat. Currently, the USAF uses the leader-follower-situation (L-F-S) model to discuss the role that the commander plays in a unit. This approach encourages leaders to consider their followers and the context of the situation in order to choose an appropriate leadership style. This study recommends three changes to studying leadership within the PME system.

1. If the USAF continues to use the L-F-S model in its curricula, it should place more emphasis on the leader's ability to *alter* the situation with which he is faced, rather than assuming it is static. For example, in this study of combat morale, the situation is changed when new tactics are introduced. This would deemphasize the USAF's current focus—suggesting that its leaders can change their personality or style to suit a situation. Instead, it is more likely that a person's personality does not change simply because he becomes a commander. The real focus should lie on the ability of commanders to change the situation in such a way as to motivate their followers and still accomplish the mission. All commanders should be innovators, or at least be able to draw innovation out of their subordinates and implement it as appropriate.

2. ACSC and AWC should encourage research into morale-related topics, especially as they relate to combat scenarios across the spectrum of war. These topics should specifically address the influences on Air Force personnel.

3. Finally, the USAF group commander and wing commander courses should include instruction specifically designed to consider morale in various settings. A focus on morale in multiple career fields and conditions would expose future commanders to the issues that really generate enthusiasm for mission accomplishment.

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