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GRADUATE COLLEGE

PERCEPTIONS OF LEADERSHIP AND MANAGEMENT
IN THE ARMED FORCES OF THE UNITED STATES

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

WILLIAM G. STEWART

Norman, Oklahoma

2000

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IN THE ARMED FORCES OF THE UNITED STATES

A Dissertation APPROVED FOR THE
GRADUATE COLLEGE

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ABSTRACT

This study probed U.S. military officers on their perceptions of effective leadership and management behaviors. The question dealt with here was what actual military leaders and managers reported to have been effective for them. It was hypothesized that those behaviors found effective would certainly vary by service branch and relative seniority. Further, it was suggested that a number of variables such as the ethnicity and gender of the leaders, and whether their duties were in operations or support roles amongst other things, would be factors controlling the choice of leadership and management styles. The aim, then, was to build a theory describing those styles that were perceived to lead to organizational success.

The study was based on a series of 48 surveys and interviews of commissioned officers representing all services and commissioned grades conducted at a joint service headquarters organization in Europe. The factor analytical techniques of Q Methodology were used to distill meaning from the

subjective judgments of the participants. Subsequent responses to semi-structured questioning helped put the findings in context and triangulated the results with qualitative data.

Respondents reported that they found both transformational and transactional leadership styles useful. They believed that the application of several different leadership approaches—cognitive frameworks—was necessary to ensure organizational success. In all, four distinctive leadership patterns were discovered. There was a consensus that being *inspirational* was very important to effective leadership and management in all situations. The efficacy of some techniques associated with power and office politics was nearly equally universally denied. In the end, military officers deemed that the selection and application of their leadership tools must be based on the situation at hand. The groups studied displayed important though sometimes subtle differences in their leader styles. As a whole, however, this sample of officers made their focus on mission accomplishment of paramount importance when balanced against any other concerns.

One does not *manage* people. The task is to lead people.

– Peter F. Drucker, *Management Challenges for the 21st Century*

Chapter 1

INTRODUCTION

Perceptions

Perceptions have to do with cognition, awareness, and discrimination; they are subjective. Consider stereotypical perceptions of the armed forces in the United

Figure 1.1. Source: Oliphant© 1997 Universal Press Syndicate. Reprinted with permission. All rights reserved.



States. In or out of the context in which it was originally delivered, the editorial cartoon in figure 1.1 can speak volumes to an individual's perceptions of military service and its leadership.

Editorial cartoons and cartoons from the comics can be clever, humorous, satirical, mean, or simply expository in their depiction of an incident or situation, depending

on the perceptions of the individual contemplating the cartoon. In the same vein, compare two renderings of the infamous incident during World War II as General George S. Patton slapped a soldier who was being treated for "battle fatigue" in an army hospital in Sicily. Anderson and Gibson (1999) recount how the Drew Pearson radio broadcast on November 21, 1943, broke the story that "took the shine off his [Patton's] brass. . . . To Drew, the slapping episode typified the oppression of the rank and file by swaggering, pompous, dangerous brass hats" (p. 61). Concerning the same episode but using a totally different backdrop, Puryear (1971) wrote that although Patton got into his most serious trouble in World War II over slapping an enlisted man, "he had the ability to deliver that indefinable something which makes men want to go out and give their all for him: to do just a little bit more than is humanly possible to do" (p. 233). The incident notwithstanding, Puryear continued, "How did General Patton lead? How did he stamp his dynamic personality on his troops, accomplish the impossible, and hypnotize his men? By word, example, training and discipline, personal leadership and concern for the soldier's welfare" (p. 243). Indeed, perceptions color what we see, hear, and "know." Thus, perceptions fall into the realm of epistemology, where one examines the foundations of knowledge, where one asks how we know what we know. The research topic for this study is indeed concerned with how we

know what we know about effective military management and leadership.

The Research Problem

This dissertation explores the main questions of what mix of leadership and management behaviors is perceived as effective by commissioned officers of the armed forces of the United States and how this blend of behaviors changes over the course of a military career. This is to be a theory building exercise. The results of this study are designed to produce a grounded theory, based on empirical data. Thus, the findings are descriptive in nature; they will also provide a foundation upon which further study and analysis can be based. This study is not restricted to a single military service; it includes all four military uniformed services: the Army, Navy, Air Force, and Marine Corps. In the process of considering the main research questions, several related subordinate topics will be examined, as whether an effective mix of leadership and management as perceived through the eyes of practicing military leaders and managers is the same for all four services, irrespective of grade/rank, in peacetime as in war, for any type of command (operations/support), relative to gender, relative to ethnicity, and also relative to source of commission: the service academies, the Reserve Officers Training Corps (ROTC), Officer Training School (OTS), or the Platoon Leaders' Course (PLC).

Though they have fundamental and far reaching differences in missions, strategies, and tactics, the four services share the same basic requirement for both leadership and management. The diversity in the leadership and management context caused by the introduction of such independent variables as were listed above requires close attention to the meanings assigned to the pair of concepts.

Definition of Terms

“General George S. Patton, Jr., once said, ‘leadership is the thing that wins battles . . . but I’ll be damned if I can define it’” (Eikenberry 1995, 22). Yukl (1994) suggests that “the term leadership means different things to different people,” and that “researchers usually define leadership according to their individual perspective and the aspect of the phenomenon of most interest to them” (p. 2). Bass (1990) concluded that “there are almost as many definitions of leadership as there are people who have attempted to define the concept” (p. 11). Thus, each of the following definitions is simply one of many that could have been selected. Because the nature of this study is so intimately associated with the U.S. armed forces and their associated perspectives, military sources were selected for the following definitions. U.S. Army Regulation 600-100, *Army Leadership*, states:

Leadership is the process of influencing others to accomplish the mission by providing purpose, direction and motivation. Effective leadership transforms human potential into effective performance.

Management is the process of acquiring , assigning priorities to, allocating, and using resources (people, money, materiel, facilities, information, time, etc.) in an efficient and effective manner. (U.S. Department of the Army 1993, 1)

And since one of the independent variables thought to affect the choice of a leadership-management mix is the military grade or rank of the individual exercising authority or command, this definition is also offered here. Army Regulation 600-20,

Army Command Policy, states:

Military Rank is the relative position or degree of precedence granted military persons marking their station in military life. It confers eligibility to exercise command or authority in the military within limits prescribed by law. (U.S. Department of the Army 1988, 3)

In these definitions from the U.S. Army, there are features that do distinguish *leadership* from *management*.

The Dichotomy

Management *and* Leadership. Leadership *versus* Management. The two terms are used together often. They are used as synonyms. Sometimes there is a distinction made between the two; other times there is not. Taylor and Rosenbach (1984) have evoked the question of this dichotomy in a military context, to wit, what of the focus on management by leaders in the armed forces?

Are leadership and management the same? Some people believe they are; many others do not. Over the past two decades, an emphasis on budgeting and resource allocation has led to a focus on management tools and techniques throughout the military. (p. 75)

The categorization of *management* and *leadership* in the context of this dissertation presents a complexity best arranged at the outset. Worledge (1996) offers help by presenting five views of the possible relationships between the two ideas.

In the first view introduced by Worledge, management is larger than leadership. Management theory often subordinates leadership to motivation as one of its basic processes. Fayol (1916/1949) made a significant contribution here with his seminal enumeration of managerial activities. While writing for the prestigious Air University Review, Dean (1976) claimed, “Most of the authorities cited in this [Dean’s own] article use the terms ‘managerial style’ and ‘leadership style’ interchangeably. However, it must be remembered that leadership is only one mechanism that managers may use to motivate others toward organizational goals” (p. 41). In this vein and according to another text, “*Leadership* means motivating people to their highest level of job performance. It’s the process of directing behaviors and satisfying needs—of both workers and organization” (Haimann, Scott, & Connor 1982, 380). Another author and editor of management theory wrote:

Leadership is a part of management but not all of it. . . . Leadership is the ability to persuade others to seek defined objectives enthusiastically. It is the human factor which binds a group together and motivates it towards goals. Management activities such as planning, organizing and decision-making are dormant cocoons until the leader triggers the power of motivation in people and guides them toward goals (Davis 1967, 96-7).

This was an older, more traditional view of the relationship of leadership with management.

In the second view of this relationship advanced by Worledge (1996).

“Management and leadership overlap, but are different in some ways. . . . Thus leadership is one possible outcome of the chemistry of a management situation” (p. 34). Here, leadership is not inevitable; it is situational. A manager is a leader when followers allow him/her to influence their thinking. Leadership power is bestowed by followers. The unique context of the situation will determine eventual leadership dimensions. These arguments have been forwarded, amongst others, by Cribbin (1972); Hersey and Blanchard (1977); and Fiedler (1964).

In a third view Worledge posited that leadership transcends management.

Much current leadership theory (Bennis 1989a; Bennis and Townsend 1995; Kotter 1988, 1990a; Zaleznik 1977, 1983, 1989) was written to support this view. In this conception, organizations need managers to maintain a balance in operations and leaders to create new approaches and lead change.

Management and leadership are simply different in the fourth view that Worledge catalogued. In this last notion, many of the arguments of the third view are used—without advancing the assertion that the process of leadership is superior to that of management. An extension of this view is that leadership and management are different activities, but an organization will need both to optimize its potential, i.e., management is the catalyst for control within an organization, leadership enables people to act. Both are critical to the achievement of peak performance. Nowhere do we find a belief that leadership and management are mutually exclusive. Worledge cited the Desert Storm commander, General Norman Schwarzkopf, as an articulator of this view: managers make organizations run; leaders lead people. Effective leadership becomes a vehicle for superior organizational achievement. It is a means to an end.

In a fifth and final view of the relationship between management and leadership, Worledge offers that leadership and management could simply be the same thing—synonyms. The enunciation of these five views of the possible relationships of leadership and management brings the reader full circle. The discussion was useful exposition, but the question for this study remains: What is the appropriate arrangement of leadership and management?

The Dichotomy Simplified

Which of the previous five views is the *true* relationship of leadership to management—if that true relationship exists—is not at issue for this dissertation. Rather, the study seeks perceptions of a truly effective blend of leadership *and* management behaviors for the military. Yukl (1994) stipulated that leadership and management *may* be separate processes; he left the determination of whether they are overlapping or mutually exclusive for others to make empirically. So it is that the respondents to this study gave their perceptions of those mixtures of leadership and management behaviors that worked for them and which of the two was subordinate to the other.

Nonetheless, as Kotter (1990b) so ironically suggested, “No one has yet figured out how to manage people effectively into battle” (p. 17). The *bon mot* has face validity even though it is debatable. It would be most difficult to *manage* instead of *lead* troops into battle. While discussing nearly five years of his own leadership research Bennis (1989b) wrote a clever and often quoted phrase:

I was finally able to come to some conclusions, of which the most important is the distinction between leaders and managers: Leaders are people who do the right thing; managers are people who do things right. Both roles are crucial, but they differ profoundly. (p. 18)

Deturk (1996) added the verbal twist to Bennis’s words that sets the final context for this study, “Whether we call it leadership or management,

administration or maintenance, the desired goal should be *doing the right things right*” (p. 35). What remains for examination here is an ongoing tension between the requirement to lead and the need to manage. I will use the two terms together as parts of a whole in the course of the report of the study. Any further distinction must arise from the perceptions of leadership and management reported in the empirical data. What is the relevance of this to the world at large?

Relevance of the Research Topic

The appropriate mix of leadership and management in the armed forces is important at several levels, from global issues of national well-being to the success of an individual military officer’s career. An optimum behavioral mix is important to the people of the United States, in providing for a credible common defense; it is important to the people as taxpayers, in providing this defense at a reasonable, minimum cost. It is important to the professional military education systems, the military academies, universities, and war colleges in presenting the appropriate curriculum in both leadership and management to present and nascent leaders. And finally, it is important to these leaders (and managers) themselves, so that they acquit their oaths of office to the best of their abilities.

Summary

Commanding officers in the armed forces of the United States must be both leaders and managers. This study provided the opportunity for those practicing military leadership to report the blend of behaviors that was effective for them—as they perceived it. Forty-eight military officers were surveyed using two quantitative instruments; the respondents also participated in semi-structured interviews designed to elicit further qualitative data on their thinking. I triangulated the results of the surveys and interviews to assess how the reported perceptions of effective management and leadership behaviors fit current academic theory. Organized differences in respondents' perceptions that are due to the specific service, level of experience, and a variety of demographic factors such as gender or ethnicity of the leaders are also reported. In the next chapter we will turn to the conceptual framework of the research question to see how evaluations of leadership and management have been inferred in academic thought in the past.

Management has to do with an organization's *processes*—performing them correctly and efficiently; leadership has to do with an organization's *purposes*.

– Gordon R. Sullivan, *Hope is Not a Method*

Chapter 2

MEASURING LEADERSHIP AND MANAGEMENT

Introduction

The previous chapter developed the idea that leadership and management are two different entities. How are they to be measured? It is useful to find and examine different points of view, and it is necessary to determine different metrics that can be applied during this study of leadership and management in the military context. Also important to this study is the determination of what specific sets of behaviors on the part of leaders and managers are perceived to exemplify *effective* leadership and management. The tautological adjectives “good” and “bad” are not very useful: they simply assign normative values to the categories. Specifics are required better to articulate *effectiveness*. Close scrutiny of historical and scholarly thought on leadership and management will aid in bringing some of the various dimensions of measurement to the fore. The purpose of this chapter is to uncover those viewpoints and models of effective leadership and management that can then

be correlated with empirical data examining perceptions of effective leadership and management by military personnel. As previously noted, Zaleznik (1977) believed that the orientation of leaders and managers was fundamentally different and could be assessed. Other authors, even without conscious design, have suggested distinct management and leadership dimensions against which empirical data from the U.S. military can be compared. From the following discussion, several metrics for leadership and management will be selected from the total discourse of thought on the two topics.

Trait Theories

What do we actually know of the genesis of leadership and management?

Of the two, the study of leadership is older. From ancient times, curiosity about great men produced qualitative studies of leadership. These were biographies that examined the characteristics of great men and so defined successful leaders.

Plutarch's Lives is such a collection of biographies of both mythical and real figures from Greece and Rome; it is one of the earliest such studies. Plutarch himself claimed not to be writing histories so much as recounting the lives of the figures who were the subjects of his studies. In the process, he tantalizes his readers with descriptions and insights. In his very first biographical sketch he compares features of two mythical figures, Romulus and Theseus: "Both of them

united with strength of body and equal vigour of mind; and the two most famous cities of the world, the one built Rome, and the other made Athens be inhabited” (Hutchins 1952, 1). So, according to Plutarch, these two fictional leaders and city founders shared the traits of strength and intelligence. Later, Plutarch writes that Caesar was said to have been admirably fitted by nature to make a great statesman and orator (Hutchins 1952, 577). This may well be the earliest claim that leaders are born, not made.

Plutarch repeatedly mentions eloquence as a trait of the great men whose lives were the subjects of his writing. As an aside, Lieutenant General Ira C. Eaker, the WWII commander of the allies' Eighth Air Force in Great Britain, was given to pondering and analyzing leadership: he, as did Plutarch, commented on the trait of eloquence in leaders. In an address at Air University, General Eaker had been remarking on the traits of leaders, focusing on their courage and the courage to make fateful decisions. After some historical review of different leaders, he concluded that the ability to communicate well was vital for effective leadership:

There have been great leaders who were blind, more who were deaf, but there were none who were dumb. All had the wit, the timing, and the courage to influence their followers to action at the critical time by a few well chosen words or by example, or both (Eaker 1961).

In this General Eaker agrees with Plutarch's observations on the leadership trait of fluency in oral communication.

To continue with a final example of specific leadership traits, Plutarch described Demetrius Poliorcetes, once King of Macedonia, as a tall man whose “countenance was one of much singular beauty” (Hutchins 1952, 726). So it is that Plutarch goes on to generalize leaders as males who are tall, good looking, intelligent, and who are able to communicate well; it was in their nature to rule. The focus on the lives and attributes of great men developed over time into various trait theories of leadership.

The several trait theories and lists of leadership traits have been expanded and reorganized repeatedly; in one text, such traits were divided into three categories: physical, personality, and intelligence traits (Donnelly, Gibson, and Ivancevich 1984, 394-6). This is not far removed from the descriptions offered by Plutarch. More recently Bass (1990) and Yukl (1994) recount that more than 100 studies on leader traits were accomplished in the first half of the 20th century and more than 160 further studies were conducted from 1949 to 1970. Bass (1990) has divided the personal attributes of leaders into six classes: (1) physical characteristics, (2) social backgrounds, (3) intelligence and ability, (4) personality, (5) task-related characteristics, and (6) social characteristics (pp. 80-1). Each of the classes was further subdivided into a list of 43 traits found to be characteristic of successful leaders. Whether the list is Plutarch’s or contains three groups of

traits or forty-three, many scholars have found this methodology to be inadequate. “The premise that some leader traits are absolutely necessary for effective leadership has not been substantiated in several decades of trait research” (Yukl 1994, 256). That is, simply looking at the lives and attributes of great men has not produced dependable predictors for effective leaders: Napoleon was short; Golda Meir was neither comely nor male; Ronald Reagan was especially known to the public for his communication skills, but not for his intellectual power. Yet each of these individuals who were exceptions to nominal trait theories were exceptional leaders. Yukl (1994) concludes that “Possession of particular traits increases the likelihood that a leader will be effective, but they do not guarantee effectiveness, and the relative importance of different traits is dependent on the nature of the leadership situation” (p. 256). That said, trait theory research is often the first common metric applied when judging leadership or management.

Although “great man” or trait theories have been largely discounted, there is still an ongoing and lively discussion in the literature on the question of whether leaders are born or if they are made. As already mentioned, Plutarch alluded to Caesar’s being admirably fitted by nature for his position. From a more recent military context, past Secretary of the Air Force, Verne Orr (1985), claims:

Some people are fortunate enough to be born with traits that encourage other people to follow them and many people will call them leaders. But

these type are few. The rest of us can, nonetheless, become great leaders by studying the actions of successful leaders and . . . by working to develop leadership capacity by “the fruit of labors” (p. 51).

According to Secretary Orr, the born leader exists; more commonly, however, leadership skills are practiced and can be learned. That collection of leadership traits attributed to an individual as a gift of nature has been called charisma. The term *charisma* comes to us in English from the Greek and means “a divinely inspired gift.” By extension, the gift is a set of traits with which one is born. German sociologist Max Weber (1924/1947) brought the concept of charisma into active use early in the 20th century to describe an extraordinary type of influence a leader may exert upon his or her followers. This influence, according to Weber, was based on the high regard in which the leader was held, along with such qualities as a sense of purpose, confidence, dominance, and the ability to articulate goals and ideas (Bass 1990, 184). Later in this discussion we will return to this concept of charisma and use it as a foil against which other leadership features can be reflected. Where the study of leadership through biographies has been shown to be a topic as old as man, the study of management, or management as a science, has emerged only in the last century.

Scientific Management

Another dimension for measuring leader/manager styles can be developed through a perusal of this more recent history of management science. Frederick Taylor effectively started a new profession in 1893 when he began practice as a consulting engineer. He was able to apply one kind of systems thinking to problems of the day, “because he saw that captains of industry, caught in a swirl of change, did not know how to untangle cost, productivity, and motivational problems” (Weisbord 1987, 22). While working at the Bethlehem Steel Company, Taylor suggested structuring organizational systems, the assumption of managerial responsibility for work accomplishment, and time-and-motion studies to affect clear job designs and standardization of task processes. Taylor’s scientific approach was one of reductionism, where each task was broken down into its subordinate elements. Each task element was studied as a separate entity; a rational and efficient process was devised for each element. Scientific management became the classical theory of organizing. Structural processes were of primary importance because of the predictability and control they gave to the managers (Harris 1993). Taylor’s own *Principles of Scientific Management*, published in 1911, embodied his philosophy and is the seminal work in management studies. Henri Fayol and the

previously mentioned Max Weber, two contemporaries of Taylor, are also of note in this overview.

Henri Fayol (1868/1949) was a French coal mining engineer who wrote extensively about the nature of effective management based on his own empirical experience. It was he who formalized a classical hierarchical structure and posited planning, organizing, commanding, coordinating, and controlling as the prime functions of a manager. A chain of command, clear lines of responsibility, and division of work added to his rational approach to effective management. Communication for problem solving, according to Fayol, was best accomplished by equals in the hierarchy. Perhaps most important to this study philosophically was Fayol's concept of subordination of individual interest to the general interest. He contended that the interest of one employee should not prevail over that of the entire organization (Harris 1993, Quinn et al. 1996). This principle will be discussed later in conjunction with the theme of charismatic leadership styles. Again, it was formal structure and a rational approach to management that would produce maximum efficiency in the workplace: these were Fayol's measurements for effective management

For his contribution to early management science, Max Weber developed some of the fundamental philosophical concepts of bureaucracy. He postulated that

bureaucracy is characterized by order maintained through clear rules, specified spheres of competence, and impersonality. Weber echoed Fayol's division of labor and also focused on a formal hierarchy of authority. He introduced the idea of career managers working for a salary. Weber's (1924/1947) view of a social or business organization was meant as a cure for the ills and rampant nepotism common in management of the 19th century. Weber believed that impartial order in an organization must be free of traditional sources of authority: a leader's charisma, or the power of nobles, of the church, or of the state. In their place he proposed the fairness and impartiality obtained by rules and regulations of a bureaucracy (Harris 1993, Quinn et al. 1996).

These three pioneers of scientific management, Taylor, Fayol, and Weber, used a rational, objective approach for their theory building; the leadership style they proposed was autocratic and authoritarian. Writing about the results of applied scientific management, Daft (1998) suggests, "The organization obtains routinized, predictable behavior in return for resource incentives. The machine-like organization runs with little emotion, capitalizing on rational analysis and self-interest. This is a powerful system, which efficiently directs people into desired roles, jobs, and behaviors" (p. 15). This is not to say that the rational structures

and practices of scientific management are without problem and universally accepted as the single best management style.

Contrarily and with consideration for the implicit duality in the nature of man, other scholars (Bass 1976, Lewin and Lippitt 1938, Lewin, Lippitt, and White 1939) reported on and proposed leadership styles in addition to the authoritarian/paternalistic style common to scientific management. Democratic, consultative and participative, and laissez-faire were the names labeling the yardsticks for a variety of management styles thought to be effective. As early as 1958 Tannenbaum and Schmidt had suggested that the selection of a specific leader style must not be limited to a single member of that nominal grouping. The choice in leader styles spreads across a continuum: “The style a manager decides to use should be based on both the short-term tasks that need to be accomplished and the manager’s long-term strategy for improving employee morale, motivation, and performance” (p. 220). In a retrospective comment on their previous statement, Tannenbaum and Schmidt (1973) propose that “rather than offering a choice between two styles of leadership, democratic or authoritarian, it [the original article] sanctions a range of behavior” (p. 227). Whether written in 1958 or 1973, this concept demonstrated some little foresight. It foreshadowed a direction in leadership study that would appear only at a later time. As the zenith

of the study of scientific management was reached, investigators sought out different approaches that would compensate for perceived weaknesses in the purely “rational.” Examinations that acknowledged man’s humanity, a behavioral or humanistic approach, came next and became the next metric for effective leadership and management.

The Hawthorne Studies

These new ideas for management were conceived from the of studies done by social scientists just before and shortly after the second World War in response to weaknesses in results obtained from traditional techniques of “scientific” management. One of the key studies heralding this change to a more humanistic approach to management was the series of experiments performed by Elton Mayo at the Western Electric Company outside Chicago, the Hawthorne studies. At the Hawthorne plant, Mayo examined the effect of different levels of illumination on the productivity of telephone assembly line workers. As expected, he found that productivity increased with increasing levels of illumination. Surprisingly, he also found that productivity went up as illumination levels went down. It was determined that confounding variables—attention paid to the workers and a growing team spirit and sense of affiliation—were the proximate cause of the increased production, not the levels of illumination (Mayo 1933, Dent et al. 1993).

Thus, the Hawthorne studies opened the door for a growing school of behavioral study into leadership and management within organizations.

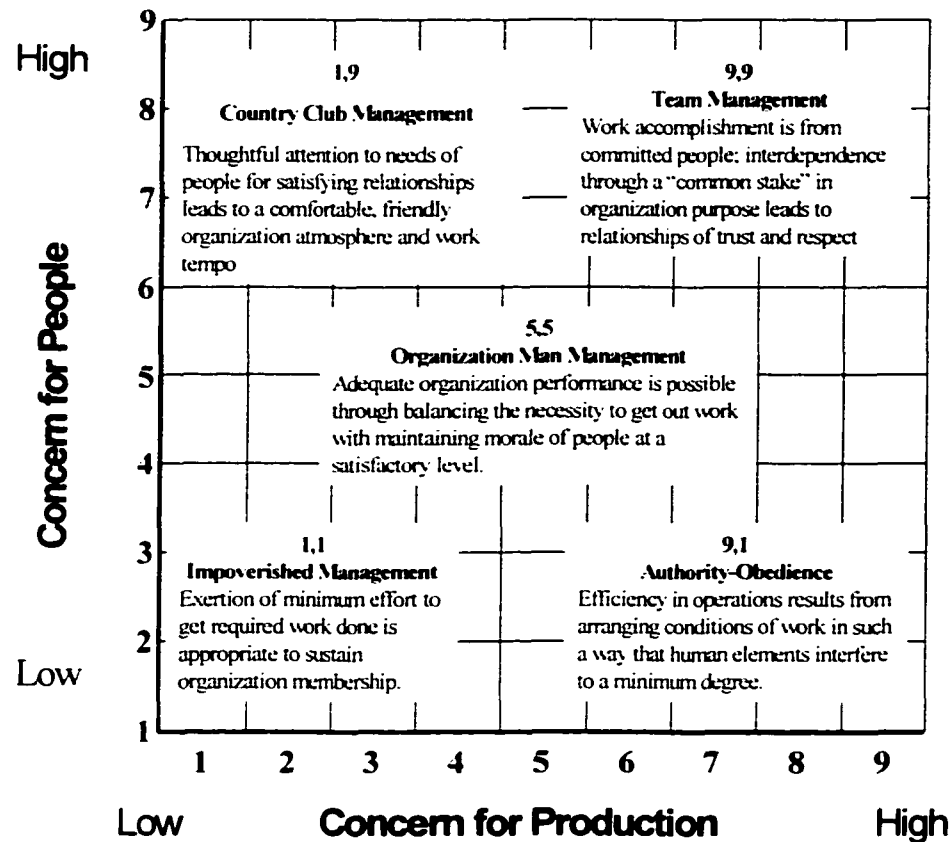
Two-Factor Theories: Concern for Task and Concern for People

Since World War II behavioral/humanistic theorists have abounded and have worked with ever more complex measures of leadership and management. One generalized behaviorist measure is the leader-manager's concern for people versus the concern for task accomplishment—a two-factor theory. Seminal work at Ohio State University (Hemphill 1950, Hemphill and Coons 1957, Yukl 1994) and the University of Michigan (Likert 1961), was followed by the theories of Blake and Mouton (1964, 1985), Blake and McCauley (1991) as well as Hersey and Blanchard (1969); all were concerned with the development of the individual within an effective and cohesive organization which could play out on a behavioral dimension (Bass 1990, 43-4).

The two factors themselves were simplified from four originally developed at Ohio State through the factor analysis of the response to a list of some 150 examples of leadership behaviors in a questionnaire. Yukler and Hunt (1976) offer a useful explanation and comparison of the work at Michigan and Ohio State. Yukl (1994) summarized that “. . .subordinates perceived their supervisor's behavior primarily in terms of two dimensions or behavior categories, which were

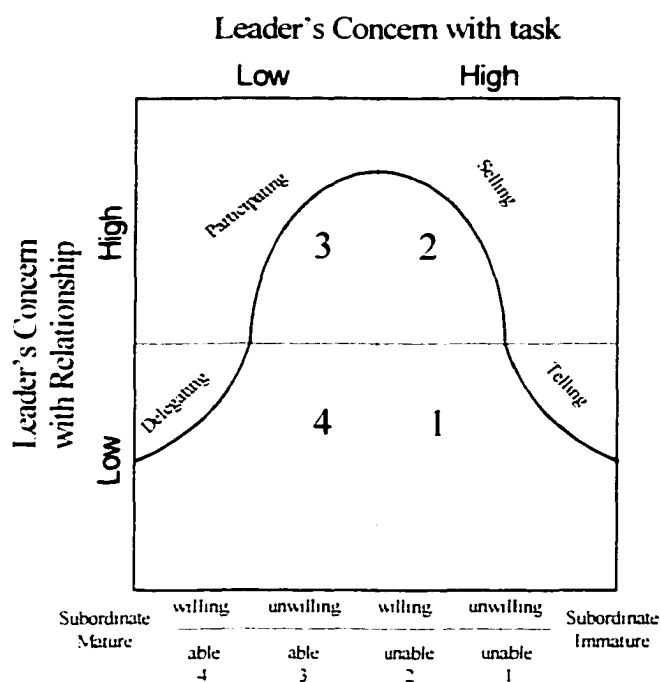
subsequently labeled ‘consideration’ and ‘initiating structure’” (p. 54). Though using different terminologies, the Ohio State studies of the 1950s and Likert’s work at the University of Michigan set the stage for further, related two-factor behavioral research. Blake and Mouton (1969, 1985) and later Blake and McCanse (1991) created and marketed the Managerial Grid, a conceptualization which measured concern for people and concern for production goals on a set of axes 90° apart from each other (Figure 2.1). The juncture of the two concerns—for people and for production—described a supervisor’s leadership and management potentials and predicted the supervisor’s effectiveness. The managerial grid provided a normative solution to the problem of which concern was more important: emphasize both of them. The Managerial Grid used labels for leader styles heavy with connotation like “impoverished management” (low both on concern for people and on concern for production) or “country club management” (high on concern for people, but low on concern for production). Positive connotation pointed the student of the Managerial Grid to “team management” where concern for both production and people was high and recognition of a common cause and interdependence of workers led to relationships of trust and respect. “High-high” leader behavior, referencing the top right quadrant of the Managerial Grid, became the “best way” to be an effective leader. Hersey and

Figure 2.1. The Managerial Grid® figure from Robert R. Blake and A. Adams McCaule. *Leadership Dilemmas-Grid Solutions*. (Houston, TX: Gulf, 1991). Used by permission.



Blanchard (1969, 1977) took the same basic two-factor concept and added to it a measure of the group's or organization's maturity before making their prescription for leader-manager behaviors (Figure 2.2). According to this theory, as members

Figure 2.2. Source: Hersey/Blanchard. *Management of Organizational Behavior: Utilizing Human Resources*, ©1977, pp. 170. Reprinted by permission of Prentice Hall, Upper Saddle River, New Jersey.



of a group mature over time, a supervisor needs to modify leadership behavior to match the maturity of the group. Leader behaviors progressed from “telling” to “selling,” then to “participating,” and finally to “delegating.” An immature group with few job skills needed a directive focus on task: “telling.” A group of subordinates who were more mature, able to accomplish their task, but still having

some production-type problems needed more emphasis on people-issues and a “participating” leader style. The leader of the most mature, capable, and willing work group could simply “delegate” the work and count on it being done. Taken to an extreme, this style of delegation is very similar to laissez-faire leadership. The graphical presentation of Hersey and Blanchard’s life cycle theory of leadership was visually very attractive and became an intuitively appealing synthesis of the work of several scholars. It is especially important because it was one of the early models of leadership that would require a leader to change the leader style depending on the situation. The generalized theme of the two-factor behavioral approach (concern for task, concern for people) is another metric by which leadership and management behaviors can be evaluated. It is important for this discussion to note that the two-factor theories were initially established as a normative approach to prescribe effective management. Authors of these studies and creators of the theories suggested that there was “one best way” to apply the two factors to a given leadership situation. These behavioralists were not working in a vacuum, however. Other social scientists, primarily psychologists, worked in tandem delving into an individual’s needs, motivations, and the very nature of man. Their work provides another possible measure for leadership and management effectiveness.

Motivation, Needs Theories, and the Nature of Man

Concurrent with the various two-factor studies, other behavioral research into human needs and motivation produced another metric by which leader effectiveness can be judged. One remembers that the working definition of leadership used here posits that it is the process of influencing others to accomplish a mission and that effective leadership leads to effective performance. In this, motivation really cuts two ways. The quality and effectiveness of the individual's own motivation comes into question, as does the use of motivation as a tool to affect subordinate behavior. In the first case one studies the values motivating the individual manager: in the second case, one studies the skill with which the manager is able to move the employee and have this subordinate identify with and internalize organizational goals and values. In this area Maslow's (1954) work on human needs is perhaps the best known as both scholars and students climbed the pyramid of his hierarchy from subsistence needs through needs for safety, belongingness, and esteem toward eventual self-actualization. Though still controversial, Maslow's hierarchy of needs is taught extensively and has great intuitive appeal. One assumption derived from Maslow is that effective leadership and management would satisfy some if not all of the higher level needs.

Another pair of psychologists, McClelland and Burnham (1976, 1995), did their own human needs studies and theorized on universal human needs for affiliation, for achievement, and for power. It is they who posited that “the key to . . . [managerial] success has turned out to be what psychologists call the need for achievement” (p. 126). McClelland and Burnham add that the need to achieve must be balanced with the need for power. Further, power is sought by these successful managers not for purposes of personal aggrandizement, but to influence others to further organizational goals. One sees a parallel with Fayol and the value set of subordinating personal needs to those of the organization. A major motivation underlying this willingness to subordinate some personal needs is an even stronger need for achievement. McClelland’s “nAch.” applied to organizational task accomplishment. Thus, the use of power need not carry the negative stigma of an authoritarian style; managerial power used in a controlled way in the influence game can empower subordinates and make them feel strong also through successful task accomplishment for or on behalf of the organization.

A third significant study by Herzberg (1968/1979) offered an insightful idea with a touch of humor into what motivates an individual to work in his discussion of motivating with “KITA.” In this Herzberg was also working with a two-factor theory. In his case the two factors were satisfiers and dissatisfiers in the work

place. His study named job *content* factors such as achievement, recognition, the work itself, responsibility, advancement, and growth as satisfiers that truly motivated the individual worker. He made a separate category for job *context* factors and called them dissatisfiers or hygiene factors. The dissatisfiers were company policies, supervision, working conditions, interpersonal relations, salary, status, job security, and personal life. According to Herzberg the opposite of satisfaction is not *dissatisfaction*; it is *no* satisfaction. Similarly, the absence of the hygiene factors caused dissatisfaction, but their presence did not ensure satisfaction: The positive side of dissatisfaction was *no* dissatisfaction. Herzberg concluded that his motivators and hygiene factors were two separate and distinct kinds of experiences. An effective manager would use job enrichment—a combination of the motivators—to make workers self-fulfilled, achievement-oriented, and self-actualizing. In this Herzberg has taken various needs theories one step further with concrete proposals for action. These human needs and motivational theories suggest that there is a leadership and management metric for effectiveness through the motivational devices employed.

Yet another measurement class for management and leadership was explored by McGregor (1960, 1967) while examining assumptions about the nature of man and relationships with subordinates. McGregor is best known for his

twin cosmologies: Theory X and Theory Y. Under Theory X, humankind is lazy, dislikes work, and needs to be driven; the average individual prefers to be directed, wishes to avoid responsibility, has relatively little ambition, and wants security above all. In Theory Y, man's physical and mental effort are as normal as play; external control is not the only means of motivation; men will exercise self control; they will learn to accept and to seek responsibility. Ouchi (1981) supplemented McGregor's work by adding his own Theory Z that suggests people need to be part of a team and that they enjoy collaboration. Theories on assumptions about people do differ from the purely motivational and human needs theories. Yet human needs, motivation, and the nature of man himself all seem to fold together as one scale on which to evaluate effective leadership and management. The behavioral metrics seem to share the concept that there is one universal best way to lead and manage. Yet some of the behavioralists begin to introduce the incongruous idea that this universality may vary with the situation.

Contingency Theories of Leadership

Many of the behavioral studies seemed to focus on a normative "one right way" to lead and manage. As Yukl (1994) suggested, "These theories postulate that the same style of leadership is optimal in all situations. For example, some theorists have advocated that leaders who make extensive use of participative

decision procedures are more effective (Argyris, 1964; Likert, 1967; McGregor, 1960) (p. 62). Later behavioralists offered that the right way might depend on the situation. Yukl (1994) discusses the reconciliation of universal and situational leadership models with an example from the Managerial Grid:

When Blake and Mouton (1982) emphasize qualitative aspects of behavior that differentiate high-high from other combinations, they clearly recognize the need for leaders to select specific forms of behavior that are appropriate for a specific time or situation. Effective managers have a high concern for both task and people, but the way the concern is translated into behavior varies with the situation and from one subordinate to another. (p. 64).

Another example of the same reconciliation scheme is espoused by Tannenbaum and Schmidt (1958/1973) who offered a continuum of leader styles marked by the extremes of being boss-centered or subordinate-centered. Their model included the concomitant continua of use authority by the manager, which varied inversely with the amount of freedom exercised by subordinates. This model and its nomenclature are really just representations of a system of outcomes when a leader selects a more authoritative style in place of a more democratic style. Scientific management, the authoritative style, is at one end of the spectrum while the democratic, participative and laissez-faire styles mark the center and far extreme of the other end of the spectrum. The normative element to the Tannenbaum and Schmidt model was the listing of “forces” acting upon the manager as he or she selects the *appropriate* style from the continuum relative to

the situation. There is still “one best way” to lead and manage, but it varies with the situation at hand. The forces impacting leader style choice were divided into effects on the manager, the subordinate and from the situation itself. They included things like the manager’s value system and predisposition for a certain style, the subordinate’s goals, needs and capabilities, the moderating effects of the organization type, the nature of the problem itself, and the pressure of time on the situation at hand. By applying a systems approach to the selection of a leadership style, Tannenbaum and Schmidt made early progress in defining a universally applicable model of leader style choice based on situation variables. This is certainly a metric for perceived leadership effectiveness.

The work cited in this section has not been lost on the professional military community of scholars. Waddell (1994) included the scholarly work and models above as he developed a situational model of leadership for military leaders at the Air War College. In this, he gleaned what was applicable and useful from theories and theorists as it applied to a variety of military situations, e.g., peace and war, joint and combined leadership, and staff versus operational leadership. Indeed, some of Waddell’s variables have been carried over into this study.

Another important situational approach to leadership was offered as “A Contingency Model of Leadership Effectiveness.” In this article, Fiedler (1964)

introduced two major questions. e.g., "What personality factors determine whether a particular individual will become a leader? And What personality traits or attributes determine whether a leader will become effective?" (p. 150). Fiedler credits previous studies for discussing his first question in the area of trait theory, but suggests that empirical research in the area of his second question is "notoriously difficult and expensive, especially if the leader's effectiveness is measured in terms of the group's performance" (Ibid.). In setting up his own study, Fiedler summarizes relevant research, noting that "autocratic leadership seems to promote greater quantitative productivity, while democratic leadership tends to result in higher morale and qualitative productivity. Autocratic leaders appear, therefore, to be the most effective in industrial work situations or the armed forces, in which the task requires strong centralized control" (Ibid., 150-1). This issue goes straight to the heart of this study and the question—in the military context—to be answered here. Fiedler continues to note that data in previous studies were not consistent. His own work, met with much acclaim and some derogation, posited that effective leadership could be predicted by scores on an interpersonal perception measures instrument of his design, the Least Preferred Coworker (LPC). Three situational components were postulated as likely to affect the leader's influence: (1) the leader's personal relationship with group members,

(2) the leader's formal positional power in the group, and (3) the degree of task structure. Working within the three-dimensional matrix resulting from these variables, Fiedler produced a great deal of data in support of his postulates. He offered a new way to view and measure leadership with an eye to predicting chances for effective leadership. It is important to note that Fiedler was offering a variation on the theme of the one, universal best way to lead. He claimed it depended on the interaction of three specific variables.

Other researchers looked at the idea that the path to effective leadership varied with the situation and tried to identify what else those variables might be. Vroom (1964), working in the field of motivation, developed an expectancy theory which postulated that the perceived probability of a given level of effort will result in a given outcome. Vroom's metric for effective leadership lay in achieving a desired outcome on the part of the manager by presenting the worker with an reward with a recognized value. This value to the worker, termed a *valence* by Vroom, measured the worker's desire to gain the reward. Vroom's theory was an extension of a *quid pro quo*, where the expected reward was contingent on the worker's performance. Later, Vroom and Yetton (1973) developed a normative model for leader-group decision making—how a leader should lead—based on the quality of the decision to be made. The level of importance of the decision and the

amount of structure in the problem itself were the variables found to be important to the leader style or decision style selected. In both examples, the researchers were attempting to define and measure universal models of leading and managing, though paradoxically this “one right way” was contingent on the situation. It may be useful in this attempt to find appropriate measures for *effective* leadership and management to see that beyond arguments for a universal or a situational models, and visit another categorization. This dichotomy is one in which the contingent reward concepts embraced and rationalized by Yetton and others in the foregoing discussion are contrasted with the ideal of leading by example, where task accomplishment is an individually internalized motivation, and where the job itself is its own reward.

Transactional and Transformational Leadership

The seminal work on transformational and transactional leadership was done by James MacGregor Burns in his 1978 *Leadership*. He came to a preeminent position in the academic leadership field through the disciplines of history and political science. In *Leadership*, he relates two very different approaches to the task of leading. In transactional leadership, the leader motivates the follower to do a task or perform a function for offering the follower something of value in return. This could be jobs for votes, subsidies for campaign

contributions, or simply a wage for work done. This *quid pro quo* motivational ploy by the leader is readily recognizable from theories already discussed. Many term this transactional approach a contingent reward. The worker's desired reward is contingent on their performance or task accomplishment; that is the transaction agreed by the leader and follower. Burns continues and develops a new concept of *transforming* leadership: the motivation of the follower is transformed and raised to a higher plane than the satisfaction of personal wants and needs. The goal to be accomplished becomes valued for itself; it becomes worthy of a quality of effort for which a normal *quid pro quo* cannot compensate or does not apply. The follower's motivation is complete and internalized. Frederick Herzberg's theories of motivators and hygiene factors run parallel with Burns in this. The job itself becomes its own reward.

Several scholars have taken Burns' beginnings and developed them further. Crediting Burns' originality in *transforming* leadership, Bennis and Nanus (1997) develop a focus on leadership vision. They suggest that a truly successful transformational leader will be able to communicate a vision of the task in such a way that it becomes transformational. What has changed is the level of motivation surrounding task accomplishment. This focus on vision by Bennis and Nanus harmonizes with Schein's themes on organizational culture. Schein (1985) wrote

that organizational culture consisted of a set of behaviors and values that were so deeply internalized as not to be thought of consciously. In other words, organizational culture is that which tells you how to behave in an organization; it also controls such behaviors as conflict resolution and the unconscious measuring of relative power by individuals. Schein continued that organizational leadership and organizational culture are two sides of the same coin. An organizational leader makes and can change the culture of the organization. Bennis and Nanus posit that a transformational leader can set, change, or develop the culture of an organization. If this is so, it is certainly a metric for effective leadership.

The scholar who may have done the most for the concept of transformational leadership after Burns, however, is Bernard M. Bass. Long known for his work in the field of leadership—it is Bass who continues to write and edit *Stogdill's Handbook of Leadership*—Bass has written extensively, alone and in collaboration, in the further study of transformational leadership. On his own, writing in books and journal articles, Bass developed Burns's concept of *transforming* leadership into *transformational* leadership based on three factors emerging from his factor-analytic study: charisma, intellectual challenge and personal support. Bass (1985b) sums it up by writing, "We see the transformational leader as one who motivates us to do more than we really

expected to do” (p. 20). While the three factors derived from empirical research deal with a leader’s chosen or described style, they also embody a cross section of leadership theories previously discussed. Thus, a leader’s charismatic style belongs to the family of trait theories; the intellectual challenge could be classified in one of the psychological needs theories in studies of motivation; similarly, the provision of personal support follows the behavioralist concern for people and is one of Herzberg’s motivators.

There is no doubt for either Burns or Bass that charisma is a major factor in developing an organization’s culture and its people to the point where they will take the last step—a step upwards—and agree to be led. Bass, in particular, looks at charisma as only one factor in this process of change. Bass has studied how leaders who stimulate their followers intellectually will more often be successful at changing the culture and raising the motivational plane. Similarly, showing concern for people is another factor, in addition to charisma, which leads to a successful transformation. As previously mentioned, this concern for people as well as task also has much theoretical precedent from the early Ohio State and Michigan studies to Blake and Mouton’s Managerial Grid and Hersey and Blanchard’s situational leadership model.

Avolio, Waldman and Yammarino (1991) and Bass and Avolio (1994) developed Bass's original three factors into four, the four "I's" of transformational leadership: Idealized influence, Inspirational motivation, Individualized attention, Intellectual stimulation. A distinction was found in the factor *charisma*, dividing it into two transformational factors. Charisma was found to contain elements of motivation through inspiration as well as the personal character of charismatic influence. This distinction is potentially an important metric in this study's attempt to find perceptions of effective leadership in the armed forces. An interesting side issue is the close definition of the differences in charisma, as originally conceived by Weber (1924/1947) as a gift from the gods out of Greek legend and in the concept of inspirational leadership developed by Bass and Avolio. Downton (1973) offered the opinion that in the case of charisma, followers are following the leader; while in the case of inspirational leadership, followers are following the cultural values and the organization's vision as promulgated and professed by the leader.

Bass (1985a, 1985b) did not focus his attention only on transformational leader styles; he also analyzed transactional styles and identified two factors through his research: contingent reward and management-by-exception (also termed contingent aversive reinforcement). Further development of their testing

instrument, the Multifactor Leadership Questionnaire (MLQ), permitted Bass and Avolio (1997) (1) to identify both active and passive corrective transactions in management-by-exception factor, and (2) to add the non-transactional, non-leadership style termed laissez-faire. These transactional factors, too, have referents in theories already discussed. Contingent reward theory is recognizable from various contingency theories of leadership, and laissez faire is one of the styles on the Lewin, Lippitt, and White (1939) continuum including democratic-participative and authoritative leader styles. As in the case for transformational factors, the transactional factors representing leader styles can be very important metrics for leadership styles perceived effective in the Armed Forces.

Both Burns and Bass agree that a good leader can use strategies of both transformational and transactional leadership. There is significant precedent in leadership theory that more than one leader style can be used: from Fiedler's contingency theory where it was necessary for the good leader to change leader style based on such factors as relative power in the organization to Hersey and Blanchard's situational leadership theory where the correct leader style (coaching, selling, telling, delegating) was a function of the followers' maturity. In the case of transactional and transformational styles, the key issues seem to be the modification of organizational culture and the followers' expectations that raises

the motivational level to that higher plane previously mentioned. Once the members of the organization have matured and the charismatic leader has negotiated the new vision and cultural changes, the transactional leader may indeed also become a transformational leader.

Reference to a trio of pieces from organizational learning literature may offer a good conclusion to this discussion of transactional and transformational leadership as a metric for this study. Peter M. Senge's 1990 work, *The Fifth Discipline*, with its systems thinking, mental models, team learning, and shared visions, defines one version the "learning organization." Using a holistic view of the organization supported by systems analysis, by promulgating new visions, modifying the organizational culture so that the visions become shared, the leader of this learning organization *is* a transformational leader. Senge's approach offers well argued, common sense, normative prescriptive approaches to the right way to lead and manage an organization. Two works by Argyris and Schön (1978, 1996) bracket Senge's work in time and offer critical depth to discussions of organizational learning. The ideas behind single loop, double loop, and deuterolearning developed by Argyris and Schön neatly overlap those of Senge. This small body of organizational learning literature rests on premises that change is both constant and inevitable, and that an organization must learn to deal with

change effectively. Managing—or more correctly—leading change well is the hallmark of the effective leader.

Viewing and Framing Leadership Styles in Organizations

Senge, along with Argyris and Schön, took a total systems approach with their views of organizational learning and, by extension, leadership effectiveness. Bass, Bass and Avolio, and Bass et al. seem to have operationalized and developed the initial concepts of transformational and transactional leader styles, cutting across earlier leader style categorization schemes, emerging with four transformational factors and three transactional factors which simplify and incorporate much of the field of leader behaviors. This dichotomy is a useful way to look at the whole of leadership and management behaviors perceived effective in the armed forces: it includes much of what has gone before. Is that enough? Bolman and Deal (1991b, 1997) surveyed the same field and propose another construct: *frames*. The word “frame” connotes a window frame or a picture frame, a thing through which we can view the world or a construct that defines the limits of a scene. Bolman and Deal use the metaphors “frame” and “reframing” to describe the models (Senge’s mental models) or paradigms that leaders and managers apply to the world around them. Bolman and Deal’s frames are the filters through which a leader perceives an organization and its culture; they are the

lenses through which one determines appropriate action in an organization.

Bolman and Deal postulate that really effective leaders do not restrict themselves to a single frame, but use what they must to accomplish their tasks. The frame metaphor coincides nicely with many of the contingency theories of leadership previously noted.

Bolman and Deal (1991a, 1991b, 1997) conceived their conceptual framework with four major vantage points for leaders and managers. They suggested that while some leaders' perceptions of their own roles restrict them to a single frame of reference, really good leaders use multiple frames. The conceptual frames they developed were the structural frame, the human resources frame, the political frame, and the symbolic frame. These reference points are not rigid constructs, but they denote a propensity for individuals to lead and manage using a specific set of cognitive tools. Here, the four frames of Bolman and Deal are analyzed to explore the appropriateness of using those frames as a metric for evaluating leadership and management behaviors perceived effective in the armed forces. Frames, then, are a way to look at the world; they are filters through which a multifaceted, complex world can be perceived. From Bolman and Deal, "reframing" is a process of taking an imaginary step backward and installing a new

filter over one's own perceptive tools so as to see the scene in a new light or with new eyes.

The Structural Frame

The structural frame is one way to look at an organization that focuses on formal hierarchies: it grows out of the earliest studies of scientific management. When the works of Fayol and Weber were first readily available in English translation after the second World War, they were combined with scientific management and economic theories of an imaginary rational man; a point of view was developed in which the organization was the center of the universe and man's task was to serve the organization.

The structural frame is a formal view of the organization. With this vantage point, one sees the tasks and problems of an organization as parts of a puzzle that one can fix or solve by rearranging the pieces. Take them apart into smaller entities: plan, reorganize, downsize, rightsize, and re-engineer. This is the technostuctural intervention approach in current organization development thought (Cummings and Worley 1997, Dent et al. 1993). Policy making, decisions, and communication go from the top down. Workers respect authority and follow the rules. It is exactly the formality of such an organization that brings about negatively phrased expressions like *rigid* or *inefficient* bureaucracy. From the

structural viewpoint taken in its extreme, organizational goals are preeminent. Personal preferences and individual needs are subordinated or sublimated in deference to those of the organization. Managers worked at improving efficiency by dividing a job into its subordinate tasks and then planning, coordinating, and controlling their accomplishment. Results-oriented managers could find the structural frame appealing. It was, after all, based on rationality and processes which produce outcomes that can be measured.

Viewers using the structural frame may very well hold with McGregor's Theory X tenets and attempt to drive workers and require strict compliance with formal organizational policy and procedure. Some managerial behavior seems to accept these tenets, even without proof. Were Theory X and scientific management principles sufficient to lead and manage the industrial world properly, study and concern in the field would have dwindled; instead, the opposite has happened. Since the post-War years, the study of leadership and management has blossomed. Bolman and Deal follow the movement in time from scientific management to the behaviorist schools in their transition from the structural to the human resource frame.

The Human Resource Frame

Due to a general dissatisfaction with trait theories of leadership and rigid, structural approaches, a series of social scientists began to examine the “human side of enterprise” (coincidentally, the title of McGregor’s widely read book) in the 1950s and 1960s. McGregor (1960, 1967) and Likert (1961) were joining Argyris (1957) who had started developing his own themes drawing on Maslow’s (1954) work. With this as a beginning, the human resource frame adds the interplay between real people and the organization to the formal structure of an organization. As Bolman and Deal (1991a, 1991b, 1997) explain this frame, organizations exist to serve human needs while the reverse was true for the structural frame. In the human resource frame it is recognized that organizations and people need each other. Contrarily, a strict Theory X advocate would say that the worker needs the organization because of extrinsic financial rewards. From the human side, when the fit of the organization to the individual is poor, one or both suffer. The strict structuralist, on the other hand, sees only a one-way street, a single dimension: if the worker is not happy, another can be found as a replacement. This view can be particularly short sighted in a time when labor is scarce and unemployment is at an all-time low. In the structural frame it was the worker’s job to assimilate organizational goals; the human resource frame sees

benefits to both parties when the individual and organization each make allowances for the other. It becomes a two-way street requiring two-way communication.

Work within the human resources frame has been most often done by psychologists and sociologists. The nature of the studies led to them also being called behaviorist, as the researchers attempted to find the best ways to modify organizational behavior patterns. The behaviorist field comprises a tremendous body of work that has even spawned new disciplines within the social sciences. Practitioners of organization development, for instance, use behaviorist, human resource frame techniques among their panoply of tools— “interventions” concerned with human processes and human resource management—to bring about organizational change (Cummings and Worley 1997, Dent et al. 1993). The real addition made by the human resource frame to this survey of metrics of leadership and management is the inclusion of the worker’s humanity in models where earlier the goal of maximized production was to be achieved by exploitation and manipulation of the worker. Even the most Machiavellian managers begin to recognize that a vital ingredient had been missing from the purely structural approach and scientific management.

It should be noted at this point that psychologists and sociologists also include contingent reward as a motivator of human activity. Behavior modification

via some stimulus-response mechanism, part of the structural view of management and leadership, is also studied by behaviorists. Both structural and human resource frames evaluate motivation in the organization. The four frames of Bolman and Deal do have various degrees of overlap, as in a Venn diagram.

The various two-factor theories previously discussed—balancing concern for task with concern for people—find their home in the human resource frame of Bolman and Deal. A general conclusion to these theories was that a single leader is not limited to either task-only or people-only concerns, rather that the leader should be able to simultaneously exhibit high concern for both task and people. Bolman and Deal might claim that the leader was integrating more than one frame of reference in their leadership. A corollary to this conclusion—that the mix of the two behaviors should be varied based on the situation at hand—developed out of the two-factor theories. The resulting body of leadership-management literature is variously called situational theory, path-goal theory, and contingency theory (Fiedler 1964, House 1971, House and Mitchell 1974, Hersey and Blanchard 1969). In all of this empirical research using the human resources frame, the student still receives the impression that this is normative research, finding rules for organizational behavior *the way it ought to be*. This frame tends to ignore some of

the pragmatic realities of human nature which are better viewed through a different lens—the political.

The Political Frame

With a belief in the goodness in man and the normative *how things ought to be*, writers using the human resource frame disregard the sometimes ugly behavior exhibited on occasion by real people. The pure cussedness of the human soul—doing a thing because you have the power and can—has mostly been ignored. This is the realm of Machiavelli's *Prince*; it is the realm of manipulation, coalitions, and constituencies. In short, this frame looks at the organization from the perspective of power. For our purposes, power has been defined as “the capacity to influence unilaterally the attitudes and behavior of people in the desired direction” (Yukl 1994, 217). Unlike the structural and human resource frames where organizational goals were dominant, “the political frame sees the pursuit of self-interest and power as the basic process both within and between organizations” (Bolman and Deal 1991b, 225). To be fair, some leaders are seen to seek and use power for the long term benefit of the organization (McClelland and Burnham 1976/1995). Even this view where the end outcome justifies the means can be interpreted as paternalistic, however.

The political frame is useful because it offers an explanation for behaviors that do not neatly fit into structural or human resource frames. The frame offers understanding for the pragmatic behaviors behind some team building activities and the formation of coalitions within an organization. It unveils the driving force behind some negotiating tactics. It is an excellent lens through which to view conflict in organizations. It is certainly not a new construct in the domain of political science: Morgenthau (1993) wrote about the pragmatic and empirical theory of power and its utility in international politics 50 years ago. What makes it novel in this context is its application to management and leadership. While Bolman and Deal (1991b, 1997) apply theories about power to their political frame, Yukl (1994) catalogs theories on applications of power.

The two volumes—Yukl as well as Bolman and Deal—work separately as they classify influence and power. Both volumes distinguish between positional power (potential influence derived from a manager's position) and personal power (potential influence derived from the characteristics of the person in a position of leadership). Both Yukl (1994) and Bolman and Deal (1991b, 1997) cite the utility of the French and Raven (1959) taxonomy of power into five major subsets: (1) reward power, (2) coercive power, (3) legitimate power, (4) expert power, and (5)

referent power. Both cite the intriguing work of David C. McClelland on power as a motivator.

As mentioned previously, McClelland and Burnham (1976/1995) and also McClelland and Boyatzis (1982) had postulated that the better manager was motivated primarily by the need for power, but that this motivation was directed toward the good of the organization rather than for personal aggrandizement. What makes this so fascinating is that a manager motivated by the need for achievement is said not to manage as well as others, because the high achiever will insist on doing things him/herself, will not delegate well, and will therefore leave subordinates frustrated. Similarly, the manager motivated by the need for affiliation will be so indecisive about applying rules consistently—in order to obtain the *liking* of subordinates—that workforce morale will be low. In a newly published version of a classic article, McClelland and Burnham (1995) conclude that the institutional manager, one with a high need for power to influence people to perform well for the good of the organization, will be most effective and have the greatest success.

Power, applied politically within the organization, is inescapable. As Bolman and Deal (1997) stated, “The question is not whether organizations will have politics, but what kind of politics they will have” (193). It is the results of the

actual application of power that is uncertain. Yukl (1994) suggests that actually using power can result in (1) enthusiastic commitment, (2) passive compliance, or (3) stubborn resistance. In some circumstances, simple compliance is sufficient; it may not be necessary for a subordinate to internalize a leader's goals. It is difficult to imagine a situation where resistance is a desirable outcome. Because of this, restraint—the threat of coercive force rather than its application—is a superior behavioral choice. The next frame could well ask the question, what is the meaning of the display of power? Was it necessary? Did it represent something else?

The Symbolic Frame

Two people witness an event and become involved in a disagreement about it. They both are rational and make astute arguments about the happening; they do not understand their disagreement. They remain in disagreement about the outcome though agreeing on the details. Each believes themselves to be correct, and each is correct. It is simply that the one event had two or more meanings assigned to it by the human witnesses. The symbolic frame of Bolman and Deal explains the paradox.

Bolman and Deal cite some prior research in the area of symbolic meaning. The concepts contained in their discussion seem to be derived from a combination of the disciplines of philosophy, anthropology, sociology, and communication. Of

the four frames, the symbolic is the least likely to be understood intuitively: the perspective it represents is a radical departure from traditional theories and traditional thought processes in leadership and management. Only when one touches on the newer literature on charismatic leadership does one begin to discern a place for the symbolic frame.

The symbolic frame organizes its assumptions unconventionally instead of in a rational, logical manner. The symbolic frame is a perspective where loosely coupled meanings thrive in ambiguity and celebrate uncertainty. Harris (1993) offers this explanation, "The symbolic frame says that what is most important about any event is not what happened, but the meaning of what happened" (82). The meanings are assigned to the event by human perception, not by the actual event itself. One quickly enters an ethereal domain of epistemology where one asks how we know what we know, what are its grounds and its limits, and how do we know we are correct. One should remember that *perceptions* of leadership and management are at the core of this study. The symbolic frame finds good employment here.

The symbolic frame is especially useful because it does consider ambiguity and uncertainty. It offers explanations for some organizational behaviors that would otherwise remain a mystery. Symbols are created by human beings to give

meaning and significance to events which would otherwise be incomprehensible. In one sense, a symbol is a simplified model of reality to which people assign their own meaning. Symbolic phenomena could be rituals, ceremonies, celebrations, physical artifacts, language behaviors, or any number of things to which metaphorical meaning can be assigned. This symbolic frame would be most useful when obvious symbolic acts create the need to resolve the confusion of ambiguity.

Bolman and Deal (1991b, 1997) offer rich anecdotal support to their symbolic frame, much of it from the sphere of U.S. politics. Also, there are useful citations and examples supporting concepts from the symbolic frame spread throughout the Yukl text. For example, Yukl (1994) notes that symbolic, dramatic actions—such as celebrating a business success—are used to emphasize key values in an organization as one technique of transformational leadership. Internalizing these values assists the organization member in accepting change associated with the transformational leadership process. The symbol often becomes a necessary motivator to facilitate a dramatic new strategy or response to crisis. Under the rubric of impression management, Yukl cites Pfeffer (1977) who explains that symbols and rituals—like a formal inauguration ceremony—reinforce the positional power of leaders and emphasize their importance.

Yukl (1994) writes, "Charismatic theories acknowledge the importance of symbolic behavior and the role of the leader in making events meaningful for followers" (339). In one classification scheme, Shamir (1991) is cited, positing four influence processes in charismatic leadership: (1) personal identification, (2) social identification, (3) internalization, and (4) self-efficacy. The second, third, and fourth categories fully support notions from the symbolic frame. A charismatic leader can use social identification symbols to establish a unique group identity and making membership in that group important. Words like "missionary," "pioneer," and "patriot" can be used as symbols for motivating group members. A charismatic leader can use internalization to add ideological support and meaning to group values. The leader can make group tasks seem more meaningful, noble, and morally correct through the use of symbols. "By making references to the collective identity, including the use of symbols, slogans, and stories of past events, charismatic leaders increase the social identification and collective self-efficacy of followers" (Yukl 1994, 325). Thus, the symbolic frame of Bolman and Deal provides a unique metric for this study. Thus, the system of frames itself, even with its Venn-like overlaps, offers an extremely useful systems view by which to measure leadership and management.

Framing Military Leadership and Management

The final portion of this discussion of the Bolman and Deal symbolic frame has mentioned charismatic leadership. This leadership style was also dealt with by Burns, Bass, and others, and is often associated with the early and now discounted trait theories of leadership. Charisma is also quite often categorized with the structural frame where the charismatic leader adheres to a rigid patriarchal and hierarchical order. Thus, Bolman and Deal's four frames make a full circle encompassing a universe of possible leadership behaviors and even allow for a certain amount of overlap in the frames.

Early in their thesis, Bolman and Deal proposed that effective leaders and managers will use multiple frames through which to view their universes; they were critical of leaders and managers "who cannot look at problems in a new light and attack old challenges with different and more powerful tools—[who] cannot *reframe*" (1991b, 4); later, they claim that "effectiveness deteriorates when managers and leaders cannot reframe" (1997, 5). These indictments can be extended logically to the ability to lead and manage change within an organization; the extension of the argument would be that leaders and/or managers could or should be agents of change. I see a connection between Bolman and Deal's discussion of the capability to reframe an issue by seeing it through a different

perspective and other themes where *change* and dealing with *change* in an organization are requisite virtues of the effective leader. Returning now to arguments from the first chapter of this work, a—not necessarily bad— tension appears between the desire to maintain a steady state and the desire to lead change well within an organization. The former can be a sign of good management, while the latter denotes good leadership. Kotter (1990a) was following the same thread, if not using the same language when he wrote, “Leadership is different from management, but not for the reasons most people think. . . . Management is about coping with complexity. . . . Leadership, by contrast, is about coping with change” (pp. 103-4). Dealing with change—managing or leading an organization through change—is at the heart of transformational leadership theory and much of the leadership literature now being published. Bennis and Nanus (1997) reflect on the need for the power, “. . . to translate intention into reality and sustain it” (p. 16); and further that leadership is that which gives “. . . an organization its vision and its ability to translate that vision into reality (p. 19). The power to effect this change is named *transformative* leadership by Bennis and Nanus, who turn full circle and give credit for the initiating thought to James MacGregor Burns.

Having examined the study and theorizing done by scholars of leadership and management over time, one is struck by the interdisciplinary nature of the

survey and the selected dimensions of leadership and management. One marks the application of anthropology, communication, psychology, sociology, and political science—a real cross-section of the social sciences—with a sprinkling of ethics, history, and the humanities. Each one of these fields of study has the potential to contain measures of effectiveness in management and leadership. The model developed for this research measures perceptions of leadership and management effectiveness as viewed through the four frames of Bolman and Deal whose work has been demonstrated as encompassing the field as a whole. The conceptual framework, then, will contain the essence of what is known of leadership and management effectiveness through a systems view; empirical research will provide the answers as to what has been perceived as effective by a sample of military leader-managers.

Q Methodology. . . engages the qualitative researcher interested in more than just life measured by the pound. Q sorts are manifestations of actual thinking defined operationally in terms of concrete human behavior.

– Professor Steven R. Brown, *Political Subjectivity*

Chapter 3

METHODOLOGY

Introduction

In the preceding chapter academic literature was surveyed to discover possible measures or evaluations of leadership and management. The purpose of this chapter is to develop the research design, instruments, methodologies, and processes by which those measures are to be applied in this study. If the task of science is “to explain actual events, processes and phenomena in nature,” (Stephen E. Toulmin, “Philosophy of Science,” in *Encyclopedia Britannica*, 15th ed.), the purpose of this study is to describe that mix of leadership and management behaviors perceived to be effective for officers of the Armed Forces. Such a descriptive theory was elicited from empirical data, the perceptions of the “best practices” of leadership and management based on the leaders’ own experiences.

Research Design

One of the very first questions to be answered for this investigation was how to set about finding the behavioral mix. My immediate thought was to follow the lead set by Mintzberg (1968, 1980) in his own doctoral thesis and later published work when he asked the question, "What does a manager do?" Mintzberg was able to frame answers to that question through "structured observations" of managers at work. His discovery and explication of ten managerial roles was well received and is cited yet today in college texts on management and organization development.

As appealing as Mintzberg's methodology of direct observation was, it was also soon apparent that it could not be applied directly to the study of military leaders and managers out of practical considerations. These individual subjects of the study deal constantly with sensitive information that is not releasable to the public at large since it is classified by government rules concerning information security. The daily meetings, conferences, telephone calls, and document handling that Mintzberg directly observed would all require a security clearance in the military environment. This clearance cannot be granted to a civilian researcher because of the "need to know" security rule: if a person has no duty-related need to know the contents of classified information, access to the information cannot be

granted. Therefore, direct observation of these military leaders over a lengthy period of time as in the Mintzberg study was simply not possible.

Permission to Conduct Research

Access to a sample population of military leaders was the sine qua non for the entire project. Proposed research of any sort using humans as respondents at the University of Oklahoma must have prior approval of the Institutional Review Board of that organization. This approval was sought and granted; a copy of that approval is attached at appendix A. I thought that access to the military leaders themselves could be granted under circumstances other than direct, lengthy observations—either to complete surveys or to allow me to conduct brief interviews. Indeed this was the case. The researcher is a retired member of the military and still uses the facilities of a large military organization near Stuttgart, Germany. This location, Patch Barracks, is the home of the Headquarters of the United States European Command (HQ USEUCOM). USEUCOM is the senior military headquarters for all the U.S. Armed Forces in Europe. It is a joint command, with all four Services: Army, Navy, Air Force, and Marines represented in a staff of some 1,200 personnel. This staff, through its commander-in-chief (the CINC), directs all U.S. military activities in some 70 countries, bounded on the west by the Atlantic, and running from Norway in the north through Turkey in the

east and through south-Saharan Africa to the south. Subordinate headquarters for each of the Services are located throughout Europe: Headquarters for U.S. Army Europe (USAREUR) is located at Heidelberg, Germany; Headquarters for U.S. Navy Europe (USNAVEUR) is located in London; Headquarters for U.S. Air Forces Europe (USAFE) is at Ramstein Air Base, Germany; and Marine Forces Europe (MARFOREUR) is based near Böblingen, Germany. These subordinate organizations are in direct command of the approximately 100,000 U.S. military members serving in Europe at this writing.

I wrote directly to the Deputy Commander in Chief (DCINC) of USEUCOM requesting permission to conduct the research for this study with members of USEUCOM as respondents. This was appropriate because the DCINC is the senior leader at Patch Barracks on a day-to-day basis, as the CINC resides near Brussels, Belgium, where he has concurrent duty as the Supreme Allied Commander Europe (SACEUR). SACEUR holds the senior NATO military position for all the 19 NATO nations in Europe; thus one individual commands both U.S. national and NATO forces. The USEUCOM Chief of Staff responded for the command and did so by granting permission for the research with two caveats: respondents had to be volunteers, and the respondent's time constraints had to be honored. A copy of that letter of permission can be found in appendix A.

With permission for a study under those constraints in hand, I set about developing a specific model for the research design.

A Model and its Variables

The hypotheses of this study are that some mix of leadership and management behaviors (L/M Mix) will be thought to be effective by military leaders; and that this behavioral mix may vary based on the situation from person to person as a function of (1) their predispositions for specific leader behaviors, (2) the branch of Service, (3) level of leadership, (4) the world situation, (5) type of leadership command or position, (6) gender, (7) ethnicity, and (8) source of commission. Thus, the effective mix of leadership and management behaviors for military leaders is the center point and the dependent variable, an unknown. Independent variables to be examined that affect the leadership-management mix are eight in number. In short form, this can be expressed in the following notation:

$$\text{L/M Mix} = f (P, S, R, W, C, G, E, A).$$

The possible values of the independent variables to be examined follow.

Predispositions for leader styles (**P**) will be either transformational or transactional. Branch of Service (**S**) will be one of four: Army, Navy, Air Force, or Marines. Military grade or rank (**R**) will be one of three: junior, mid-level, or senior. Each of the four service branches has ten commissioned ranks, from second

lieutenant (in the Navy, an ensign) through general (in the Navy, an admiral). Associated with each rank is a pay grade, an abbreviated numerical device with useful applications in a variety of issues. The pay grades in all four services run from O1 through O10, the "O" representing an officer. By referring to pay grades, confusion between Army captains (O3) and Navy captains (O6) can be avoided, and a simple division of the ten pay grades into three ordinal-scaled groups for a factorial sampling design can be effected. The three "ranks" for this study are junior, from O1 to O3, mid-level, from O4 to O5, and senior, from O6 through O10. The world situation (**W**) is divided into two states, peacetime and armed conflict/war. The leadership or command position (**C**) is divided into two: the "operators" or war fighters, and all others who perform duties in support of those combatants. Gender (**G**) was neatly dichotomized into males and females, while ethnic group (**E**) was equally simply divided into two: Caucasian and all others. The source of commission through which an officer is trained and enters a Service (**A**) was also simplified to include the categories: Service academy graduates from West Point, Annapolis, and the Air Force Academy, and all others from Reserve Officer Training Corps (ROTC), Officer Candidate School (OCS), Officer Training School (OTS), the Platoon Leader's Course (PLC), and direct commissioning. Each of the independent variables, then, is categorical or nominal in nature.

Limitations which could result from these determinations will be discussed in the fifth chapter of this work.

Instruments for Measurement

With the exception of the predisposition for leader styles (P), each of the independent variables is demographic in nature and can readily be determined by direct observation, examining personnel records, or querying the respondent. Measuring a predisposition for leader styles, however, was not such an easy matter. Bass (1985b) and Bass and Avolio (1994) have added much to our knowledge and theory of leader styles beyond the two-factor theories, task and relations orientation, and the path-goal theory mentioned in chapter two of this work. In his 1985 work, Bass introduced behavioral descriptions of transactional and transformational leadership derived from a Leadership Questionnaire (Form 1) and factor analysis. This pioneering work was later refined and marketed by Bass and Avolio as the Multifactor Leadership Questionnaire (MLQ) in several different formats. "In the last five years alone, there have been close to 100 theses and doctoral dissertations on the subject [paradigm of transformational and transactional leadership] . . . Previous models fell short in explaining the 'full range' of leadership styles. . . ." (Avolio, Bass and Jung 1995, 4). A subset of the MLQ Form 5x was selected for use in this study to attempt to determine a

respondent's predilection for either transactional or transformational leader styles.

This subset consists of eight questions¹ for self evaluation on a Likert scale².

Though the MLQ has been the subject of study and criticism, it has been subjected to validity checks in nearly 200 research programs in recent years (Ibid. 6). The MLQ proved instructive in determining any predispositions of respondents to this research project.

The larger question concerned not the eight independent variables in the model under study, but a determination of how to measure the dependent variable, the mix of leader-manager behaviors perceived effective by respondents in the study. Because the dependent variable is an unknown, some broad view of potential leader-manager behaviors was required. Bolman and Deal (1992) and personal electronic correspondence with Dr. Lee Bolman revealed that the two scholars had developed a series of "Leadership Orientations Instruments," based on their own work and research into the four frames of leadership that have

¹Mind Garden, Inc., is the commercial entity that markets the questionnaire for Bass and Avolio and uses the same subset of the MLQ on its world wide web site on the Internet to introduce readers to the larger instrument. Available at <http://www.leadership.mindgarden.com/>.

²Rensis Likert was a pioneer in developing scientific approaches to attitude surveys. His own doctoral dissertation at Columbia University was a classic study in which he developed the widely used 5-point "Likert Scale" (Cummings and Worley 1993).

already been discussed in the second chapter of this work. Bolman and Deal had prepared parallel instruments for a leader's self evaluation and evaluation of the leader by others. Both of the instruments were divided into three parts: Section I was a 32-question survey on a five point Likert scale broadly examining leader behaviors. Section II looked at leader styles generally with six forced choice questions, while Section III provided an overall rating of manager effectiveness and leadership effectiveness consisting simply of two questions. The 32-question survey was divided into eight replication questions each for the four broad theoretical frames of leadership proposed by Bolman and Deal. The instrument has been used in more than 1200 cases and has been tested for internal consistency and item reliability. Thus, Section I, Leader Behaviors of Bolman and Deal's Leadership Orientations Instrument, provided an excellent examination across the spectrum of potential leader behaviors and made a prime tool with which to describe the dependent variable, the leadership-management behavior mix perceived effective by military officers. In summary, demographic data and the MLQ were thought to be able to dichotomize the independent variables in the model of military leadership and management, while the Bolman and Deal Leadership Orientations Instrument was used to provide the description for the dependent variable.

As the planned research was to be based on subjective perceptions of actual military leaders, the specific technique selected to perform the study was to apply the factor analysis of Q methodology to semi-structured interviews with a sample of the population of military leaders at Patch Barracks.

Q Methodology

What has come to be referred to as Q methodology was introduced by William Stephenson (1935a), a physicist (Ph.D. 1926, University of Durham) and psychologist (Ph.D. 1929, University of London) in a letter to *Nature*. Stephenson, who also served as the last assistant to Charles Spearman, the inventor of factor analysis, developed this methodology as a quantitative method for the scientific study of human subjectivity. "Subjectivity, in the lexicon of Q methodology, means nothing more than a person's communication of his or her point of view" (McKeown and Thomas 1988, 12). The use of Q allows research subjects to evaluate the concourse of thought on a theme. In the world of Q, the "concourse" is the flowing together of all the discourse on a topic. The concourse for this study, as already explained, was a selected compilation of measurements of leadership and management established by the four frames of Bolman and Deal in their Leadership Orientations Instruments. To continue, in Q methodology respondents are not variables being tested in a survey; rather they are doing the

testing—subjectively evaluating—the concourse. People are doing the measuring; they are not being measured (Stephenson 1935b). This is the essence of the “science of subjectivity” and is what differentiates it from other techniques.

Commonly (and incompletely) known as the “Q sorting technique,” Q methodology encompasses a distinctive set of psychometric and operational principles that, when conjoined with specialized statistical applications of correlational and factor-analytical techniques, provides researchers a systematic and rigorously quantitative means for examining human subjectivity (McKeown and Thomas 1988, 7).

Fundamentally, the data gathering process for Q methodology consists of an interview and survey in which respondents are asked to sort a group of stimulus items called the Q sample. These stimulus items can be pictures or objects, but are most often simply statements printed on cards. The Q sample for this study, as has been noted, was an extract of those statements selected by Bolman and Deal from the concourse of thought on leadership and management. In the sorting process the respondent models his or her subjective views into a distributed rank order; this process is called the Q sort.

In Q theory it is common for the ranking to be done in a quasi-normal distribution for statistical convenience (Kerlinger 1986, 509). One should not imply that the Q sort distribution is nominal rather than ordinal, however, just because some items are placed in one stack in a “+3” position rather than in another stack in a “+4” position. The distribution of the Q sort is made along a

Likert-like continuum such as “most agreement” to “least agreement”, “most approve” to “least approve.” or “most like my opinion” to “least like my opinion.” The sorting or ranking must also be accomplished in accordance with an explicit rule. In Q, this rule is called the “condition of instruction.” The condition of instruction is a guide for the Q sorter and ensures that each respondent uses the same starting point from which to begin their subjective model building.

The resulting sequenced list of statements in a single Q sort is one individual’s subjective judgement of the whole. A collection of these Q sorts are first correlated and then subjected to factor analysis. From the many stimulus items—statements—in the concourse, one or more factors may emerge. The resulting extracted factors are hypothetical entities or latent variables that are assumed to underlie the respondents’ subjective evaluations. The factors identify a cluster of respondents with similarly based subjective profiles, those that think alike. This analysis reduces the multiplicity of statements in the concourse to a greater simplicity. In so doing, Q methodology and factor analysis serve the cause of scientific parsimony (Kerlinger 1986, 569). The result is to evoke commonly held subjective perspectives. At the conclusion of the Q sort process, the researcher also should attempt to uncover some of the reasoning behind the respondent’s choices through a semi-structured interview. Capturing this data

permits a richer description and analysis of the factor analytical results of the Q sorts. Thus, the researcher uses methodological triangulation to enrich the quantitative data derived by factor analysis with the qualitative data from the interview. In summary, Q methodology is frequently recommended as the most useful approach for analyzing human choices and complex judgment because its major focus is to uncover both *what* people believe and *why* they believe it (McKeown and Thomas 1988). It is useful both for its heuristic quality and as exploratory research: "One explores unknown and unfamiliar areas and variables for their identity, their interrelations and their functioning" (Kerlinger 1986, 521). This is the precise purpose of this study into military leadership and management.

Statistical Procedures in Q Methodology

Upon completion of the Q sorts and interviews, the data, in matrix form, is subject first to correlation and then to factor analysis. The mathematical difference between Q methodology and the associated R methodology (from Pearson's *r*) is a 90° transposition of the data matrix. The real difference between the two methodologies is not limited to the data transposition; it is the reflection of different philosophies of inquiry where the focus of Q is subjectivity. Standard computer-based statistical packages such as SAS or SPSS can certainly perform the mathematical processes required by Q methodology. Automatic options (such

as Varimax rotation) in these packages may limit the researcher who would choose a judgmental rotation of factors, however. Q-specific shareware written in the computer language FORTRAN is available in IBM, VAX, and UNIX versions. Also, both commercial software and freeware have been developed for PC-based systems. This research study was accomplished using PQMethod 2.06 (Schmolck 1997). This PC-version software was adapted and ported to the MS-DOS environment by Peter Schmolck of the University of the Federal Armed Forces (Germany) at Munich from the mainframe program, QMethod, developed by John Atkinson at Kent State University. The near universal applicability of PQMethod in the personal computer environment, its built-in features for editing data and formatting reports, combined with its overall ease of use made it the software tool of choice as the study actually began.

The Concourse and Q-Sample Design

The selection of items from the concourse of military leadership and management, as was noted earlier, is key to the utility of any results from this study. The Q sample used for sorting must capture those dimensions of leadership and management on which military leaders can ponder. As Kerlinger (1986) notes, "To structure a Q sort is virtually to build a 'theory' into it. Instead of constructing instruments to measure the characteristics of individuals, we construct them to

embody or epitomize ‘theories’” (p. 512). As mentioned earlier, the theory proposed in this study is that the mix of leadership and management tools perceived effective and found useful by military officers will vary based on the situation at hand and as affected by a number of demographic variables.

The concourse of statements for this Q sample and the subsequent Q sorts was generated directly from the Bolman and Deal Leadership Orientations Instruments. The precise language of the Bolman and Deal instrument was modified only to change the statements from their original grammatical form allowing “self-reporting” to the grammatical imperative so that the statements provided counsel or advice. This grammatical modification was necessary to fit the statements into the conditions of instruction for this specific Q study.

Bolman and Deal used 32 statements to investigate not only the four frames, but eight sub-scales within the frames as well; it was both an adequate and convenient number of statements to use as it agreed with the constraint of minimizing demands on respondent’s time set by the USEUCOM Chief of Staff. (It was estimated that the Q sort and interview for each individual in the study could be accomplished in one hour.) Kerlinger (1986) would have preferred a larger number of statements (60 to 90) but admitted that “the number of cards in a Q distribution is determined by convenience and statistical demands” (p. 509). The

Bolman and Deal instrument with its 32 statements has been validated and used repeatedly in other studies. It was applied here in a Q study for the first time. The exact statements for the Q sample and a copy of the respondent's answer sheet form can be found in appendix A.

Condition of Instruction

The condition of instruction for this study was developed to support a maximum diversity in the points of view of the sample population. It was decided not to investigate the perceptions of leadership of the respondents for their period of duty while assigned to the staff at HQ USEUCOM, but rather to ask what was perceived to be effective during the last duty assignment *prior* to being assigned to USEUCOM. As a result of this condition of instruction the response of the sample population did not represent a homogenous group of successful staff officers: it came from a heterogenous collection of successful military leaders with the widest variety of duty and experience.

Population Sample and Design

The targeted population for the study is the commissioned officer corps of the four military Services. The Coast Guard was specifically excluded from this study as it is assigned as a military Service to the Department of Defense only in

time of war. The study was accomplished with initial interviews and the Q sorts themselves at HQ USEUCOM on a sample population. The factorial sampling design is depicted in table 3.1. Brown (1991) contends that “samples of persons (P sets) rarely exceed 50.” This claim would be unusual for studies using other statistical techniques where larger sample sizes are the norm. Q methodology, however, is “biased toward small person samples and single case studies . . .” (McKeown and Thomas 1988, 36). The sample size of 48 is sufficient and suitable for the purposes of this study.

Table 3.1. Factorial Sampling Design		
Dimensions	a. Service	b. Grade
Types	Army	O1-O3
	Navy	O4-O5
	Air Force	O6-O10
	Marines	
N	4	3

P-Sample (n) = (Criteria) (Replications) = ([a] [b]) (m)

([a] [b]) = (4) (3) = 12 combinations

Replication (m) = 4

n = (12) (4) = 48 subjects for study

Another view of the factorial sampling design is more intuitively understood by reference to the spreadsheet extract at table 3.2:

Table 3.2. Desired Research Design:

Grade\Service	Army	Navy	Air Force	Marines	Sum
O-6 +	4	4	4	4	16
O-4/5	4	4	4	4	16
O1/2/3	4	4	4	4	16
Sum	12	12	12	12	48

Sequential Flow of Research Project

With the hypothesis, instruments and techniques with which to evaluate it, a sample population and permission to approach them in hand, I approached the appointed liaison office at USEUCOM, the Office of the Command Historian, and began networking from that point. Early contacts were made with the Assistant Chief of Staff, a Marine Colonel, and the DCINC's Quality Advisor, a Navy Commander. Both individuals agreed to participate in interviews and suggested further members of the USEUCOM staff that might be interested in participation in the project. As was noted in the section on research design, no attempt was made to get a random sampling of the population; the fact that a person was assigned to the European Command and fit one of the empty cells in the factorial sampling design was enough. Even so, the final group of participants was broad. It ranged, for example, from a Naval Academy graduate filling entry level positions in a computer networking shop to a Marine Corps Regimental Commander commissioned through the ROTC; from the general officer commanding the Air Force Doctrine Center to an Army company commander. The virtue of the specific condition of instruction for this study was having participants perform their Q sort from the point of view of their last positions prior to being assigned to the USEUCOM staff; this and the factorial sampling design assured diversity in the

respondents. With a handful of initial interviews and Q sorts performed, research began in earnest through a mailing campaign with letters of introduction that explained the study and requested voluntary participation; a sample of which is included at appendix A. A telephone call a few days later to follow up the introductory letter netted appointments for the actual Q sort and interview. Only two individuals of those contacted declined the request to participate. One of those two was departing the following day on short notice for a four-month deployment to Bosnia. The willingness of these busy staffers to voluntarily participate in the study was gratifying. I noted an ongoing, active interest on the part of the USEUCOM staff in how they could best practice leadership and management in a military setting. Some respondents also chose to take the opportunity actively to criticize existing leadership practices as they perceived them.

As a general case, I began each interview with a few introductory remarks in the attempt to put the respondent at ease and to establish a measure of rapport. The purpose of the study and its methodology was reviewed and the respondent agreed in writing to participate in the study on an Informed Consent Form (see appendix A) to satisfy ethical requirements for research with human subjects. The respondent was then made acquainted with the concept of the Q sort. Using a standardized response sheet, I directed the progress of the sort by reference to an

instruction sheet and also recorded the participant's ranking of the cards. Both the response sheet and instructions are included at appendix A. Immediately upon conclusion of the Q sort the respondent was asked to complete the self evaluation of their own propensity for a specific leadership style based on the extract from the Bass and Avolio Multifactor Leadership Questionnaire (MLQ). The form to record these responses is also included in appendix A. Completion of the two quantitative investigations required between 15 and 40 minutes of the interview that was designed to last one hour. The remainder of the planned time was spent in a tape recorded, semi-structured interview in the attempt to draw out some of the thought processes that went into the decisions made while sorting the cards. The demographic information required to establish which categories applied to the individual responding was gathered casually in the course of the interview, so as not to cause alarm on the part of the respondent by too much self disclosure at the beginning of the interview. The questions used in the interview follow in table 3.3:

Table 3.3. Questions for Semi-Structured Interview	
1.	Can you define what charisma means to you?
2.	What does inspiration mean?
3.	Do you perceive a difference between the two concepts?
4.	Can you give examples of charisma and inspiration from your own experience?
5.	What motivates you and other members of the military?

A.	Contingent reward?
B.	Non-contingent reward?
C.	Affiliation?
D.	Achievement?
E.	Abstractions/Symbols?
F.	Power?
6.	What do you perceive the word "effective" to mean in the context of leadership and management?
7.	What is the single biggest change you have witnessed in your tenure as a military professional?
8.	Was that change well managed, or was it even possible to be managed?

Notes on Methodological Techniques

With the empirical data from the Q sorts in hand, practical considerations on how best to interpret the statistical data arose; the following discussion is an explanation of my choices and reasoning for the analysis. In Q methodology, a factor identifies a cluster of participants with similarly based subjective profiles. The clusters of individuals in this study have related perceptions of effective leadership and managements styles based on their own experience. The analysis of these shared perceptions is the basis for the theory building in this study. As mentioned earlier, the factor analysis was performed using the computer software program PQMethod 2.06, from which the specific factor analytical techniques of Principal Components Analysis and Varimax rotation were selected. These choices

are most common and are the most reasonable unless a study-specific circumstances suggest the selection of another technique.³ “One of the positive claims of the principal components method is that the factors extracted account for the maximum amount of variance” (Brown 1980, 222). Thus, the mathematics of the method favors controlling a model for variance. The choice of an objective rotational procedure such as Varimax rotation is the preferred choice for many factor analysts. It is a theoretical rotation whose mathematics seek to optimize a rotational solution acceptable to statistical criteria. In any case, “the rotation does really not affect the relationship among the facts, therefore—i.e., the data points are not moved around—only the vantage point from which the relationships are observed” (Brown 1980, 230).

A common problem in any factor analytical study is to determine just how many factors are significant and should be extracted. “By convention, factors with eigenvalues greater than 1.00 are considered significant” (McKeown and Thomas, 1988, 51), an eigenvalue being the sum of the squared loading for a factor. This study had 12 factors with eigenvalues greater than 1.00. Though this method is extremely common, it is also very arbitrary. A twelve factor solution, though

³Should the researcher have some specific ideas for an outcome, judgmental rotation is facilitated by the choice of Centroid factor analysis and was preferred by Stephenson (1953).

mathematically correct did not simplify the larger model enough to cast a light of understanding on it—the cause of scientific parsimony mentioned by Kerlinger (1986) had not yet been served.

Continuing with the question of which is the correct number of factors to rotate, Brown (1980) and McKeown and Thomas (1988) both suggested using factors with at least two significant loadings. “Factor loadings are the correlation coefficients representing the degree to which a Q sort correlates with a factor” (Brown 1980, 222). For a factor loading to be significant at the 0.01 level, it must exceed 2.58 times the standard error. Thus, significance at this level is computed by the expression $2.58(SE) = 2.58(1/\sqrt{32 \text{ statements}}) = \pm 0.46$. Using this criterion, the initial study of all cases showed six factors that were statistically significant.

It has been shown by Cattell (1978) that in large matrices it is possible to greatly overestimate the number of factors to be extracted in factor analysis. Also, since the eigenvalue is a sum, it has the capability of producing spurious factors as in the case where there are many variables and many of the Q sorts have each have very low loads for the factor. If too many factors are rotated, the factors split up; the entire purpose of the simplifying the greater correlation study is thereby thwarted. The six factor solution to this study, again a mathematically correct

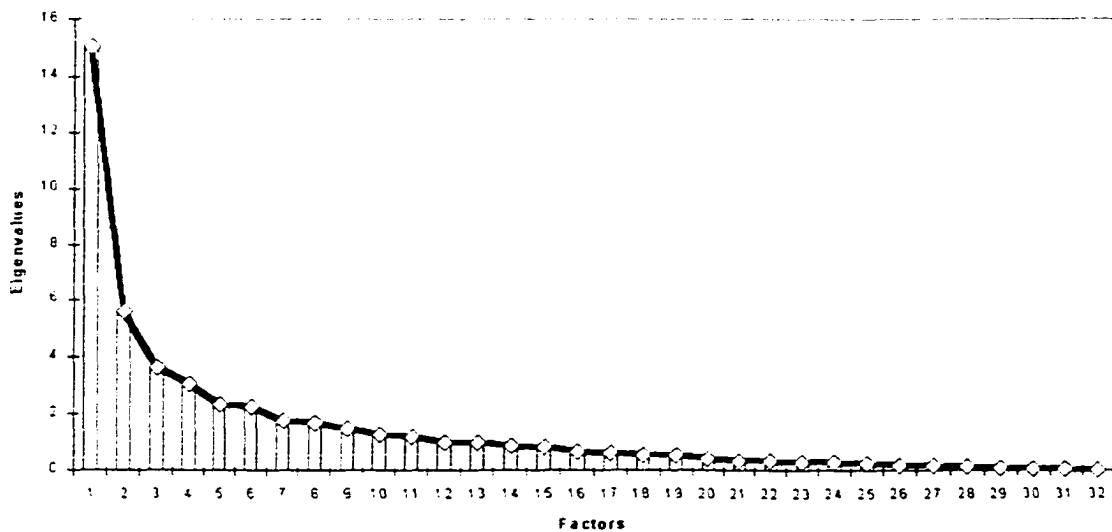
solution, did dilute the meaning of its analysis by splitting factors. Statement # 6 (Work on the ability to mobilize people and get things done), for example, was ranked with the highest score (+4) across four of the six factors. Statement # 19 (Communicate a strong and challenging vision and sense of mission) was also ranked with a score of +4 on three of the six factors. The statements # 6 and # 19 together shared the top spots in describing two of the six factors. Clearly, meaning was being lost in the six factor solution by factor splitting which spoke against using that factor analytical solution.

An even more stringent criterion for selecting the correct number of factors to rotate is Humphrey's rule (Fruchter 1954, 79-80) which states that "a factor is significant if the cross-product of its two highest loadings (ignoring sign) exceeds twice the standard error" (Brown 1980, 223). For this study, $2(SE) = 0.35$. Applying this more exacting rule resulted in five factors of statistical significance in this study. The five factor solution also suffered from factor splitting with a high correlation between the first two factors; this solution was also rejected.

Kline (1994) reports that "there is now agreement amongst most factor analysts of any repute that Cattell's Scree test is just about the best solution to selecting the correct number of factors for rotation and analysis. In a Scree test a

graph is made of the eigenvalues and the principal components. The cutoff point for factor rotation is where the line changes slope” (Kline 1994, 75). Such a Scree test for the data of this study is displayed here as figure 3.1. This figure shows a sharp change in slope, but it is arguable whether that change occurs after two, three, four or five factors. The results of the Scree test were, unhappily, still

Figure 3.1. Scree Test on 48 Cases, 32 Unrotated Factors



somewhat ambiguous and left the selection of the number of factors to rotate to pure logical analysis. Close examination of the five and six factor solutions each displayed a marked factor splitting as was discussed earlier; those potential solutions were rejected. At the other end of the spectrum, the two factor solution was crystal clear; its two factors confirming the traditional dichotomy of a concern

for task and a concern for people as seen in the early Ohio State and Michigan studies as well as the later Managerial Grid® or Hersey-Blanchard models. Generally speaking, Brown (1980) confirmed the reasoning behind such a simplified choice, saying that for purpose of rotation “it is best to take out more factors than it is expected ahead of time will be significant” (p. 223). For all this arbitrariness, it seemed that the removal of insignificant factors would improve loadings on a major factor. But what *is* a major factor? As such, the two factor interpretation added nothing new to the leadership literature. Such simplicity—that sought after *parsimony*—must always also be balanced with the *fit* of a model and its data to the real world. Though also a mathematically correct interpretation, the two factor solution was so parsimonious as to leave out nuances of meaning contained in the four factors finally selected for rotation and further analysis. Again, the purpose of selecting Q as a methodological device was to build theory and distill as much meaning as possible from respondents’ perceptions of effective leadership. The four factor solution was selected as the clearest representation and containing the most meaning of the sample population’s perceptions of effective leadership and management in the military. Four factors contained the best balance between *parsimony* and *fit*.

Summary

This study proposed use of the Bolman and Deal Leadership Orientation Instrument and Q methodology to elicit perceptions of what mixture of leadership and management behaviors was effective in the Armed Forces of the United States, how it changed over the course of time in a military career, and how it varied over a number of independent demographic variables. A second, smaller, quantitative study with a subset of questions from the Bass and Avolio MLQ was to be performed in an attempt to dichotomize the respondents' predispositions to use transactional versus transformational leadership behaviors in the successful performance of their military assignments. The sample population to be surveyed consisted of people that *do* lead and manage the U.S. military establishment. They were selected as representative of all four services and grades from a joint command headquarters organization near Stuttgart, Germany. The respondents have the body of knowledge of what has worked—and what has failed—in the past. In keeping with good Q methodology practices, the interviews and surveys were audio taped. Audio material from the interviews was used to augment and enrich the factor analytical results from the Q sorts themselves. Close scrutiny of those results led to the selection of a four factor solution to explain perceptions of

effective leadership and management in the armed forces. Detailed findings follow in the next chapter of this study.

All leaders are responsible for: (1) accomplishing the unit's mission, (2) ensuring subordinates welfare, and (3) effectively communicating vision, purpose, and direction. . . .

– *U.S. Army Regulation 600-100, Army Leadership*

Chapter 4

FINDINGS

Introduction

Brown (1980) wrote that “the thrust of Q Methodology is . . . not one of predicting what a person will say, but in getting him to say it in the first place. . . in the hopes that we may be able to discover something about what he means when he says what he does” (p. 46). The overall study was designed to uncover those leadership and management behaviors perceived to be effective in the armed forces of the United States. This chapter will present both the quantitative and qualitative results studies on one sample population of military officers as triangulated with three procedures: (1) the Multifactor Leadership Questionnaire (MLQ) survey instrument, which sought predispositions towards transactional versus transformational behaviors, (2) the Q sort and subsequent factor analytical study based on the Leadership Orientations Instrument, and (3) the closing semi-

structured personal interviews meant to draw out and underscore the significance of the quantitative results.

Major Findings

1. There was no true predisposition for either transactional or transformational behavior on the part of the participants. Rather, the MLQ survey instrument made it clear that the participants were aware of and claimed to use both types of leadership behaviors in the interest of mission accomplishment.
2. The Q study differentiated four major factors describing perceptions of the utility of a choice of leadership styles amongst officers of the armed forces, to wit: (A) the contemporary leader who believed that leadership strategies using the human resource frame would make them effective by generating inspiration, loyalty, and enthusiasm; (B) the traditional leader who thought that the predominant use of the structural frame would effect task accomplishment; (C) the integrated leader who regarded an eclectic collage of three frames—decidedly different from the rest—as most effective; and (D) the power-oriented leader who saw the use of the political frame as the key to effect task accomplishment. After factor analytical rotation, the four

factors together accounted for 58% of the total statistical variance in the study.

Having presented only a thumbnail sketch of each of the major findings from the separate studies, each finding is now discussed at length.

Finding Number 1, Transactional vs. Transformational Behavior

There was no predisposition on the part of the participants to select either transactional or transformational behaviors. The application of the MLQ survey instrument in this study was designed to separate tendencies toward the use of *contingent reward*, a transactional behavior, from *individualized consideration*, a transformational behavior—looking for a predisposition for one or the other. The results demonstrated that the military members surveyed were aware of both transformational and transactional leader behaviors; they claimed to select and used both as dictated by the perceived situational necessity. Each of the semi-structured interviews in this study explored perceptions of motivation for military members in the attempt to uncover some the of the reasoning behind the choice and application of motivational methods.

Responses to the MLQ questions were self reported on a 5-point Likert scale measured from 0 (zero). “A behavior I use seldom,” to 4, “A behavior I use

frequently if not always.” Here, for convenience, the questions are repeated in table 4.1. The eight questions were coded to conform to the MLQ: “CR” for

Table 4.1. Multifactor Leadership Questionnaire Extract		
1.	CR	I provide others with assistance in exchange for their efforts.
2.	CR	I discuss in specific terms who is responsible for achieving performance targets.
3.	IC	I spend time teaching and coaching.
4.	CR	I make clear what one can expect to receive when performance goals are achieved.
5.	IC	I treat others as individuals rather than just as a member of the group.
6.	IC	I consider each individual as having different needs, abilities, and aspirations from others.
7.	IC	I help others to develop their strengths.
8.	CR	I express satisfaction when others meet expectations.

contingent reward, and “IC” for individualized consideration. The sequence of “CR” and “IC” statements was shuffled with a random number generator for presentation to the respondents.

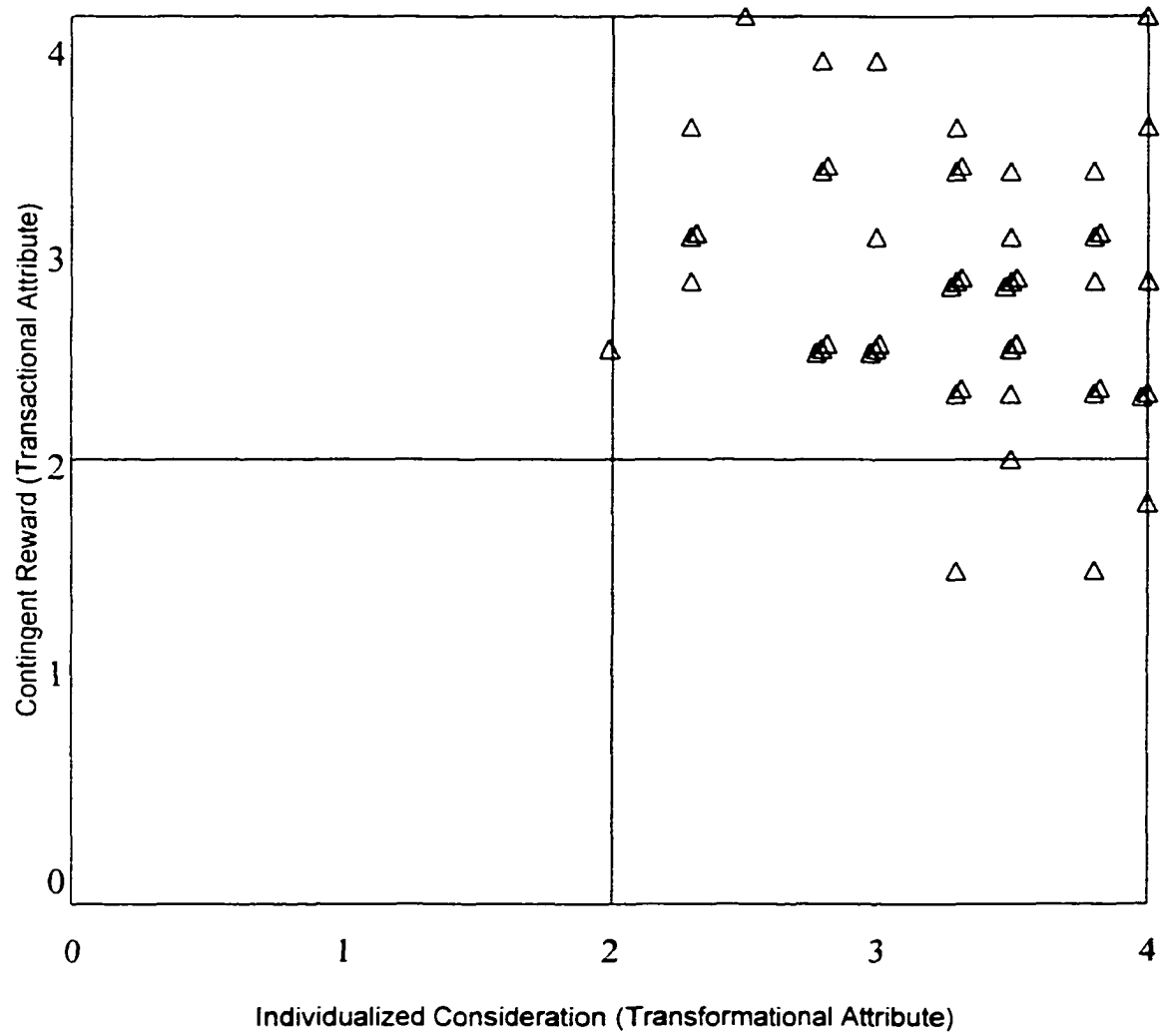
The eight question subset of the MLQ selected for this survey instrument produced interesting, if not startling, results. The first of the questions caused repeated requests for clarification and was useful as a focal point during the semi-structured interviews that followed. That first question embodied a classic, if bald, example of a quid pro quo. In the interview, one senior army officer complained of the wording, saying that it sounded like he was “buying” people (Anonymous

interview with author. 10 March 1999). Moving past queries concerning the wording of the questions, all participants completed the survey rapidly. The complete results are tabulated in table B.1 in appendix B, with only the summary presented here as table 4-2.

Table 4.2. MLQ Summary		
	Individualized Consideration Score (Transformational Behavior)	Contingent Reward Score (Transactional behavior)
Arithmetic Mean	3.3	2.8
Minimum	2.0	1.5

The results show an arithmetic mean score of 3.3 on the 5-point scale measured from zero to four for individualized consideration, the transformational behavior, and 2.8 on the same scale for contingent reward, the transactional behavior. While it can be argued that there was a higher absolute propensity for the specified transformational behavior, viewed as a whole the results show that virtually all of the participants claimed to use both of the behaviors fairly often. The responses "0" and "1" corresponding to the "Not at all" and "Once in awhile" measures of frequency were not used. Figure 4.1, a scattergram of the responses, makes this point most clearly. The graphical presentation depicts clearly that virtually all members of the sample population claimed to use both transactional and transformational leadership behaviors. When viewing the figure it should be

Figure 4.1 MLQ Scattergram



noted that in 16 cases the participants had identical scores; in those instances of double and triple scoring, the markers are slightly offset to display the data in depth.

A correlation study was run on the “IC” scores and “CR” scores against each of the demographic independent variables considered in this study. The “IC” Scores and “CR” scores showed no significant correlation with each other or with any of those independent variables. That entire correlation matrix is included at table B.2 of appendix B. Thus, there were no organized relationships between the transformational and transactional leader styles or between any of the independent variables and the choices of transformational or transactional behaviors.

These military leaders reported that they chose pragmatically those styles that worked for them at the time. More specifically, they claimed consciously to choose leadership tools that would lead to overall task accomplishment. In discussing the concepts of leadership and management, one Air Force captain confirmed that both were needed, “They’re two separate things and both are needed and it just depends on what you’re doing as what you need more of at the moment” (Anonymous interview with author, 23 November 1998). And referring to the balance of transformational and transactional styles, another junior Air Force officer said that the display of personal respect and recognition— transformational

leadership behaviors from the human resource frame—were prime motivators in his experience, yet that the military does use contingent rewards—transactional behaviors—as well. He claimed not to agree with the use of contingent reward, but that certain people take career paths or certain jobs specifically because of the rewards intrinsic to that path or job (Anonymous interview with author, 15 December 1998). In an interview query concerning whether such consciously pragmatic leader behaviors could be construed as—the very loaded word—“manipulative,” a Navy captain responded,

So what’s wrong with that? I mean . . . why am I the leader here? What are we doing? You know, if am expected and I believe my role is to get some product delivered, some mission requirement satisfied, hey you know, I’m going to do what I can to get it done in the best way possible. If that is being manipulative, so be it. (Anonymous interview with author, 18 December 1998).

Thus, there is no simple dichotomy in the data from this study that allows a categorization of military leadership choices as predominantly transformational or transactional. Military leaders in this sample population were aware of both styles, even without their precise textbook definitions, and claimed to use both transactional and transformational behaviors as the situation dictated to effect their mission accomplishment. The following close examination of the data derived from the Q sorts will help identify the factors that determined which specific leadership styles or managerial tools—in the context of the four frames from the Bolman and

Deal Leadership Orientations Instrument—were applied and found to be effective by the respondents to the study.

Q Study Results

I have already noted the process by which the number of factors—four—was derived for the Q studies. We can now consider what the factors mean.

In Q methodology, the presence of several orthogonal (independent) factors is evidence of different points of view in the person-sample. An individual's positive loading on a factor indicates his or her shared subjectivity with others on that factor; negative loadings, on the other hand, are signs of rejection of the factors perspective. (McKeown and Thomas 1988, 17)

Table B.3 in appendix B contains the factor matrix with specific cases identified that define each of the factors. Fourteen respondents loaded on factor A, twelve on factor B, four on factor C, and five on factor D. No one loaded on more than one factor; in all, twelve individuals loaded on none of the four factors. Although some of those cases could appear to have a factor loading high enough to be included in one of the factors, I determined to use the algorithm built into the PQMethod software designed to flag “pure” cases only, according to the following two rules: “Flag loading a if (1) $a^2 > h^2/2$ (factor ‘explains’ more than half of the common variance) and (2) $a > 1.96/\sqrt{n}$ items (loading ‘significant at $p > .05$ ’)” (Schmolck 1997, 6). This determination kept the twelve cases from being included

in any of the four factors. Tables accompanying the individual factor discussions that follow identify more completely the individuals defining a factor.

At the outset of this discussion it should be noted that one statement, statement #1 (Inspire others to do their best), was a consensus statement. That statement from the Bolman and Deal symbolic frame could not be used to distinguish any one of the derived factors. This statement was ranked with a +3 on the scale of ± 4 in its importance to perceived effective leadership in three of the four factors isolated; in the remaining factor it was ranked with a +2 in importance. In all four factors this statement was non-significant at $P > 0.01$. The practical ramification of this consensus is that all of the respondents found the act of inspiring others to be a very important part of their choice of leadership styles. The value of this consensus statement is to say that inspiration, and by extension the symbolic frame and the transformational leadership of which it is part, are a very important part of all leadership styles. To qualify this conclusion one step further, one must at the same time observe that the statement was not ranked with a +4. That would indicate it as a *most* important part of effective leadership—the consensus was that inspiration, a transformational leader style, was simply a *very* important part of every effective leadership factor.

Table Pairs for Study and Discussion

A pair of summary tables for each factor listing (tables 4.3 through 4.10) were prepared to facilitate this discussion of the results. The first table of each pair contains the rank of each statement in the Q sort on the scale of ± 4 , the number of the statement from the concourse, the complete statement itself, its statistical significance as a defining statement (DS) for the variable, its categorization from one of the four frames of Bolman and Deal, and the normalized factor score (z score) of the statement. When the raw scores are transformed into such standardized scores, they show the relative status of that score in a distribution. "The conversion of raw scores to z scores is handy when one wishes to emphasize the *location* or *status* of a score in the distribution. . . . The mean of a distribution of standardized scores is always 0, and the standard deviation is always 1.00" (Hays 1994, 191). The positive and negative extremes of z scores for each factor provide an overview of those statements from the total delimiting the leadership and management behaviors deemed effective in military command—in accordance with the condition of instruction. Accordingly, the z scores were used in conjunction with the ± 4 statement rankings in the discussion. I arbitrarily used a criterion of ± 1 standard deviation for the z scores from these tables to help define what respondents loading on the factor believed to be especially important. This,

of course, is quite different from the list of statements that distinguish one factor from another.

The second table of the pair created for the study and discussion of each factor places those distinguishing statements with their ± 4 rankings and standardized z scores side by side with the other three factors. This table format facilitates the comparison and discussion of those statements that made the factor unique. That comparison is very useful because this factor *distinctiveness* is not the same as what the respondents perceived to be important or unimportant. This second table of the pair for each factor also contains the number of individuals loading either positively or negatively on the factor and a summary of their demographic characteristics further to facilitate study and discussion.

Finding Number 2A. The Contemporary Leader

Contemporary leaders perceived that their success depended on using tools from the human resource frame. This first factor isolated, factor A, was defined by the Q sorts of 15 individuals; one of those 15 loaded negatively on the factor. Technically, that lone individual represents yet another decision pattern. The 15 respondents were spread rather evenly between all four services and levels of seniority. Six were members of the Army, two of the Navy, three of the Air Force, and four of the Marines. Six were junior officers; four were mid-level; five were

senior in grade. Table 4.4 contains a tabular summary of the complete demographic characteristics. There were no significant correlations between factor loadings on factor A and service or rank or any of the other independent demographic variables such as ethnicity or gender; the correlation matrix depicting these null findings is attached as table B.4 in appendix B.

Factor A alone accounted for 20% of the variance in the Q study. This factor described the contemporary leader as one who accepted the human resource frame in generating inspiration, loyalty, and enthusiasm as part of their thinking. The modifying adjective *contemporary* was selected to connote that reliance on the human resource frame is a relatively recent phenomenon, following in time the sterner schools of trait theory and scientific management. Table 4.3 depicts seven statements (#15, #23, #1, #11, #3, #7, and #18) as defining the positive side of this statement with z scores greater than 1.00. These statements are not all *distinguishing* statements differentiating factor A from the others, rather they indicate what the respondents found very important to their effectiveness by virtue of being ranked one standard deviation or more above neutral. Five of those seven statements came from the human resource frame of Bolman and Deal.

Statement #15 (Build trust through open and collaborative relationships) was ranked +4 and was a distinguishing statement for factor A; it set the tone for

Table 4.3. Q Study – Factor A, The Contemporary Leader.

Rank	No.	Statement	DS	Frame	Z-Scores
+4	15	Build trust through open and collaborative relationships.	*	HR	1.697
+4	23	Generate loyalty and enthusiasm.	**	SYM	1.509
+3	1	Inspire others to do their best.		SYM	1.417
+3	11	Give personal recognition for work well done.	**	HR	1.361
+3	3	Listen well and be unusually receptive to other people's ideas and input.		HR	1.344
+2	7	Show high levels of support and concern for others.	*	HR	1.315
+2	18	Foster high levels of participation and involvement in decisions.		HR	1.110
+2	17	Show high sensitivity and concern for other's needs and feel	**	HR	.783
+1	13	Be an inspiration to others.	*	SYM	.671
+1	19	Communicate a strong and challenging vision and sense of mission.	*	SYM	.583
+1	2	Develop and implement clear logical policies and procedures.		STR	.527
+1	22	Serve as an influential model of organizational aspirations	**	SYM	.500
+1	9	Be consistently helpful and responsive to others.		HR	.404
0	10	Strongly emphasize careful planning and clear time lines.		STR	.172
0	29	Set specific measurable goals and hold people accountable for results.	**	STR	.147
0	27	Approach problems through logical analysis and careful think		STR	.113
0	20	Think very clearly and logically.		STR	-.145
0	6	Work on the ability to mobilize people to get things done.	**	POL	-.284
0	32	Approach problems with facts and logic.	*	STR	-.317
-1	30	Develop alliance and build a strong base of support.		POL	-.351
-1	8	Anticipate and deal adroitly with organizational conflict.		POL	-.417
-1	31	Succeed in the face of conflict and opposition.	**	POL	-.513
-1	28	Strongly believe in clear structure and chain of command.		STR	-.559
-1	21	See beyond current realities to create exciting new opportunities.		SYM	-.819
-2	5	Be highly charismatic.	*	SYM	-1.005
-2	16	Be very effective in getting support from people with influence and power.		POL	-1.182
-2	25	Pay extraordinary attention to detail.		STR	-1.232
-3	14	Be highly imaginative and creative.		SYM	-1.237
-3	12	Be a highly participative manager.		HR	-1.237
-3	4	Be unusually persuasive and influential.		POL	-1.371
-4	24	Be a very skillful and shrewd negotiator.		POL	-1.481
-4	26	Be politically very sensitive and skillful.		POL	-1.503

DS – Distinguishing Statements: Single asterisk indicates significance at $P < .05$; double asterisk at $P < .01$

Frame – Bolman and Deal Categorizations: SYM – Symbolic; STR – Structural; HR – Human Resources; POL – Political

Table 4.4. Factor A, Contemporary Leaders:
Distinguishing Statements and Summary of Demographic Characteristics
Both the Factor Q-Sort Value and the Normalized Score are Shown.

No. Distinguishing Statement	Factors							
	A		B		C		D	
	RNK	SCORE	RNK	SCORE	RNK	SCORE	RNK	SCORE
15 Build trust through open and collaborative relationships.	4	1.70	0	.17	3	1.12	1	.54
23 Generate loyalty and enthusiasm.	4	1.51*	1	.63	-1	-.30	2	.61
11 Give personal recognition for work well done.	3	1.36*	2	.83	1	.63	1	.39
7 Show high levels of support and concern for others.	2	1.31	0	.19	1	.67	0	-.10
17 Show high sensitivity and concern for other's needs and feel	2	.78*	-1	-.88	-1	-.70	0	-.13
13 Be an inspiration to others.	1	.67	0	.21	-3	-1.08	-1	-.27
19 Communicate a strong and challenging vision and sense of mis	1	.58	4	1.57	0	-.06	3	1.63
22 Serve as an influential model of organizational aspirations	1	.50*	-1	-.79	-3	-1.05	-2	-.86
29 Set specific measurable goals and hold people accountable fo	0	.15*	4	1.81	-2	-.99	3	1.30
6 Work on the ability to mobilize people to get things done.	0	-.28*	3	1.30	3	1.18	4	1.94
32 Approach problems with facts and logic.	0	-.32	1	.42	1	.65	-2	-.83
31 Succeed in the face of conflict and opposition.	-1	-.51*	1	.43	-4	-1.93	4	1.92
5 Be highly charismatic.	-2	-1.00	-3	-1.48	-4	-2.52	-4	-1.70

(P < .05 ; Asterisk (*) Indicates Significance at P < .01)

Characterisitics of Factor A Respondents

14 individuals loaded positively:													
Service	Grade		Situtation		Position		Commission		Ethnicity		Gender		
Army	5	Senior	5	Peace	13	Operations	8	Academy	1	Caucasian	13	Male	1
Navy	2	Mid-Level	4	War	1	Support	6	Other	13	Other	1	Female	
Air Force	3	Junior	5										
Marines	4												
1 Loaded negatively:													
Army	1	Junior	1	Peace	1	Support	1	Other	1	Other	1	Male	

the rest. (Refer to table 4.4 for the tabular comparison of distinguishing statements.) Discussing what motivated his subordinates, one Air Force lieutenant colonel responded: “. . . the fact that I can trust them to do their jobs. . . . We don’t like being told to do something and then have someone hover over you the entire time you do it. You like to be given a task to do and get turned loose to go do it” (Anonymous interview with author, 9 February 1999). From the opposite perspective, a Marine Corps captain added that his reward and personal job satisfaction came from being trusted by his superiors to accomplish the mission (anonymous interview with author, 28 January 1999).

Statement #23 (Generate loyalty and enthusiasm) was also ranked +4, but came from the symbolic frame. This was a distinguishing statement for this factor at $P < 0.01$. Combined with consensus statement #1 (Inspire others to do their best) ranked +3 in this factor, one recognizes that the contemporary leaders viewed trust, loyalty, and inspiration to be their major leadership tools.

Giving personal recognition (statement #11, ranked +3) was a distinguishing statement for factor A at $P < 0.01$. It was combined with listening well (statement #3), showing high levels of support (statement #7, also a distinguishing statement), and fostering high levels of participation (statement #18); these statements are all from the human resource frame and had normalized

factor loading scores above 1.00. These are the statements that defined what individuals who loaded on factor A perceived as important for successful leadership.

The same factor table 4.3 contains eight statements (#26, #24, #4, #12, #14, #25, and #16) with z scores > -1 ; four of these came from the political frame. These are the leader styles that the respondents rejected as part of their thinking. The rejection of statement #26 (Be politically very sensitive and skillful) was particularly wide spread, as it was ranked with a -4 in this factor A as well as in factors B and D. Statement #24 (Be a very skillful and shrewd negotiator) was also ranked with a -4 in both factors A and B. Semantically, the use of the political frame may have implied *manipulation* to the respondents and could have been normatively perceived as a negative. One could question if the Bolman and Deal test instrument was fairly balanced in its choice of wording for these two statements. It is possible that connotations rather than denotations of a word like “shrewd” in statement #24 caused the negative scores, thereby skewing results. A larger discussion of possible limitations of the Bolman and Deal Leadership Orientations Instrument follows in the final chapter of this work.

The structural frame was also represented in the list of statements with negative rankings and z scores. Statement #25 (Pay extraordinary attention to

detail) was ranked with a -2. This is a logical indication that micromanagement, expressed in terms of the conditions of instruction for the Q sorts, was a behavior found *not* to be effective in military command by the same respondents who accepted human resource themes.

The symbolic frame was also included on the list of rejected statements. Statement #5 (Be highly charismatic) was ranked -2 with a z score just over one standard deviation from neutral. Further, this statement #5 was one of 13 statements that distinguished Factor A from the others. It was significant in this regard at $P < 0.05$.

Interestingly, charisma and inspiration are two related concepts from the theories of transformational leadership. Adherents of factor A embraced inspiration while rejecting charisma; the pragmatic leaders judged one portion of the transformational leadership described by scholars to be effective while repudiating another. It has already been mentioned that inspiration (statement #1) was a statistically non-significant consensus statement perceived positively. Charisma (statement #5) was not a consensus statement, but was ranked -3 in factor B and -4 in factors C and D. Charisma was universally, though unequally, rejected as a behavior effective for military command. I will explore this theme more completely as an implication of this study in the final chapter of this work.

Concomitant with the discussion of the statements that defined perceptions of effective leadership is the discussion of those statements that defined the factor itself, *distinguishing statements*. Tables 4.3 and 4.4 present different views of those statements that set factor A apart from the other factors. All told, 13 statements differentiated factor A from the others with statistical significance. These statements did not define what was perceived as effective leadership; they defined a statement's place in the hierarchy or scale of statement ranks that made the factor unique. For instance, statements #29 (Set specific measurable goals and hold people accountable) and #6 (Work on the ability to mobilize people and get things done) were ranked neutrally with a scores of zero; this neutral scoring of the structural and political frames distinguished factor A from the others at $P < .01$. However, it was the positive loading on the distinguishing statements concerning the building of trust, generating loyalty, giving personal recognition, and showing high levels of support that really defined what these respondents believed to be effective leadership tools.

While one description of factor A is to say it is centered on the Bolman and Deal human resource frame, that also subsumes underlying manifestations from such motifs as McGregor's Theory Y, Likert's System 4, or "high-high" leadership on the Managerial Grid® of Blake and Mouton. The factor A isolated by this study counters the stereotypical picture of a the military leader as a power

hungry, authoritarian bureaucrat and suggests that today's contemporary military leaders concentrate on the needs of their subordinates in order to get their tasks accomplished. These contemporary leaders responding to the study were not building trust, generating loyalty, and being inspirational for the sake of being popular; mission accomplishment was ever on their minds as expressed in their interviews. A Marine Corps captain noted that how he dealt with his subordinates was very "mission-oriented." He reported that the reward they received was from the satisfaction they received by doing the job well and to know that he trusted them (anonymous interview with author, 28 January 1999). An Air Force captain added that "most of the folks I've had the privilege to work with—they've enjoyed the work they've done; and they have wanted to do their work" (Anonymous interview with author, 1 March 1999). An Army lieutenant, a female, concluded that the job itself—the feeling of doing something important and making a difference—motivated her and her subordinates (Anonymous interview with author, 8 March 1999). And a Navy admiral claimed that "there is almost no limit to how well people can perform who feel good about what they're doing; and there is no limit to the absolute paralysis that can occur in an organization where people don't feel good about themselves" (Anonymous interview with author, 24 February 1999). Adherents to the second factor were also concerned with mission accomplishment, but approached it from a much different perspective.

Finding Number 2B, The Traditional Leader

The traditional leader deemed that their effectiveness rested predominantly in the structural frame. The modifier *traditional* here signals that this cluster of respondents put value on hierarchical nature of the military and formal structural lines to ensure their mission success. Factor B accounted for 18% of the total variance in this study. The cluster of respondents defining this factor was made up of twelve individuals; three were from the Army, two from the Navy, four from the Air Force, and three from the Marine Corps. The services had an even spread through factor B. Four of the traditional leaders came from the junior grades; seven were mid-level leaders; one came from the senior group. A complete demographic summary is at table 4.6. Although the large majority of the traditional leaders were from the mid-level group with 12 to 20 years experience, this fact was not statistically significant. Of the 12 officers loading on this factor, nine came from operational work specialties while three held leadership positions in support roles. There *was* significant correlation between being in operations and embracing this traditional leadership factor at $P < 0.05$. The complete correlation matrix is itemized as table B.5 in appendix B. Postulating the meaning, if any, of the correlation between those individuals loading on factor B and being in one of the operations-oriented career fields is difficult. Military leaders in both operations and support roles have command responsibilities to see that a mission is accomplished,

though the overall commanders are by definition in operations. This bit of data is nevertheless worthy of further study and consideration.

Table 4.5 reveals the factor B results of this Q study. Six statements (#29, #19, #6, #10, #1, and #28) in factor B had z scores greater than 1.00, indicating their perceived importance for effective leadership. The structural frame statement #29 (Set specific measurable goals and hold people accountable for results) was paired with the symbolic frame statement #19 (Communicate a strong and challenging sense of mission) with the common rank score of +4. The top ranked statements combined the motivational push of a vision and mission with the need to be held accountable for task accomplishment. As one senior Air Force leader expressed it, “You are trying to provide inspiration for doing what needs to be done. You are trying to put vision into the organization. You are trying to get people to go ‘Eureka!’” (Anonymous interview with author, 10 March 1999).

The next three statements with z scores > 1 were all ranked a +3. They were statement #6 (Work on the ability to mobilize people and get things done), statement #10 (Strongly emphasize careful planning and clear time lines, and statement #1 (Inspire others to do their best). They represented three frames, the political, structural, and symbolic, respectively. Statement #10 from the structural frame was a distinguishing statement for factor B at $P < 0.01$. This statement is working in close support with the structural frame statement #29 to keep people

Table 4.5. Q Study, Factor B, The Traditional Leader.

Rank	No.	Statement	DS	Frame	Z-Scores
+4	29	Set specific measurable goals and hold people accountable for results.		STR	1.808
+4	19	Communicate a strong and challenging vision and sense of mission.		SYM	1.567
+3	6	Work on the ability to mobilize people to get things done.		POL	1.301
+3	10	Strongly emphasize careful planning and clear time lines.	**	STR	1.231
+3	1	Inspire others to do their best.		SYM	1.152
+2	28	Strongly believe in clear structure and chain of command.	**	STR	1.055
+2	2	Develop and implement clear logical policies and procedures.		STR	.850
+2	11	Give personal recognition for work well done.		HR	.831
+1	25	Pay extraordinary attention to detail.	**	STR	.710
+1	23	Generate loyalty and enthusiasm.		SYM	.625
+1	27	Approach problems through logical analysis and careful think		STR	.566
+1	31	Succeed in the face of conflict and opposition.	**	POL	.427
+1	32	Approach problems with facts and logic.		STR	.419
0	20	Think very clearly and logically.		STR	.316
0	13	Be an inspiration to others.		SYM	.211
0	7	Show high levels of support and concern for others.		HR	.189
0	15	Build trust through open and collaborative relationships.		HR	.170
0	3	Listen well and be unusually receptive to other people's ideas and input.		HR	.052
0	8	Anticipate and deal adroitly with organizational conflict.		POL	-.094
-1	18	Foster high levels of participation and involvement in decisions.		HR	-.288
-1	9	Be consistently helpful and responsive to others.		HR	-.301
-1	12	Be a highly participative manager.		HR	-.524
-1	22	Serve as an influential model of organizational aspirations		SYM	-.794
-1	17	Show high sensitivity and concern for other's needs and feel		HR	-.881
-2	14	Be highly imaginative and creative.		SYM	-.882
-2	4	Be unusually persuasive and influential.		POL	-1.065
-2	30	Develop alliance and build a strong base of support.	**	POL	-1.152
-3	21	See beyond current realities to create exciting new opportunities.	*	SYM	-1.305
-3	16	Be very effective in getting support from people with influence and power.		POL	-1.474
-3	5	Be highly charismatic.		SYM	-1.482
-4	24	Be a very skillful and shrewd negotiator.		POL	-1.557
-4	26	Be politically very sensitive and skillful.		POL	-1.683

DS - Distinguishing Statements: Single asterisk indicates significance at $P < .05$; double asterisk at $P < .01$

Frame - Bolman and Deal Categorizations: SYM - Symbolic; STR - Structural; HR - Human Resources; POL - Political

Table 4.6. Factor B, Traditional Leaders:
Distinguishing Statements and Summary of Demographic Characteristics
Both the Factor Q-Sort Value and the Normalized Score are Shown.

No.	Distinguishing Statement	Factors							
		A		B		C		D	
		RNK	SCORE	RNK	SCORE	RNK	SCORE	RNK	SCORE
10	Strongly emphasize careful planning and clear time lines.	0	.17	3	1.23*	-2	-.94	0	-.14
28	Strongly believe in clear structure and chain of command.	-1	-.56	2	1.05*	-2	-.73	-1	-.47
25	Pay extraordinary attention to detail.	-2	-1.23	1	.71*	-1	-.23	-3	-1.57
31	Succeed in the face of conflict and opposition.	-1	-.51	1	.43*	-4	-1.93	4	1.92
30	Develop alliance and build a strong base of support.	-1	-.35	-2	-1.15*	2	1.02	-1	-.22
21	See beyond current realities to create exciting new opportun	-1	-.82	-3	-1.30	-1	-.51	0	.05

(*P* < .05 ; Asterisk (*) Indicates Significance at *P* < .01)

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Characterisitics of Factor B Respondents

[illegible]

on task and ensure success. Statement #1, the consensus statement from the symbolic frame, supports statement #19 in setting an inspirational tone while nevertheless demanding performance. Achievement of the task at hand was a vital component of factor B and was to be effected through leadership by example. As the following anecdote told by a Marine Corps major suggested, some of the tasks might be more formal than others; nevertheless, the process demonstrated its own efficacy:

You can inspire people—use leadership by example. I had a commanding officer, a lieutenant colonel. Walk with this man, just around the compound, and he would stop and pick up every piece of trash. So you would find yourself picking up trash, but he would never say a word. But we found that as the young officers walked across the compound by ourselves, we were picking up trash the next day. (Anonymous interview with author, 1 February 1999)

The final statement in factor B that had a z score > 1 was statement #28 (Strongly believe in clear structure and chain of command) from the structural frame. Statement #28 was ranked a +2 and was a distinguishing statement for the factor at $P < 0.01$. Table 4.6 contains the tabular view of distinguishing statements for this factor. There is obviously much positive support by those loading on factor B for an effective hierarchy and its overall utility in job accomplishment.

Two statements (#25 and #31) in the Q study were worthy of note in their ranking neutrality. Both statements were ranked here with a modestly positive +1. Both, however, were distinguishing statements for factor B at $P < 0.01$. Statement

#25 (Pay extraordinary attention to detail) pointed to the principle of micromanagement or a negative management by exception. Statement #31 (Succeed in the face of conflict and opposition) underscored the desire for mission accomplishment. These statements distinguished the factor not by the strength of their ranking, but by their position on the +4 to -4 scale. The traditional leaders of factor B are clearly more concerned with detail (statement #25) than contemporary leaders and power-oriented leaders whose scores were effectively one and two standard deviations lower on this statement. Both micromanagement and the willingness to push for success in the face of conflict are at least modestly tolerated by these traditional leaders, distinguishing them from adherents of the other factors.

Seven statements (#26, #24, #5, #16, #21, #30, and #4) received normalized factor scores > -1 . These are the statements which defined those behaviors perceived *not* to be an aid to effective leadership. Five of these negatively perceived statements came from political frame. Statement # 26 (Be politically very sensitive and skillful), statement #24 (Be a very skillful and shrewd negotiator), statement # 16 (Be very effective in getting support from people with influence) statement #30 (Develop alliances and build a strong base of support), and statement #4 (Be unusually persuasive and influential) all represent the

political frame and an approach to power in leadership. Adherents in the factor B cluster rejected the utility in this.

Two statements (#5 and #21) with z scores > -1 come from the symbolic frame. Statement #5 (Be highly charismatic) was ranked -3. As in the factor A, charisma in factor B is perceived negatively, especially when compared with its symbolic frame cousin, consensus statement #1 on inspiration. Statement #21 (See beyond current realities to create exciting new opportunities) was ranked -3 and was a distinguishing statement for the factor.

Thus in factor B, leader styles associated with manipulative behavior and office politics were rejected as the least useful behaviors to effective military command. Though the specific statements in play vary, the utility of the political frame as an effective leadership behavior was rejected generally here. This finding is remarkable in that it contradicts the stereotypical military commander often portrayed in newspaper opinion-editorial page cartoons, satire, and fiction, as power-hungry individuals seeking self aggrandizement. The statistical strength of these perceptions is not to be denied. In the final chapter of this study, the implications of this denial by the respondents and the potential for their overstatement are discussed.

In the end, the hierarchical, structural—even paternalistic— approach was favored for factor B. One Marine aviator reported simply, “You’re trained to be a professional and you’re trained to always focus on mission accomplishment, following the commander’s intent with the follow-on of achieving the mission” (Anonymous interview with author, 11 February 1999). Another Marine Corps major discussed his personal approach to command at length and how he delegated responsibility to his non-commissioned officers:

“This is your shop.” I said, “You’re in charge of these Marines. I’m just the monitor. I have the final say, but you run everything through me. You get them to the rifle range. You make sure the books are squared away. If their family’s having problems, they need a day off, you better get them a day off.” Then I held him accountable. . . . I held him responsible for those 20 Marines. (Anonymous interview with author, 1 February 1999)

Though not denying the need to accomplish a mission, officers representing the next factor cluster embraced very different approaches.

Finding Number 2C, The Integrated Leader

The integrated leader judged that an eclectic collage from three of the four Bolman and Deal frames—a mixture decidedly different from the those in the other factors—would lead to effectiveness. The adjective *integrated* is used here to indicate that the leadership and management behavior mixture selected was the most broadly based. At the same time, what these leaders held as very important or

very unimportant for success, adherents to the other factors did not. What the integrated leaders perceived to be neutral in utility were those behaviors others accepted or rejected as part of their thinking quite emphatically. The judgments of those making up factor C were most contrary compared to the others. A cluster of only four individuals defined this third factor. That means that the convictions of a reasonably small fraction, just over 8% of the sample population, were strong and similar enough to give individual, unified meaning to their perceptions. After factor analytical rotation, factor C accounted for some 9% of the total variance in the study. Three of the respondents in this cluster were Navy officers; one was from the Air Force. Three of the respondents were senior officers; one was a mid-level leader. The tabular summary of demographic characteristics is shown at table 4.8. Two of the respondents in this cluster were female. Only this last demographic detail was statistically significant, and that at $P < 0.01$. The complete correlation matrix for this factor is catalogued as table B.6 in appendix B. As there were five females in the sample population of 48, this sample population mirrored the size of female representation in the armed forces as a whole which is ca. 10%. It was significant that two of the five females in the sample population loaded on and defined the third factor; therefore, this factor contains gender specific thinking.

Reference to table 4.7 presents eight statements (#3, #16, #1, #6, #15, #20, #30, and #2) with z scores > 1.00 . These statements represented what the integrated leaders accepted in their thinking as behaviors that led to effectiveness. Adherents of factor C had selected behaviors from each of the four frames. Ranked as a +3 is the consensus statement #1, (Inspire others to do their best). It was the only statement from the symbolic frame from this group of positively perceived statements. At the same time, the integrated leaders ranked a second statement concerning inspiration from the symbolic frame (statement #13, Be an inspiration to others) with a -3. Given the small difference in meaning between “inspiring others” and “being an inspiration,” balancing the ranking the two similar statements with a +3 and a -3 tended to cancel out the significance of inspiration from the factor. Moreover, statement #13 was a distinguishing statement for this factor at $P < 0.05$. One *could* argue that this balancing and cancellation effectively removed the symbolic frame from the accepted thinking in factor C. The remaining statement rankings with z scores > 1 for the integrated leaders were a collage of the remaining three frames from Bolman and Deal.

Statement #3 (Listen well and be unusually receptive to other people’s ideas) was ranked a +4. It was paired with statement #15 (Build trust through open and collaborative relationships), ranked +3. Both of these statements come

Table 4.7. Q Study - Factor C, The Integrated Leader.

Rank	No.	Statement	DS	Frame	Z-Scores
+4	3	Listen well and be unusually receptive to other people's ideas and input.		HR	1.437
+4	16	Be very effective in getting support from people with influence and power.	*	POL	1.232
+3	1	Inspire others to do their best.		SYM	1.196
+3	6	Work on the ability to mobilize people to get things done.		POL	1.179
+3	15	Build trust through open and collaborative relationships.		HR	1.117
+2	20	Think very clearly and logically.	*	STR	1.097
+2	30	Develop alliance and build a strong base of support.	**	POL	1.018
+2	2	Develop and implement clear logical policies and procedures.		STR	1.007
+1	18	Foster high levels of participation and involvement in decisions.		HR	.681
+1	7	Show high levels of support and concern for others.		HR	.672
+1	32	Approach problems with facts and logic.		STR	.650
+1	11	Give personal recognition for work well done.		HR	.634
+1	9	Be consistently helpful and responsive to others.		HR	.624
0	27	Approach problems through logical analysis and careful think		STR	.257
0	8	Anticipate and deal adroitly with organizational conflict.		POL	.167
0	24	Be a very skillful and shrewd negotiator.	*	POL	.136
0	26	Be politically very sensitive and skillful.	**	POL	.105
0	19	Communicate a strong and challenging vision and sense of mission.	*	SYM	-.064
0	4	Be unusually persuasive and influential.	**	POL	-.226
-1	25	Pay extraordinary attention to detail.	**	STR	-.230
-1	23	Generate loyalty and enthusiasm.	**	SYM	-.304
-1	21	See beyond current realities to create exciting new opportunities.		SYM	-.514
-1	14	Be highly imaginative and creative.		SYM	-.587
-1	17	Show high sensitivity and concern for other's needs and feel		HR	-.698
-2	28	Strongly believe in clear structure and chain of command.		STR	-.734
-2	10	Strongly emphasize careful planning and clear time lines.	*	STR	-.944
-2	29	Set specific measurable goals and hold people accountable for results.	**	STR	-.991
-3	22	Serve as an influential model of organizational aspirations		SYM	-1.054
-3	13	Be an inspiration to others.	*	SYM	-1.081
-3	12	Be a highly participative manager.		HR	-1.337
-4	31	Succeed in the face of conflict and opposition.	**	POL	-1.930
-4	5	Be highly charismatic.	*	SYM	-2.518

DS - Distinguishing Statements: Single asterisk indicates significance at $P < .05$; double asterisk at $P < .01$

Frame - Bolman and Deal Categorizations: SYM - Symbolic; STR - Structural; HR - Human Resources; POL - Political

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from the human resource frame. In this initial focus on human resource thinking, the integrated leaders appeared to be echoing the contemporary leaders from factor A in this study. The integrated leaders, however, immediately distinguished themselves by ranking three statements from the political frame as very important: Statement #16 (Be very effective in getting support from people with influence and power) was ranked +4 and was a distinguishing statement for the factor; statement #6 (Work on the ability to mobilize people and gets things done) was ranked +3; statement #30 (Develop alliances and a strong base of support) was ranked +2 and was a distinguishing statement at $P < 0.01$. Together, the selection of three statements from the political frame displayed pragmatism and set the respondents loading on factor C apart from the rest. Indeed, as table 4.8 shows, the ranking of statement #16 in factor C was effectively 2.5 standard deviations above the scores for factors A and B. Also in the list of statements accepted in the thinking of the integrated leaders were two from the structural frame: Statement #20 (Think clearly and logically) was ranked +2 and was a distinguishing statement; nearly one full standard deviation separated its ranking from those of the other three factors. Statement #2 (Develop and implement clear logical policies and procedures) was also ranked +2.

Taken together, integrated leaders found an eclectic combination of the human resource, the political, and the structural frames to be most effective for successful military command. One senior Navy officer commented on his conscious choice of a variety of leadership styles:

I recognize that everybody is different and some things motivate some people that don't motivate others; and one of the things I've tried to do as an officer, leader, and manager is to try and understand what makes person A tick versus person B, C, D. And within my abilities and within reason . . . use a tactic which works and gets the response that I need from person A and a different tactic with B and/or C and/or D. (Anonymous interview with author, 18 December 1998)

Continuing with the analysis of factor C, five statements had normalized factor scores > -1.00 , indicating their rejection. Three of these negatively weighted statements came from the symbolic frame: Statement #5 (Be highly charismatic) was ranked -4 and was a distinguishing statement with an exceptionally low z score of -2.518; statement #13, (Be an inspiration to others) was ranked -3 as previously mentioned; statement #22 (Serve as an influential model of organizational aspirations) was also ranked -3. Truly, integrated leaders eschewed use of the charisma and the symbolic frame.

Though several facets of the political frame appealed to the integrated leaders, some did not. Statement #31 (Succeed in the face of conflict and opposition) was ranked -4 and was a distinguishing statement at $P < 0.01$. This

judgment differed from 1.5 to 2 standard deviations from the traditional and contemporary leaders and nearly four standard deviations from the power-oriented leaders. Similarly, though integrated leaders found much utility in some parts of the human resource frame, they ranked statement #12 (Be a highly participative leader) with -3.

The statement scoring that really displayed the contrasting thinking of the integrated leaders was the position of six statements (#24, #26, #19, #4, #25, and #23), each ranked neutrally with a 0 or a -1. Where other respondents heartily accepted or soundly rejected the thinking represented by these statements, the integrated leaders judged them neutrally; here it was the neutrality of the scoring that made the integrated leaders different and set them apart from others in the sample. Each of these six listed statements were statistically distinguishing statements for the factor—four of the six at the $P < 0.01$ level.

Since the integrated leaders cannot be categorized by adherence to a single frame—rather by their insistence on the utility of several—one could find support for one thesis of Bolman and Deal (1991a) that the effective leader does and should use multiple frames. It is this very perception of the utility of multiple frames in this third factor that demonstrates nuances of meaning from the selected four factor solution that would not come to light in a simpler two factor solution

to the study. It is similarly challenging to dichotomize the perceptions of these integrated leaders in the terms of any of the well known two factor models of leadership balancing concern for task and concern for people.

The 9,9 (high, high) leader from the Managerial Grid® of Blake and Mouton (1985) may come closest to describing the integrated military officers in this study, where the authors suggested that the attempt was made to maximize both job accomplishment and personnel needs simultaneously. Reflections on motivation from the interview of one senior Navy officer may best define the context for this integrated leader style. She posited that everybody is interested in doing a good job, and that everybody is also interested in getting a pat on the back—but that many older folks, like herself, were brought up with the value system of doing a good job for the sake of doing a good job. In further comments on how the military is managing an increasing operations tempo while in the midst of budget constraints and downsizing the force structure, she claimed that,

The system will never break, you know, because there are too many people too dedicated to holding it together. It is not going to break because I work 12 hours a day; and then you know, next year I am going to work 13, and the next year I am going to work 14. You know, until I retire, it is not going to break. (Anonymous interview with author, 18 December 1998)

Once more, this citation underscores the respondent's personal desire to accomplish her mission and the mission of her organization. However, as a group,

the integrated leaders perceived the makeup of what would bring about that success markedly differently from those making up the other factor groups. In another interview, a senior Naval officer summed up this pragmatic mind set by saying,

There's a job to get done, and if I can within those boundaries I laid out earlier—not being discriminatory, unfair, or creating more problems by doing it—if I can get the job done and get better response from each of the individuals by using slightly different methods in each case, I say that's a frugal way to do it. . . . I think a manager who tries to manage everybody exactly the same is not a good manager, not a good leader. (Anonymous interview with author, 18 December 1998)

What these integrated leaders pursued as pragmatically useful leader styles differed markedly from those respondents making up the fourth factor stemming from this study.

Finding Number 2D. The Power-Oriented Leader

The fourth factor derived from this study describes the power-oriented leader as one who saw the use of the political frame as the key to effective military command. This factor accounted for 11% of the total variation in the study; the process of factor rotation sharpened the focus on this factor to the point that in this four factor solution, more total variance was explained by this factor D than by the previous factor C. Five respondents formed the cluster defining the factor. One

was from the Army, two were from the Navy, and there were one each from the Air Force and the Marines. One was a junior officer, one a mid-level leader, three were senior in rank. A full listing of the demographic characteristics for factor D is at table 4.10. There was no statistically significant correlation between the factor loading scores and any of the independent demographic variables; the complete correlation matrix is detailed in table B.6 in appendix B.

Factor D is in one way related to factor B, in that task accomplishment was thrust to the fore. Its main distinguishing feature is that the respondents who loaded on this factor did not generally eschew the use of the political frame as did those in the population representing factor B. For these five individuals in factor D, a careful application of the political frame—the use of power—was the perceived tool of choice to effect mission accomplishment.

In all, five statements (#6, #31, #19, #29, and #27) had z scores > 1.00 . Referencing table 4.9, one notes that the two statements ranked highest (#6 and #31), each with +4, were from the political frame and embraced the use of political power to further task accomplishment. Statement #6 (Work on the ability to mobilize people and get things done) had an extremely high z score at 1.943 and was a distinguishing statement for this factor. Statement #31 (Succeed in the face of conflict and opposition) came next; it also had an extremely high z score

Table 4.9. Q Study - Factor D, The Power-Oriented Leader.

Rank	No.	Statement	DS	Frame	Z-Scores
+4	6	Work on the ability to mobilize people to get things done.	*	POL	1.943
+4	31	Succeed in the face of conflict and opposition.	**	POL	1.922
+3	19	Communicate a strong and challenging vision and sense of mission.		SYM	1.632
+3	29	Set specific measurable goals and hold people accountable for results.		STR	1.298
+3	27	Approach problems through logical analysis and careful think	*	STR	1.090
+2	1	Inspire others to do their best.		SYM	.958
+2	4	Be unusually persuasive and influential.	*	POL	.724
+2	23	Generate loyalty and enthusiasm.		SYM	.610
+1	16	Be very effective in getting support from people with influence and power.	*	POL	.544
+1	15	Build trust through open and collaborative relationships.		HR	.544
+1	3	Listen well and be unusually receptive to other people's ideas and input.		HR	.430
+1	11	Give personal recognition for work well done.		HR	.394
+1	20	Think very clearly and logically.		STR	.268
0	14	Be highly imaginative and creative.	*	SYM	.185
0	21	See beyond current realities to create exciting new opportunities.		SYM	.052
0	7	Show high levels of support and concern for others.		HR	-.104
0	17	Show high sensitivity and concern for other's needs and feel		HR	-.128
0	9	Be consistently helpful and responsive to others.		HR	-.132
0	10	Strongly emphasize careful planning and clear time lines.		STR	-.141
-1	30	Develop alliance and build a strong base of support.		POL	-.217
-1	13	Be an inspiration to others.		SYM	-.271
-1	28	Strongly believe in clear structure and chain of command.		STR	-.469
-1	24	Be a very skillful and shrewd negotiator.	*	POL	-.611
-1	18	Foster high levels of participation and involvement in decisions.		HR	-.732
-2	32	Approach problems with facts and logic.	*	STR	-.825
-2	2	Develop and implement clear logical policies and procedures.	**	STR	-.838
-2	22	Serve as an influential model of organizational aspirations		SYM	-.858
-3	12	Be a highly participative manager.		HR	-.889
-3	8	Anticipate and deal adroitly with organizational conflict.	*	POL	-.946
-3	25	Pay extraordinary attention to detail.		STR	-1.566
-4	5	Be highly charismatic.		SYM	-1.702
-4	26	Be politically very sensitive and skillful.		POL	-2.162

DS - Distinguishing Statements: Single asterisk indicates significance at $P < .05$; double asterisk at $P < .01$

Frame - Bolman and Deal Categorizations: SYM - Symbolic; STR - Structural; HR - Human Resources; POL - Political

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127[illegible][illegible]

of 1.922 and was a distinguishing statement at $P < 0.01$. The tabular study of distinguishing statements for this factor is at table 4.10. Examination of the meaning of statement #31 clearly reveals the task focus of factor D. By contrast, the integrated leaders of factor C had ranked this same statement -4, nearly four standard deviations apart—totally polar odds to this factor ranking. The opposing rankings between factors C and D on this one statement gave cause to contemplate the rhetorical question, what price is one willing to pay for success? Leaders loading on factor D seemed willing to pay most any price. One Army lieutenant colonel whose Q sort identified him with factor D said in response to this theme,

There are brief exceptions to the rule where you have to – to drive people to or past the breaking point to accomplish some missions. . . . It may not be pleasant. . . . It may be better to not use the forceful, rough-edge personal tools at your hand, but sometimes you have to do that.
(Anonymous interview with author, 2 March 1999)

Continuing with the exposition of factor D, statement #19 (Communicate a strong and challenging vision and sense of mission) was ranked +3—along with the consensus statement #1, ranked +2—and provided the symbolic foundation for motivation on which the task focus was based. Statements #29 (Set specific measurable goals and hold people accountable for results) and #27 (Approach problems through logical analysis and careful thinking) completed the list of those statements with z scores >1 ; they were both from the structural frame and both

ranked +3. Additionally, statement #27 was a distinguishing statement for factor D.

Thus, the five statements with the highest loadings defining factor D used three frames: the willingness to embrace the political frame in order to accomplish the task rested on a foundation of the symbolic and structural frames. In contrast to factor A, here, the human resource frame was markedly absent. Of the ten distinguishing statements for the power-oriented leaders, 3 were ranked ca. 2 standard deviations and 4 were ranked ca. 1 standard deviation apart from the contemporary leaders. The differences in perceptions of effective leadership behaviors between adherents of the two factors was marked.

Only three statements (#26, #5, and #25) making up factor D had z -scores > -1 . Paradoxically, that group of three statements had one each from the political, symbolic, and structural frames on which the factor was based. Power-oriented leaders appeared very selective, even within the frames they used, about which specific tools they chose and employed. Here they discarded one tool from each of the frames they did use.

One statement in factor D with a z score > -1 was #25 (Pay extraordinary attention to detail); it was ranked -3. Here, the power-oriented leaders showed

their rejection for micromanagement; leaders associated with other factors found this behavior of neutral utility or mildly useful.

As mentioned earlier, statement #26 (Be politically very sensitive and skillful) was ranked -4 in factor D—and also in factors A and B. Only the integrated leaders found this particular behavior to be neutral in terms of effective military command. Though there were no apparently emotion-laden words in the statement, adherents to three of the four factors agreed to reject this politically-oriented behavior.

Statement #5 (Be highly charismatic) was also scored -4 in factor D. In this case the power-oriented leaders shared their rejection of charisma as a tool with the integrated leaders who also ranked it -4. Factor B leaders scored the same statement -3; factor A leaders gave it -2. The rejection of the use of charisma was not statistically a consensus item, as was statement #1 on the use of inspiration. Nevertheless, one notes the general attitude was not one in favor of the use of charismatic behavior.

Qualitatively, the power-oriented leaders described themselves as being motivated by the job itself and being part of a group. As one Air Force general officer expressed it,

What motivates me is the fact that when you're doing a job that needs to be done . . . the more direct connection you can draw between what you

are doing and something good that is happening—or something bad that is *not* happening. . . . The thing is *things happen*. . . . People *work* for IBM but I'm *in* the Air Force.” (Anonymous interview with author, 10 March 1999)

It stands to reason that pressing forward with mission accomplishment would be paramount for those so motivated. A Marine Corps colonel spoke at length of providing training programs and discipline that would not permit failure on the part of the troops. Using the example of a Marine firing his rifle for score and *not* qualifying, he explained that the Marine *would* qualify by going back and working on his marksmanship until finally scoring expert. Leadership within the Corps would require him to succeed. Training to a standard was the methodology; expulsion for failure was not (Anonymous interview with author, 24 November 1998). An Army lieutenant colonel echoed these sentiments by saying that the measure of an effective Army leader was to succeed in day-to-day tasks and to be prepared for combat if required. He continued that the idea of eliminating the weaker performer contained too narrow a mandate. Army leadership would take care of the troops, motivate, train and ready them. By these steps they would succeed in their ultimate mission (Anonymous interview with author, 2 March 1999).

A Navy lieutenant from the factor D cluster, assigned to a support field and somewhat disaffected from her service, added this,

Right now I think the only thing that can motivate people in the Navy is the desire to serve the mission and serve the operators. . . . I think that the only thing that keeps these people going is the dedication to the duty itself. . . . I have pride because I do my job well. I can't say it is because I like the Navy; I like the fact that you're on the tip of the spear; I like the fact that we're the ones doing it. I think we do it better. (Anonymous interview with author, 9 March 1999)

In summary, the power-oriented leader of factor D accepts the thinking of the political frame in conjunction with other frames to ensure mission accomplishment; on the surface, a human resource perspective was notably lacking in this factor. Failure to accomplish an assigned mission was not acceptable. Pride in self and the personal need for achievement worked together for the push through to success. That this cannot be accomplished by the lone individuals in leadership positions led back to the recognition by the power-oriented leaders of the absolute requirement to train and care for their troops.

Summary

The research design for this study posited that the mix of leadership behaviors perceived as effective for military command by actual military leaders and managers would vary based on the independent variables of their predisposition for transformational or transactional behaviors, their specific branch of service, their relative seniority, the world situation (peace or war) as they performed their tasks, their command position, be it operations or support, and

demographic factors such as gender, ethnicity, and the source of their military commission.

The foregoing list of findings was developed by examining the results of surveys and interviews using the Multi-Factor Leadership Questionnaire and the Leadership Orientations Instrument. Anecdotal explanations and support was given to the quantitative results from transcripts of semi-structured interviews with the respondents. The findings made clear that there was no predisposition for transactional or transformational leadership. Both styles were used and found to be effective in an appropriate setting.

The Q sorts performed by the sample population as a whole generated four factors that defined their perceptions of effective leadership in the military services. In factor A, a concern for people, the human resource perspective was dominant. In factors B and D, the concern for task accomplishment through structural hierarchy or the use of political power overshadowed other concerns. Factor C contained an integrated blend of approaches that were markedly different from the other factors; nevertheless it contained a task focus. Being a traditional leader in factor B correlated with being in operations, not in a support post. In factor C there was a highly significant correlation with being female. Inspirational leadership, as opposed to charismatic leadership, was truly an element common to

all of the factors. The following chapter concludes with a discussion of the implications of this study and also its limitations and further research.

The most lasting tangible act of leadership is the creation of an institution—a nation, a social movement, a political party, a bureaucracy—that continues to exert moral leadership and foster needed social change long after the creative leaders are gone.

– James MacGregor Burns, *Leadership*

Chapter 5

DISCUSSION

Introduction

The previous chapter set out and discussed in detail the findings of this study based on the initial hypothesis that the mix of leadership and management behaviors deemed effective by military officers would vary across a set of independent variables. It was determined that the chosen leadership and management styles did vary, but there were only two instances where those behaviors correlated meaningfully with any of the independent variables: (1) Traditional leaders who perceived the effectiveness of using formal hierarchy and the structural frame tended come from operational career fields rather than having support roles; and (2), the female gender correlated strongly with the integrated leaders whose perceptions of effectiveness in military command included the broadest blend of the human resource, political, and structural frames to

accomplish their missions. In this final chapter, implications are drawn from the findings, limitations to the study are noted, and opportunities for future research are suggested.

Effective Military Leadership and Management

Drucker (1999) wrote that “management exists for the sake of the institution’s results. It has to start with the intended results and has to organize the resources of the institution to attain those results” (p. 39). After so many definitions have been examined and so many opinions heard, this study concludes that effective leadership and management in the military context were perceived as the set of traits, skills, and behaviors intended to motivate followers to actions that were in consonance with the values and goals of the organization. On the surface, there is little new in this particular definition: in fact, it closely follows Drucker’s contention about management noted here and the definition of leadership cited from Army regulation in the first chapter of this work. The key to this conclusion and the definition framed from this study—its unique determinations—lies in the focus on task accomplishment and organizational goals held by the military officer corps. In the minds of the officers surveyed and interviewed, *effective* leadership resulted in mission accomplishment. Management and *effective* management were viewed in similar terms. Management and allocation of resources, materiel and

personnel, were effective when the mission was accomplished. Clearly, the respondents perceived differently the manner by which this motivation and mission accomplishment were to be effected. Traditional leaders believed in relying on hierarchy and structure; power-oriented leaders tended to favor the political frame; integrated leaders accepted the thinking from the broadest blend of three frames—but in each case mission accomplishment, the concern for task, was in the forefront. Even the contemporary leaders, who perceived that the human resource frame made for effective military command—and hence were most concerned with the welfare of their people, still placed mission accomplishment on a par with their concern for people. Four citations and anecdotes, one from each of the four derived factors illustrate this.

A contemporary leader, an Air Force lieutenant colonel, commented, “You explain to people why what they do is important and you recognize them when they do a good job. . . . To me, my biggest function is to take care of the people. If you take care of the people problems, the rest of that stuff’s going to work itself out” (Anonymous interview with author, 9 February 1999). This statement encapsulated the view of those depending on the human resource frame: take care of the people and they will take care of the mission.

A traditional leader, an Army major, said that, “they [the subordinates] have to know you care about them. They also have to know that regardless of each individual’s circumstance or [the] consequences of decisions you make . . . that the overriding factor, at least in the military, is mission accomplishment” (Anonymous interview with author, 15 December 1998). Here, the traditional leader paid due respect to the need for caring for his people while at the same time recognizing that the overarching military mission must take precedence.

An integrated leader, the same Navy captain who talked of consistently putting in 12-hour work days and who has already been quoted on how the system would not “break” while she was on watch, related the following in terms of contingent reward, “You know [if] we’ve had a great week, it’s Friday afternoon, if I say ‘Get out of here,’ that is a reward. You know, this morning I brought chocolate [treats] in that I made for everybody. . . . They liked it. We had a good time” (Anonymous interview with author, 18 December 1998). This integrated leader was very willing to pick and choose among the leadership frames. On one hand she used contingent reward and caring for her subordinates with homemade baked goods: at the same time she insisted that the mission be accomplished, even at the cost of unremitting long hours on her part and on the part of all those in her organization.

A power-oriented leader, an Air Force general officer, commenting on the Total Quality Management (TQM) program in the Air Force reported that:

We got wrapped around on “quality” and forgot our first principles that we are a military organization, and that while efficiency and effectiveness are good, we are playing with edge tools and people can get hurt. And so some things [management tools] are good for IBM and [for] some other organizations that are making a product. I mean our [Air Force] product effectively is deterrence—or death and destruction. There are some [management styles] that we were trying to embrace that made no sense at all. . . . “Quality” is not just quality for quality’s sake. We are not just going to sit around and hum “Kumbayah.” We have a very serious job to do. We got a little bit too much three-piece suit there and forgot this is a military organization. There are a lot of good things in these management theories, but a lot of the management theories were not practiced in this crucible of blood. We got too collegiate; I guess you would say we lost our first principle and purposes. (Anonymous interview with author, 10 March 1999)

These statements reflect the political frame from which they came and the earnestness of the tasks facing U.S. military leaders. In this case, management programs of most any ken must bow to the gravity of a mission performed in that “crucible of blood.”

While perusing the prioritization of *mission accomplishment* illustrated here, one is reminded of the theories from the classic studies done at Michigan in the 1950s as noted by Yukl (1994) and Ohio State in the 1960s (Likert 1961) and the later models developed by Blake and Mouton (1964, 1985), Blake and McCauley (1991), and Hersey and Blanchard (1969, 1977). The cited body of

leadership literature relates the ongoing tension in leadership styles where concern for people is balanced against concern for task. As demonstrated, this dichotomy also emerged from the empirical data in this study and was a core issue. The four factors derived from the Q studies nicely revealed nuances of meaning across the two competing concerns for task and for people.

As a group, the sample of mission-oriented military leaders did not present themselves as uncaring, uniformed villains from some fictional apocalyptic scenario. At the time of this writing the officer corps of the armed forces of the United States consisted predominantly of married bread winners who had chosen the military as a profession, a career, and a calling. As financial managers under the financial constraints set by the Congress in each year's appropriations, they are forced to juggle costs for new investments and capital expenditures, maintenance, force readiness and training, and a variety of quality of life issues for their people. Making the decision to do one thing at the expense of another—robbing Peter to pay Paul—is an every day occupation for senior commanders. Turning those fiscal decisions made by the senior leaders into practice and explaining the decisions to the troops—while *always* accomplishing the assigned mission—is the quandary of the mid-level and junior officers.

A second level in the concern for people by military officers deserves further amplification here. Unlike many civilian occupations, military jobs are often inherently dangerous. This is the aforementioned “crucible of blood.” Even *training* for crisis or war can cost life and limb of the participants or of innocent bystanders. Military accidents—from spectacular air crashes to tragic mistakes with loaded weapons—are continuing fare in the news media. One response to the obvious dangers (and expense) of training events has been to reduce their rigor, to simulate the training or deal with it in a classroom environment as much as possible. The counter to this argument is that such training does not really prepare the U.S. armed forces for the real hazards they can expect to face. As a result of training where too much is simulated, our forces are more likely to come to harm should their military skills be put to the test in a real crisis scenario. During his interview, a junior Navy lieutenant commented exactly on these hazards, saying that you run a risk to your troops if you do not practice and train in the same way that you plan to fight (Anonymous interview with author, 24 February 1999). Once more our military leaders have been caught in a classic dilemma trying to balance their concern for mission accomplishment with their concern for, this time, the *physical* safety of their people.

Conversely, several of the respondents to this study claimed that no prioritization in concern for people and for mission accomplishment was necessary. For them, whether it was the more mundane quality of life issues such as more floor space or private dormitory rooms for junior enlisted personnel—or those domains where anxiety about physical danger for their troops existed—“people” issues were not in conflict with the requirement to get the job done. Concern for task and for people were joined together in their perceptions as one thing—nevertheless, this joint concern was often phrased only in terms of task accomplishment. A Marine Corps captain had answered the question “what does effectiveness mean within the military” very directly by saying, “Being able to accomplish the mission with the least amount of resources.” When queried further if the happiness or satisfaction of the individuals involved played in this version of “effectiveness,” The same Marine said that the satisfaction of his troops was important because it played heavily in how quickly and efficiently they got their job done: “If they’re happy where they’re at, then they’re going to work harder and they’re going to put more into it. . . . Happier troops get the job done. . . . [You] have less waste, have less sick problems overall” (Anonymous interview with author, 28 December 1998). One might question the leader’s true motivation in pronouncing his concern for his troops’ welfare or the potential manipulative

nature of the selected leadership style, but the consequence is an authentic concern for the welfare of subordinates—irrespective of its motivation. Another Marine, a colonel, phrased it this way, “Sure, of course the Marine Corps foresees that [the need to balance concern for task with concern for people]; and they go out of their way in stating that they’re both important. They’re both equally important; they’re both something you have to strive for” (Anonymous interview with author, 26 February 1999). In this, the military leaders were consciously or unconsciously duplicating the normative recommendation from the Managerial Grid® of Blake and Mouton (1985), that the most successful leaders used a 9,9 style of team management where work accomplishment is maximized by people committed to organizational goals. Both task *and* people are important at the same time. This principle is also in consonance with the work of Bolman and Deal (1991a, 1991b, 1997), who with their own model and approach claimed that leaders must be able to use multiple frames to be effective. The military officers responding to this study used their own very personal selections from the four frames—these cognitive vantage points—to balance concern for people and for task. An examination of their individual motivation and the motivation of their subordinates helps one to understand their selection of different leader styles and the cognitive frames from which they come.

Motivation

As Stanford University Professor James March has said, “When studying leadership, it is helpful to separate the plumbing (technical skills) from the poetry (motivation, people skills)” (Eikenberry 1995, 22-3). Motivation in this study needs to be viewed from two vantage points: (1) the internal motivation the military leaders brought with them to their job as part of their intellectual baggage, and (2) the motivational tools that they used and applied in their appeal to their followers. The human needs theories of Maslow (1954) and McClelland (1985) provided the theoretical backdrop found most useful for examining both of these motivational vantage points.

I have demonstrated and argued that the overarching personal motivation of the military leaders participating in this study was their drive for mission accomplishment; this drive reveals their personal need for achievement. Certainly, other needs played in the psychological makeup of these people, but it was their need to achieve organizational goals that drove them. Stipulating that all these individuals did not enter the armed forces having already internalized the values, attitudes, and beliefs, associated with military culture implies that these military leaders were themselves *transformed* by the training and socialization they received while serving. Logically, therefore, processes must have been designed

and cultivated within U.S. military organizations to raise individual motivation beyond lower the order needs described by Maslow to internalize self actualization and other higher order needs.

The need for achievement was a primary motivator for the officer corps. Also, many of the respondents noted that their membership in a military organization satisfied a need for affiliation. *Belonging* to an elite group while doing a worthwhile job was compelling. While the need for affiliation was high, the need for power was less meaningful. Virtually no one admitted that the perquisites and trappings of high military rank held any interest for them. Several of the leaders had commented on their view from the “top of the food chain,” acknowledging their own seniority as general or flag officers, but they did not concede its siren-like call. Here, the research design—the self-reporting nature of the two quantitative instruments and the face-to-face interviews themselves—may not have truly captured the relative importance of the need for power in the makeup of the officer corps. Indeed, one limitation to this study is the potential for less than candid responses due to rationalization or the self deception possible in the direct, self-reporting format. Some respondents may have unwittingly—or on purpose—shaded their perceptions to me to make their responses “sound better.”

The military leaders queried confirmed that they used a broad spectrum of motivational tools with their enlisted subordinates. Without reference to academic motivational theories, military leaders identified *the job itself* as the prime motivator for their followers. They related that the *doing* of something important and worthwhile, and that the *participating* in an adventure with the opportunity for travel were part of the job motivation. Interviews confirmed that after the job itself, a need for affiliation was the next motivator. Respondents reported that belonging to an elite organization and being accepted and trusted by the peer group were very important, especially for the younger troops. Other motivators belonged to the social exchange theory of contingent reward: young people entering military service wanted to have steady employment with reasonable pay, to receive training and develop job skills, and, to have the opportunity for a subsidized college education. For others, the opportunity of military service was seen as a method of escape from an unsatisfying, unsatisfactory, or troubled home environment. Some leaders referred colloquially to this particular motivation on the part of their young recruits as the “ticket out of town,” or the “get out of jail free card.” When asked about the utility of symbols as motivators: the flag, the oath of office sworn to the U.S. Constitution, or concepts of *duty* or *service*, military leaders became thoughtful. They allowed that such symbols were

motivators, but that they were not as important to the youngest enlistees as were other motivators mentioned here. They concluded that the motivation provided by such symbols grew over time with an individual's experience and maturity in the service. In this, they perceived their followers to be in a position to follow Maslow's hierarchy from top to bottom. Military leaders and the military culture itself made possible the satisfaction of survival needs, the needs for belonging and esteem, and self-actualizing events through job satisfaction.

The Pragmatic Choice of Transactional and Transformational Leadership Styles

Whatever the beginning individual motivation, the military system and its culture appeared organized and designed over time to move its people to embrace organizational values, specifically that value of mission accomplishment. One remembers that the working definition of leadership developed here is the application a set of traits, skills, and behaviors to motivate followers to actions that are in consonance with the values and goals of the organization. One Army major of some experience judged,

You know the American soldier is a wonderful individual, very difficult to lead. He will go—the American soldier will go—exactly where he wants to go. . . . He can be led exactly where he wants to go. . . . So I think the real hard part is always convincing all your soldiers, sailors, airmen that the direction they want to go is in fact the direction he wants to go: in other words, that higher goal. (Anonymous interview with author, 15 December 1998)

In this the respondent gave a user's definition of inspirational, transforming leadership. The act of motivation becomes the establishment within an individual of organizational values; those values must be persuasive. To follow those values is to follow the best in oneself. Recently, recruiters and military public relations specialists have expressed it so: "Aim High—Air Force," or, "Be the Best You Can Be—Join the Army Reserve." The motivational processes revealed here follow precisely the generalized definition offered by Burns (1978), who wrote,

Leadership over human beings is exercised when persons with certain motives and purposes mobilize . . . institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers. This is done in order to realize goals mutually held by both leaders and followers (p. 18).

In his work Burns continued, describing that special kind of leadership he termed *transforming*. He wrote that, "Such leadership occurs when one or more persons *engage* with others in such a way that leaders and followers raise one another to higher levels of motivation and morality" (Ibid., 20). As has been evidenced here, military leaders responding to this study attempted to provide transforming leadership in the cause of the organizational goal of mission accomplishment. However, as the formal finding from the previous chapter noted, they also used transactional leadership styles. There was no significant predisposition for one style over the other: they selected pragmatically that leadership style that caused them to

be effective in accomplishing their own tasks. Zaleznik (1967) wrote that such managers are concerned with efficient processes rather than substantive ideas; they are more interested in what works rather than what is true. They are flexible. Bass (1985b) commented that such transactional behaviors are often underutilized. “despite the evidence that contingent reward is efficacious leaders behavior which can provide subordinates with role clarity and role acceptance, satisfaction and performance” (p. 130). The normative selection of one leadership style over another by the respondents here—participative over directive, transformational over transactional—because it was deemed *better*, was simply not done. These military leaders picked the styles that worked for them in the situation at hand.

Drucker (1999) has commented on the concept of a normative choice or a universal theory of leadership and management:

In no other area are the basic traditional assumptions held as firmly—though most subconsciously—as in the respect to people and their management. And in no other area are they so totally at odds with reality and so totally counterproductive. “*There is one right way to manage people—or at least there should be.*” This assumption underlies practically every book or paper on the management of people (p. 17).

He favored the idea that leadership and management must overcome earlier assumptions that may once have pertained, but now have been overcome by technological, cultural, and societal changes. He further asserted that the discipline and practice of management will be required to change its base to operational

terms, “focused on results and performance” (Ibid., 34). The operationally oriented leadership behavior touted by Drucker is precisely what the military leaders responding to this study perceived effective across all four derived factors. After examining the motivation of military leaders and their followers, one understands their perceptions that there is no *one best way* to lead within the military. These leaders recognized the need to use all types of leadership and management tools as dictated by the situation to accomplish their broad missions. Still, participants in this study perceived some tools to be less useful than others.

Charisma versus Inspiration in Leadership

I have already noted that the military leaders in this study concurred at a statistically significant level that inspirational leadership was one of the most important behaviors an effective leader could practice. Likewise, the leaders surveyed found charisma to be much less useful although that statement in the Q study did not achieve consensus status. Yet both of these behaviors are a part of transformational leadership as reported by Bass (1985b, 1996); Bass and Avolio (1994, 1997); Avolio, Waldmann, and Yammarino (1991); Avolio, Bass, and Jung (1995). In many of these referenced factor analytical studies, Bass and others rendered transformational leadership into four parts: individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence. Of these

four factors, *inspirational motivation* was defined in terms related to charisma and *idealized influence* had the characteristics of building confidence and trust in the overall mission and inspiring through leadership by example—the inspirational leadership of this study. Though the two factors are related and are part of transformational leadership, the military participants in this study embraced that of “Inspiring others to do their best”—*idealized influence*—while turning away from “Being highly charismatic”—encompassed by *inspirational motivation*.

The importance of *inspirational motivation* to transformational leadership notwithstanding, charisma itself was perceived as *not* being particularly useful, even though it was generally regarded as a *good* leadership trait. Charisma was perceived virtually universally to be something separate from inspired leadership—and not as valuable. In an interview, a Marine colonel had identified this precise contrast and explained it in his own military context. He said that what he called *charisma* had value in different ways. It allowed a natural leader to establish himself more quickly and easily. People naturally would follow a leader with the gift of charisma. But this personal aura was no substitute for competence on the job. He said that the example set by a *competent* leader inspired trust and a confidence that the job would get accomplished. In his own language, the Marine Corps officer had identified the *competent* leader as one whose followers wanted

to be like the leader in terms of the leader's own behaviors, attitudes, and values. in short, the epitome of *idealized influence* (Anonymous interview with author, 24 November 1998).

Also, according to separate interviews with an Army major and a senior Marine Corps officer, charisma was not always associated with the ability to inspire. They both volunteered the example of the incumbent President of the United States, their Commander in Chief, as a charismatic individual whose personal life has kept him from inspiring through force of personal example (Anonymous interviews with author, 4 March 1999; 11 February 1999). A senior Navy officer summarized the feeling of all the respondents when he reported,

I guess I have a somewhat negative view of charisma, in that I often identify it with people who are putting on a face, so to speak—that are acting out some role that they think is important, as opposed to actually who they are. That's what I don't like about it as a quality. And that, in fact, what's required of leaders and managers is performance that should be inspiring to individuals; but it's not a Hollywood sort of thing. . . . It's not being a . . . cheerleader. There's a lot of cheerleading that has to go on in positions of leadership, but it has to be outwardly directed instead of inwardly directed. That's why the charisma thing to me is separable from leadership. (Anonymous interview with author, 24 February 1999)

The Admiral had neatly separated the self-serving and possibly narcissistic dilettante from a leader capable of inspiring with a sense of vision and mission. This separation of *charisma* and *inspiration* was one unique message delivered by

the perceptions of the participants in this study. Another message was that most respondents claimed to shun at least a portion of the political frame.

Denial of the Utility of “Adroitness” in the Political Frame

Bolman and Deal constructed the Leadership Orientations Instrument (LOI) with eight subscales in each of the four frames. The subscales examined such qualifiers to the frames as “supportive,” “inspirational,” “powerful,” and “adroit” (Bolman 1996). Those of the sample population loading on factors C and D in this study embraced different qualifiers of the Bolman and Deal political frame as measured in the LOI. For instance, integrated leaders found it useful to “Be very effective in getting support from people with influence.” Power oriented leaders “worked on the ability to mobilize people and get things done.” The former came from the “organized” LOI subscale while the latter came from the “powerful” subscale. It has already been noted in the findings of this study that two statements, statement #26 (Be politically very sensitive and skillful), and statement #24 (Be a very skillful and shrewd negotiator), were particularly unpopular with the respondents in three of the four factors, though the integrated leaders rated both statements neutrally. Both of these statements were “adroit” qualifiers to the political frame. The denial of the utility of political adroitness is interesting by itself. An uncomplicated interpretation is that those giving these

statements such strong negative rankings simply did not want themselves to be perceived as politically oriented and motivated; they thought that these behaviors would detract from overall mission accomplishment. Responding to an interview question on the use of power, one Army captain said:

Using power? I would say that without actually knowing how to use it, it is wrong. It can take you down a rough road. . . . I don't see myself as using politics to my advantage. I don't know enough about the politically right way to go about it to get a mission—or something—achieved.
(Anonymous interview with author, 8 March 1999)

Another possible interpretation for the denial of the utility of “adroitness” is that the language of the statements itself, with a modifier like “shrewd” or a phrase like “politically very sensitive” was interpreted with a negative connotation. It is also very possible that respondents wanted to avoid the onus of being thought “political” or “careerists” by their colleagues and subordinates.

Careerism

Burns (1978) wrote that “Political leaders call for harmony and cooperation, though they practice the opposite as they compete for office” (p. 453). This touches on the theme of “careerism” that surfaced in the course of these many interviews. Zaleznik (1983) has written scathingly on a subject he termed the *leadership gap*:

Simultaneous with a decline in confidence, a dangerous trend toward careerism has developed. More often than not, people think of their own advancement or personal goals in terms of salary or status rather than the long range effects of their work on others or on larger organizational objectives. Nothing destroys the mutual confidence between a person in authority and subordinates more than an awareness that the supervisor, executive, or officer is fundamentally looking out for his own self-interest. We must counteract careerism." (p. 36).

In an interview, a senior Air Force lieutenant colonel offered his speculation that the power available to military officers does motivate some; he suggested that up to 25% of the officer corps pursued and had the need for power. He also said that it "turns people off." In response to a follow up question, the colonel related that the biggest change he had witnessed during his tenure in the officer corps was that the U.S. armed forces no longer had any "war fighters." When queried about what that meant and who was filling this void, he responded with a derogatory "politicians." He clarified his answer, saying that with the word "politicians" he did not mean the civilian officials elected or appointed to office who are the ultimate military leaders in the United States. Rather, he identified those military officers who are "political, looking out for their political well-being to maintain their . . . power position." The colonel agreed that he had been describing "careerism" as he had perceived it. (Anonymous interview with author. 3 March 1999). A junior Navy lieutenant tied this careerism back to a negatively perceived charisma and the denial of the utility of adroitness in the political frame.

He said that charismatic leadership is often used for the wrong purposes, purposes that may not be pertinent to mission accomplishment. The charismatic behavior may instead be directed toward whatever personal goals the person playing at charisma may have (Anonymous interview with author, 24 February 1999).

Thus, the qualitative tone of semi-structured interviews elicited some additional meaning that can be added to the purely numerical results of the Q sorts. Charisma as a leadership tool was widely distrusted because it brought with it thoughts of a politically oriented careerist, one who put personal advancement ahead of organizational values and mission accomplishment. In the end, the military officers surveyed here were more concerned with accomplishing their assigned tasks than with any other consideration.

Limitations and Future Studies

I have already noted several limitations to the research design of this study. Its strengths are also its weaknesses. The study was designed to gather subjective perceptions of effective leadership and management. It did that. Of course, any such subjective information must be analyzed and judged as such. It is subject to the coloration and biases of the individuals surveyed. Also, with varying motivations, respondents may have slanted their responses to “sound right” or be politically correct. At further issue is the language of the two survey instruments,

the LOI and the MLQ, used in the study. Although both instruments have been thoroughly tested and have seen extensive use in other research studies, people are individuals who read and interpret meaning through their own personal filters (Gibson and Hodgetts 1991). Undesired, extrinsic meaning could have been assigned by the respondents to the stimulus items, resulting in distorted conclusions. Lastly, no discussion of cause and effect is possible in this study based on the use of Q methodology. There can be no final pronouncements accepting or rejecting a hypothesis. Nevertheless, the study successfully uncovered and described much of what the selected group of military leaders thought about effective leadership and management in the armed forces. This was a theory building exercise, and it paved the way for future work. With the description of select, pragmatic approaches to leadership and management in place, further research designed to operationalize the four factors developed here would be most worthwhile.

Conclusion

The four factors isolated in the findings here are perceptions of effective leadership and management for command in the armed forces of the United States. They can also be said to represent various blends of (1) the concern for task accomplishment and (2) the concern for people from the variety of two factor

theories cited. Similarly, the same four factors can be interpreted in a declining order of (1) an individual's need for accomplishment, (2) the need for affiliation, and (3) the need for power from the various human needs theories. The same four factors can also be seen in terms of the application of both transformational and transactional leadership styles headed by the transformational factors "inspirational motivation" and "individualized attention" as well as the transactional style of leadership manifested in giving something, e.g., trust and empathic listening, as a "contingent reward" in return for performance. Finally, as seen through the Bolman and Deal nomenclature from whence the Q study concourse of thought sprang, the four factors in the Q study represented a combined use of selected portions of multiple frames. Bolman and Deal (1997) had concluded that "the use of multiple frames permits leaders to see and understand more—if they are able to employ the different logics that accompany the different frames" (p. 379). The leaders surveyed here have done that; their responses displayed the acceptance of the complex and ambiguous world of which they are part. They used their own best judgment to select cognitive frames of reference to effect their assigned missions. Lassey and Fernández (1976) summarized Fiedler's (1973) 25 years of leadership research by saying that orientation to task achievement is the most important factor in leadership effectiveness over the long term. The 48 respondents

to this study, each with from three to over thirty years real experience as military leaders, concurred. They believe that effective leadership means task accomplishment; they selectively choose their own management and leadership styles to do it.

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APPENDIX A

IRB Approval to Conduct Research



The University of Oklahoma

OFFICE OF RESEARCH ADMINISTRATION

April 13, 1998

Mr. William G. Stewart
HQ USEUCOM
Unit 30400 Box 669
APO AE 09128

Dear Mr. Stewart:

Your research proposal, "Leadership Versus Management in the Armed Forces of the United States," has been reviewed by Dr. E. Laurette Taylor, Chair of the Institutional Review Board, and found to be exempt from the requirements for full board review and approval under the regulations of the University of Oklahoma-Norman Campus Policies and Procedures for the Protection of Human Subjects in Research.

Should you wish to deviate from the described protocol, you must notify me and obtain prior approval from the Board for the changes. If the research is to extend beyond twelve months, you must contact this office, in writing, noting any changes or revisions in the protocol and/or informed consent form, and request an extension of this ruling.

If you have any questions, please contact me.

Sincerely yours,

A handwritten signature in cursive script that reads "Karen M. Petry".

Karen M. Petry
Administrative Officer
Institutional Review Board

KMP:pw
98-200

cc: Dr. E. Laurette Taylor, Chair, IRB
Dr. Ronald M. Peters, Faculty Sponsor, Political Science
Graduate College

USEUCOM/CS Permission to Conduct Interviews



HEADQUARTERS
UNITED STATES EUROPEAN COMMAND
Office of the Chief of Staff
APO AE 09128

11 April 1997

Mr. William G. Stewart
Lt Colonel, USAF (Ret.)
HQ USEUCOM
Unit 30400, Box 669
APO AE 09128

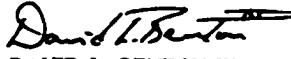
Dear Mr. Stewart,

Reference your letter to General Jamerson requesting approval to do research for a doctoral thesis on "The Dichotomy of Management and Leadership within the Armed Services" using our military leaders at Patch Barracks, I am pleased to inform you that your concept is approved. However any participants will do so on a voluntary basis and when their time constraints allow.

When you are ready to proceed with your research, I recommend you contact our Command Historian, Dr. Brian van Sweringen at 680-7152. He will assist you in getting started.

I wish you success in your endeavor.

Sincerely,


DAVID L. BENTON III
Lieutenant General, USA
Chief of Staff

Letter of Introduction to Schedule Interviews



**The University of Oklahoma
Norman, Oklahoma 73019**

Name
HQ USEUCOM/Office Symbol
APO AE 09128

Date

Dear ,

At the beginning of this effort, the past HQ USEUCOM Chief of Staff, LTG Benton, granted me permission to conduct doctoral research on military leadership by the folks that actually practice it at Patch Barracks (see Atch). During and through a change of senior leadership in the command, I have been pursuing the planned studies. Admiral Abbot, himself, just took part in the study. The project is meant to improve our understanding of the factors which affect leadership and management behaviors and how effective leadership may vary by military grade and by Service.

The research is being accomplished by a specialized survey and an interview which is designed to take no more than an hour. There is no right or wrong way to complete the survey; the study is based on your subjective beliefs about military leadership.

Participation is strictly voluntary. No fee is being paid to HQ USEUCOM, to me the investigator, or to anyone connected with this research. I am requesting your help as a participant. I will contact your office in the next days personally or by telephone to determine if you are willing to volunteer. Feel free to contact me directly if you have questions about the research.

Sincerely,

William G. Stewart
Lieutenant Colonel, USAF (Ret.)

HQ USEUCOM/Unit 30400, Box 669
APO AE 09128
☎ German civilian: 07034 20501
email: stewartb@csi.com

Informed Consent Form

- I. **Title: Informed Consent Form.** Research is being conducted under the auspices of the University of Oklahoma—Norman Campus. This form documents an individual's consent to participate in the research project.
- II. **Introduction.** The study concerns Leadership versus Management in the Armed Forces of the United States. The principal investigator is William G. Stewart, Lt Col., USAF (Ret.), a student in the European Ph.D. cohort of interdisciplinary studies, with a focus on organizational leadership. His faculty sponsor is Dr. Ronald M. Peters, Jr., Chair of the Department of Political Science.
- III. **Description of the Study.** This project is focused on understanding the leadership and management behaviors used by effective officers in the Armed Forces of the United States. The interview and Q sort for this research study will require approximately one hour of the subject's time and will be recorded on audio tape. In conjunction with the interview the subject will be asked to sort a set of cards containing statements concerning subjective feelings—the relative importance—of specific management and leadership issues. There is no right or wrong way to sort the statement cards; the study is one of subjective beliefs.
- IV. **Potential Risks and Benefits of Participation.**
- A. **Risks.** There are no foreseeable risks or discomforts foreseen.
- B. **Benefits.** The subject will not be paid for participation in this study. There is no fee being paid to HQ USEUCOM, to the investigator, or to anyone connected with this research. Benefits accrue through a better understanding of leadership and management in the Armed Forces of the United States.
- V. **Subject's Assurances.**
- A. **Conditions of Participation.** Participation in this study is strictly voluntary. Refusal to participate involves no penalty or loss of benefits to which the subject is otherwise entitled. The subject may discontinue participation at any time without loss of benefits to which otherwise entitled.
- B. **Confidentiality.** The subject's identity as a participant will be kept confidential to protect anonymity as the source of information collected in the interview. No one except the principal investigator and his dissertation committee will hear the audio tapes or have access to any of the transcribed notes. The audio tapes will be used for academic research and publication purposes and will be destroyed within three years.
- C. **Compensation for Injury.** Risk of injury is not foreseen. No compensation for injury is available.
- D. **Contacts for Questions about Research Subjects Rights.** Questions about the research itself or about a research subject's rights may be referred to William G. Stewart, telephone +49 (0)7034 20501, e-mail stewartb@csi.com.
- VI. **Signatures.**

Participant

Date

William G. Stewart, Investigator

Date

Conditions of Instruction

This research project is trying to determine the mix of leadership and management behaviors that *you* found effective in military command.

In your mind, place yourself in that command assignment discussed in our interview.

Activity: Perform a Q-Sort the deck of statement cards into those behaviors you agree were effective and those you found ineffective.

There is no right way to sort the cards; the choices are subjectively yours and inherently correct.

1. There are 48 cards numbered from 1 to 48. As you read the cards, place them in three piles: (1) I agree; (2) I am neutral; (3) I disagree.
2. From the I AGREE pile, select the two cards with which you most agreed, and write their numbers in the column labeled “+4.”
3. From the I DISAGREE pile, select the two cards with which you most disagreed, and write their number in the column labeled “-4.”
4. From the I AGREE pile, select the three cards that most agree with your viewpoint; write their statement numbers in the column labeled “+3.”
5. If you do not have enough cards in the I AGREE pile, select them from the I AM NEUTRAL PILE—or the I DISAGREE PILE.
6. From the I DISAGREE pile, select the three cards that most disagree with your viewpoint; write their statement numbers in the column labeled “-3.”
7. If you do not have enough cards in the I DISAGREE pile, select them from the I AM NEUTRAL PILE—or the I AGREE PILE.
8. Continue the back-and-forth procedure with six cards each for the columns labeled “+2” and “-2.”
9. Continue the back-and-forth procedure with eight cards each for the columns labeled “+1” and “-1.”
10. If you do not have enough cards to fill the columns, take them from the neutral pile or the next adjacent pile.
11. Write down the numbers of the remaining cards in the column labeled “0” for I AM NEUTRAL.
12. When you finish, there should be no cards left over and no blank spaces on the answer table.

Concourse for Q Sorts

1. Inspire others to do their best.
2. Develop and implement clear logical policies and procedures.
3. Listen well and be unusually receptive to other people's ideas and input.
4. Be unusually persuasive and influential.
5. Be highly charismatic.
6. Work on the ability to mobilize people and resources to get things done.
7. Show high levels of support and concern for others.
8. Anticipate and deal adroitly with organizational conflict.
9. Be consistently helpful and responsive to others.
10. Strongly emphasize careful planning and clear time lines.
11. Give personal recognition for work well done.
12. Be a highly participative manager.
13. Be an inspiration to others.
14. Be highly imaginative and creative.
15. Build trust through open and collaborative relationships.
16. Be very effective in getting support from people with influence and power.
17. Show high sensitivity and concern for other's needs and feelings.
18. Foster high levels of participation and involvement in decisions.
19. Communicate a strong and challenging vision and sense of mission.
20. Think very clearly and logically.
21. See beyond current realities to create exciting new opportunities.
22. Serve as an influential model of organizational aspirations and values.
23. Generate loyalty and enthusiasm.
24. Be a very skillful and shrewd negotiator.
25. Pay extraordinary attention to detail.
26. Be politically very sensitive and skillful.
27. Approach problems through logical analysis and careful thinking.
28. Strongly believe in clear structure and chain of command.
29. Set specific measurable goals and hold people accountable for results.
30. Develop alliances and build a strong base of support.
31. Succeed in the face of conflict and opposition.
32. Approach problems with facts and logic.

Perceptions of Leadership — Q-Sort Respondent Sheet

Demographics and Description of Respondent's Last Military Assignment:		<p>Conditions of Instruction:</p> <p>⇒ Describe your position as a leader and manager during your last assignment.</p> <p>⇒ Imagine yourself giving the hand-over briefing to your successor as you prepared to depart that assignment.</p> <p>⇒ Rate what you perceived to be <i>more important</i> or <i>less important</i> in doing your job while performing the Q-Sort.</p>
Branch of Service		
Grade/Rank		
Inclusive Dates		
Situation (Peace/Conflict)		
Position (Ops/Support/etc.)		
Source of Commission		
Ethnic Group		
Gender		

Q-Sort Table

[illegible]

MLQ Self Evaluation

X each statement using this key	0	1	2	3	4
	Not at all	Once in a while	Some- times	Fairly Often	Frequently, if not always

		0	1	2	3	4
1.	I provide other with assistance in exchange for their efforts.					
2.	I discuss in specific terms who is responsible for achieving performance targets.					
3.	I spend time teaching and coaching.					
4.	I make clear what one can expect to receive when performance goals are reached.					
5.	I treat others as individuals rather than just as a member of the group.					
6.	I consider each individual as having different needs, abilities, and aspirations from others.					
7.	I help others to develop their strengths.					
8.	I express satisfaction when others meet expectations.					

Appendix B

SUMMARY OF QUANTITATIVE RESULTS

Q Case Code	Q1 - (CR)	Q2 - (CR)	Q3 - (IC)	Q4 - (CR)	Q5 - (IC)	Q6 - (IC)	Q7 - (IC)	Q8 - (CR)	IC Score	CR Score
abb5nnc	1	3	3	2	3	3	3	4	3.0	2.5
ale5f3co	4	2	3	2	4	4	3	3	3.5	2.8
aus2n6no	3	4	1	4	4	4	2	4	2.8	3.8
ayr4f3xo	3	3	2	2	2	3	2	3	2.3	2.8
bie3a3co	0	3	4	1	4	4	4	3	4.0	1.8
bra3a2	3	3	2	3	2	2	3	3	2.3	3.0
bre3mmar	3	2	3	3	4	4	4	4	3.8	3.0
bro3m6o	4	4	2	1	1	4	4	4	2.8	3.3
can9aca	1	3	4	3	4	3	3	3	3.5	2.5
chu3npsd	3	2	2	1	4	3	3	4	3.0	2.5
coo6n6dd	1	2	4	3	4	3	4	3	3.8	2.3
dar5ndcq	4	4	3	3	3	4	3	3	3.3	3.5
dav5n5p	3	4	2	3	3	2	2	4	2.3	3.5
dev4a1xo	4	3	3	3	4	4	2	3	3.3	3.3
dud2n2	4	4	1	3	4	4	3	4	3.0	3.8
ede4a6xo	1	3	3	4	4	4	3	3	3.5	2.8
fag5f35c	3	3	4	2	4	4	3	4	3.8	3.0
fio6a1dr	1	2	4	0	4	4	3	3	3.8	1.5
gra3mmar	2	3	3	2	4	4	3	2	3.5	2.3
gre3f3co	3	3	4	3	1	4	4	4	3.3	3.3
gnu6mcsa	4	2	4	1	3	4	4	2	3.8	2.3
har6f5na	1	3	4	3	4	4	4	4	4.0	2.8
her6m5m	2	4	4	2	2	3	4	3	3.3	2.8
hug3f4xo	1	4	1	2	2	2	3	3	2.0	2.5
hug5a5s	3	4	4	3	4	4	4	4	4.0	3.5
hun6n4ma	1	3	4	2	4	4	4	3	4.0	2.3
jon4a1ae	2	3	3	4	3	3	2	4	2.8	3.3
ket3n2xo	2	3	3	2	3	4	3	2	3.3	2.3
key8f3	4	4	3	4	4	2	1	4	2.5	4.0
iul6fmd	2	2	3	2	4	4	3	4	3.5	2.5
kylfmmar	0	4	4	3	3	3	2	3	3.0	2.5
mad5n1po	4	4	4	4	4	4	4	4	4.0	4.0
mcb5m6o	4	3	4	1	4	4	2	4	3.5	3.0
mcc3f2xo	2	3	2	2	4	3	2	3	2.8	2.5
myk4m3	1	4	4	0	4	4	4	4	4.0	2.3
nee5n35	2	4	3	3	3	2	1	3	2.3	3.0
raw5m5a	1	2	3	1	4	3	4	4	3.5	2.0
rog5f5na	2	2	4	3	3	2	4	4	3.3	2.8
sau6n4en	3	1	2	2	4	4	3	3	3.3	2.3
spa3f5xo	3	1	4	3	4	4	3	4	3.8	2.8
sta6a1po	3	4	3	2	4	4	3	2	3.5	2.8
ste6f1p	3	4	4	2	3	4	3	4	3.5	3.3
web7m3dd	4	2	3	1	4	4	2	4	3.3	2.8
whe3mmar	1	3	4	3	2	2	3	3	2.8	2.5
whi3a6o	3	2	3	0	4	4	2	1	3.3	1.5
wm6aig	4	2	4	4	4	4	3	3	3.8	3.3
you6mmar	3	4	2	1	4	4	2	4	3.0	3.0
zab3a6	3	1	3	3	4	2	2	3	2.8	2.5
Average									3.3	2.8
Minimum									2.0	1.5

Table B.2. Correlations of Individualized Consideration (IC) Scores and Contingent Reward (CR) Scores with All Demographic Variables

		IC SCORE	CR SCORE	SVC	GR	SIT	POS	SCE	ETH	GDR
IC SCORE	Pearson Correlation	1	-0.24	-0.009	0.214	0.177	0.059	-0.055	-0.064	-0.059
	Sig. (2-tailed)		0.101	0.953	0.143	0.228	0.69	0.708	0.666	0.69
	N	48	48	48	48	48	48	48	48	48
CR SCORE	Pearson Correlation	-0.24	1	-0.012	-0.045	-0.045	-0.059	-0.11	0.074	0.231
	Sig. (2-tailed)	0.101		0.934	0.761	0.762	0.692	0.455	0.617	0.114
	N	48	48	48	48	48	48	48	48	48
SVC	Pearson Correlation	-0.009	-0.012	1	-0.033	0.113	-0.094	0.132	-0.03	-0.282
	Sig. (2-tailed)	0.953	0.934		0.823	0.446	0.526	0.371	0.837	0.052
	N	48	48	48	48	48	48	48	48	48
GR	Pearson Correlation	0.214	-0.045	-0.033	1	0.149	-.324(*)	-0.012	-0.135	-0.224
	Sig. (2-tailed)	0.143	0.761	0.823		0.311	0.025	0.937	0.361	0.126
	N	48	48	48	48	48	48	48	48	48
SIT	Pearson Correlation	0.177	-0.045	0.113	0.149	1	0.048	0.156	-0.129	-0.143
	Sig. (2-tailed)	0.228	0.762	0.446	0.311		0.748	0.289	0.383	0.333
	N	48	48	48	48	48	48	48	48	48
POS	Pearson Correlation	0.059	-0.059	-0.094	-.324(*)	0.048	1	0.126	0.249	0.175
	Sig. (2-tailed)	0.69	0.692	0.526	0.025	0.748		0.392	0.088	0.235
	N	48	48	48	48	48	48	48	48	48
SCE	Pearson Correlation	-0.055	-0.11	0.132	-0.012	0.156	0.126	1	-0.052	-0.022
	Sig. (2-tailed)	0.708	0.455	0.371	0.937	0.289	0.392		0.724	0.88
	N	48	48	48	48	48	48	48	48	48
ETH	Pearson Correlation	-0.064	0.074	-0.03	-0.135	-0.129	0.249	-0.052	1	-0.129
	Sig. (2-tailed)	0.666	0.617	0.837	0.361	0.383	0.088	0.724		0.383
	N	48	48	48	48	48	48	48	48	48
GDR	Pearson Correlation	-0.059	0.231	-0.282	-0.224	-0.143	0.175	-0.022	-0.129	1
	Sig. (2-tailed)	0.69	0.114	0.052	0.126	0.333	0.235	0.88	0.383	
	N	48	48	48	48	48	48	48	48	48

* Correlation is significant at the 0.05 level (2-tailed).

Table B.3. Factor Matrix with an X Indicating a Defining Factor

Q SortCases	Loadings			
	A	B	C	D
1 abb9ndc	0.6790 X	0.2596	0.0505	0.3966
2 ale5f3co	0.4044	-0.1647	0.4540	0.4244
3 aus2n6no	0.4875	-0.1468	-0.3178	0.5961
4 ayr4f3xo	0.3594	0.7003 X	0.0246	0.1421
5 bie3a3co	0.5256	0.6410 X	-0.0827	0.2615
6 bra3a2	0.5815 X	0.3330	0.4086	-0.0798
7 bre3mmar	0.5440	-0.0326	0.4270	0.4384
8 bro3m6o	0.0419	0.2400	0.0378	0.0106
9 can9acs	0.5957	0.3979	-0.3189	0.3603
10 chu3npsd	0.6211 X	0.2109	0.2380	-0.0492
11 coo6n6dd	-0.3618	-0.0670	-0.1943	0.5944 X
12 dar5ndcq	0.3914	-0.3704	0.2257	0.4884
13 dav5n5p	-0.1406	0.5248 X	0.0194	0.0531
14 dev4a1xo	0.6154 X	0.4310	-0.2270	0.1894
15 dud2n2	0.0490	0.2828	0.1451	0.7613 X
16 ede4a6xo	0.3077	0.8114 X	0.0441	0.0319
17 fag5f35c	0.5939 X	-0.0135	0.1884	-0.0923
18 flo6a1dr	0.6827 X	0.3867	-0.0718	0.3363
19 gra3mmar	0.4698 X	0.4015	-0.1217	0.1947
20 gre3f3co	0.7022 X	0.2642	0.1866	0.0098
21 gru6mcsa	0.0524	0.5206	0.0731	0.5826 X
22 har6fna	0.3644	0.2755	0.2256	0.5018
23 her6m5am	0.2187	0.7025 X	0.0411	0.4522
24 hug3f4xo	-0.1359	0.7495 X	0.0997	0.2729
25 hug5a5s	0.1262	0.4759	-0.0157	0.6739 X
26 hun6n4ma	0.0164	0.0802	0.6921 X	-0.1808
27 jon4a1e	-0.0380	0.5379 X	0.5003	-0.0629
28 ket2n2xo	-0.4541	0.2391	0.5077	0.3322
29 key8f3	0.1718	0.1363	0.3371	0.4881 X
30 kil6fmd	0.7622 X	-0.0106	0.0121	0.3372
31 kyl4mmar	-0.0645	0.7338 X	0.0242	0.1712
32 mad5n1po	0.1143	0.0374	0.6984 X	0.0657
33 mcb5m6o	0.2434	0.5282	0.3086	0.4126
34 mcc3f2xo	0.4983	0.5885 X	-0.0727	-0.0102
35 myk4m3	-0.0134	0.8141 X	0.0001	0.0737
36 nee5n35	0.3379	0.8549 X	-0.0087	-0.0963
37 raw5m5a	0.6057 X	0.5062	0.1850	0.2265
38 rog5f5na	0.2071	0.2280	0.2814	0.3146
39 sau6n4en	0.3971	0.1207	0.5951 X	0.2017
40 spa3f5xo	0.0951	0.4730 X	0.0113	-0.0628
41 sta6a1po	0.4323	0.4625	0.2433	0.1518
42 ste6f1p	0.1570	-0.2721	0.5580 X	0.2817
43 web7m3dd	0.5517	-0.0910	0.4526	0.4036
44 whe3mmar	0.5592 X	0.3824	0.0513	0.2378
45 whi3a6o	-0.6233 X	0.1594	0.1059	0.0124
46 wil6aig	0.7020 X	0.1001	0.1692	0.0118
47 you6mmar	0.4915 X	0.1095	0.3045	0.0893
48 zab3a6	0.6549 X	-0.0839	0.3478	0.0957
% expl.Var.	20	18	9	11

Table B.4. Correlation Study of Factor A with MLQ Scores and Independent Variables

CORRELATION STUDY		FACTOR A	IC SCORE	CR SCORE	SVC	GR	SIT	POS	SCE	ETH	GDR
FACTOR A	Pearson Correlation	1	0.042	0.042	-0.016	0.155	-0.104	-0.144	0.004	-0.147	-0.094
	Sig. (2-tailed)		0.775	0.777	0.915	0.291	0.483	0.329	0.977	0.319	0.526
	N	48	48	48	48	48	48	48	48	48	48
IC SCORE	Pearson Correlation	0.042	1	-0.23	-0.012	0.205	0.172	0.062	-0.052	-0.05	-0.067
	Sig. (2-tailed)	0.775		0.116	0.933	0.163	0.242	0.674	0.728	0.736	0.649
	N	48	48	48	48	48	48	48	48	48	48
CR SCORE	Pearson Correlation	0.042	-0.23	1	-0.011	-0.049	-0.045	-0.055	-0.122	0.082	0.23
	Sig. (2-tailed)	0.777	0.116		0.939	0.741	0.759	0.712	0.407	0.578	0.116
	N	48	48	48	48	48	48	48	48	48	48
SVC	Pearson Correlation	-0.016	-0.012	-0.011	1	-0.033	0.113	-0.094	0.132	-0.03	-0.282
	Sig. (2-tailed)	0.915	0.933	0.939		0.823	0.446	0.526	0.371	0.837	0.052
	N	48	48	48	48	48	48	48	48	48	48
GR	Pearson Correlation	0.155	0.205	-0.049	-0.033	1	0.149	-0.324(*)	-0.012	-0.135	-0.224
	Sig. (2-tailed)	0.291	0.163	0.741	0.823		0.311	0.025	0.937	0.361	0.126
	N	48	48	48	48	48	48	48	48	48	48
SIT	Pearson Correlation	-0.104	0.172	-0.045	0.113	0.149	1	0.048	0.156	-0.129	-0.143
	Sig. (2-tailed)	0.483	0.242	0.759	0.446	0.311		0.748	0.289	0.383	0.333
	N	48	48	48	48	48	48	48	48	48	48
POS	Pearson Correlation	-0.144	0.062	-0.055	-0.094	-0.324(*)	0.048	1	0.126	0.249	0.175
	Sig. (2-tailed)	0.329	0.674	0.712	0.526	0.025	0.748		0.392	0.088	0.235
	N	48	48	48	48	48	48	48	48	48	48
SCE	Pearson Correlation	0.004	-0.052	-0.122	0.132	-0.012	0.156	0.126	1	-0.052	-0.022
	Sig. (2-tailed)	0.977	0.728	0.407	0.371	0.937	0.289	0.392		0.724	0.88
	N	48	48	48	48	48	48	48	48	48	48
ETH	Pearson Correlation	-0.147	-0.05	0.082	-0.03	-0.135	-0.129	0.249	-0.052	1	-0.129
	Sig. (2-tailed)	0.319	0.736	0.578	0.837	0.361	0.383	0.088	0.724		0.383
	N	48	48	48	48	48	48	48	48	48	48
GDR	Pearson Correlation	-0.094	-0.067	0.23	-0.282	-0.224	-0.143	0.175	-0.022	-0.129	1
	Sig. (2-tailed)	0.526	0.649	0.116	0.052	0.126	0.333	0.235	0.88	0.383	
	N	48	48	48	48	48	48	48	48	48	48

* Correlation is significant at the 0.05 level (2-tailed).

Table B.5. Correlation Study of Factor B with MLQ Scores and Independent Variables

CORRELATION STUDY		FACTOR B	IC SCORE	CR SCORE	SVC	GR	SIT	POS	SCE	ETH	GDR
FACTOR B	Pearson Correlation	1	-0.205	-0.244	0.044	-0.122	0.094	-.360(*)	-0.109	-0.102	-0.068
	Sig. (2-tailed)		0.163	0.095	0.768	0.409	0.524	0.012	0.462	0.491	0.648
	N	48	48	48	48	48	48	48	48	48	48
IC SCORE	Pearson Correlation	-0.205	1	-0.23	-0.012	0.205	0.172	0.062	-0.052	-0.05	-0.067
	Sig. (2-tailed)	0.163		0.116	0.933	0.163	0.242	0.674	0.728	0.736	0.649
	N	48	48	48	48	48	48	48	48	48	48
CR SCORE	Pearson Correlation	-0.244	-0.23	1	-0.011	-0.049	-0.045	-0.055	-0.122	0.082	0.23
	Sig. (2-tailed)	0.095	0.116		0.939	0.741	0.759	0.712	0.407	0.578	0.116
	N	48	48	48	48	48	48	48	48	48	48
SVC	Pearson Correlation	0.044	-0.012	-0.011	1	-0.033	0.113	-0.094	0.132	-0.03	-0.282
	Sig. (2-tailed)	0.768	0.933	0.939		0.823	0.446	0.526	0.371	0.837	0.052
	N	48	48	48	48	48	48	48	48	48	48
GR	Pearson Correlation	-0.122	0.205	-0.049	-0.033	1	0.149	-.324(*)	-0.012	-0.135	-0.224
	Sig. (2-tailed)	0.409	0.163	0.741	0.823		0.311	0.025	0.937	0.361	0.126
	N	48	48	48	48	48	48	48	48	48	48
SIT	Pearson Correlation	0.094	0.172	-0.045	0.113	0.149	1	0.048	0.156	-0.129	-0.143
	Sig. (2-tailed)	0.524	0.242	0.759	0.446	0.311		0.748	0.289	0.383	0.333
	N	48	48	48	48	48	48	48	48	48	48
POS	Pearson Correlation	-.360(*)	0.062	-0.055	-0.094	-.324(*)	0.048	1	0.126	0.249	0.175
	Sig. (2-tailed)	0.012	0.674	0.712	0.526	0.025	0.748		0.392	0.088	0.235
	N	48	48	48	48	48	48	48	48	48	48
SCE	Pearson Correlation	-0.109	-0.052	-0.122	0.132	-0.012	0.156	0.126	1	-0.052	-0.022
	Sig. (2-tailed)	0.462	0.728	0.407	0.371	0.937	0.289	0.392		0.724	0.88
	N	48	48	48	48	48	48	48	48	48	48
ETH	Pearson Correlation	-0.102	-0.05	0.082	-0.03	-0.135	-0.129	0.249	-0.052	1	-0.129
	Sig. (2-tailed)	0.491	0.736	0.578	0.837	0.361	0.383	0.088	0.724		0.383
	N	48	48	48	48	48	48	48	48	48	48
GDR	Pearson Correlation	-0.068	-0.067	0.23	-0.282	-0.224	-0.143	0.175	-0.022	-0.129	1
	Sig. (2-tailed)	0.648	0.649	0.116	0.052	0.126	0.333	0.235	0.88	0.383	
	N	48	48	48	48	48	48	48	48	48	48

* Correlation is significant at the 0.05 level (2-tailed).

Table B.6. Correlation Study of Factor C with MLQ Scores and Independent Variables

CORRELATION STUDY		FACTOR C	IC SCORE	CR SCORE	SVC	GR	SIT	POS	SCE	ETH	GDR
FACTOR C	Pearson Correlation	1	0.076	0.17	0.065	0.057	0.015	0.107	0.216	-0.218	.440(**)
	Sig. (2-tailed)		0.605	0.248	0.662	0.7	0.918	0.47	0.14	0.136	0.002
	N	48	48	48	48	48	48	48	48	48	48
IC SCORE	Pearson Correlation	0.076	1	-0.23	-0.012	0.205	0.172	0.062	-0.052	-0.05	-0.067
	Sig. (2-tailed)	0.605		0.116	0.933	0.163	0.242	0.674	0.728	0.736	0.649
	N	48	48	48	48	48	48	48	48	48	48
CR SCORE	Pearson Correlation	0.17	-0.23	1	-0.011	-0.049	-0.045	-0.055	-0.122	0.082	0.23
	Sig. (2-tailed)	0.248	0.116		0.939	0.741	0.759	0.712	0.407	0.578	0.116
	N	48	48	48	48	48	48	48	48	48	48
SVC	Pearson Correlation	0.065	-0.012	-0.011	1	-0.033	0.113	-0.094	0.132	-0.03	-0.282
	Sig. (2-tailed)	0.662	0.933	0.939		0.823	0.446	0.526	0.371	0.837	0.052
	N	48	48	48	48	48	48	48	48	48	48
GR	Pearson Correlation	0.057	0.205	-0.049	-0.033	1	0.149	-.324(*)	-0.012	-0.135	-0.224
	Sig. (2-tailed)	0.7	0.163	0.741	0.823		0.311	0.025	0.937	0.361	0.126
	N	48	48	48	48	48	48	48	48	48	48
SIT	Pearson Correlation	0.015	0.172	-0.045	0.113	0.149	1	0.048	0.156	-0.129	-0.143
	Sig. (2-tailed)	0.918	0.242	0.759	0.446	0.311		0.748	0.289	0.383	0.333
	N	48	48	48	48	48	48	48	48	48	48
POS	Pearson Correlation	0.107	0.062	-0.055	-0.094	-.324(*)	0.048	1	0.126	0.249	0.175
	Sig. (2-tailed)	0.47	0.674	0.712	0.526	0.025	0.748		0.392	0.088	0.235
	N	48	48	48	48	48	48	48	48	48	48
SCE	Pearson Correlation	0.216	-0.052	-0.122	0.132	-0.012	0.156	0.126	1	-0.052	-0.022
	Sig. (2-tailed)	0.14	0.728	0.407	0.371	0.937	0.289	0.392		0.724	0.88
	N	48	48	48	48	48	48	48	48	48	48
ETH	Pearson Correlation	-0.218	-0.05	0.082	-0.03	-0.135	-0.129	0.249	-0.052	1	-0.129
	Sig. (2-tailed)	0.136	0.736	0.578	0.837	0.361	0.383	0.088	0.724		0.383
	N	48	48	48	48	48	48	48	48	48	48
GDR	Pearson Correlation	.440(**)	-0.067	0.23	-0.282	-0.224	-0.143	0.175	-0.022	-0.129	1
	Sig. (2-tailed)	0.002	0.649	0.116	0.052	0.126	0.333	0.235	0.88	0.383	
	N	48	48	48	48	48	48	48	48	48	48

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table B.7. Correlation Study of Factor D with MLQ Scores and Independent Variables

CORRELATION STUDY		FACTOR D	IC SCORE	CR SCORE	SVC	GR	SIT	POS	SCE	ETH	GDR
FACTOR D	Pearson Correlation	1	0.175	0.138	0.137	0.235	0.077	0.127	-0.218	-0.02	-0.255
	Sig. (2-tailed)		0.235	0.35	0.352	0.108	0.605	0.388	0.136	0.892	0.08
	N	48	48	48	48	48	48	48	48	48	48
IC SCORE	Pearson Correlation	0.175	1	-0.23	-0.012	0.205	0.172	0.062	-0.052	-0.05	-0.067
	Sig. (2-tailed)	0.235		0.116	0.933	0.163	0.242	0.674	0.728	0.736	0.649
	N	48	48	48	48	48	48	48	48	48	48
CR SCORE	Pearson Correlation	0.138	-0.23	1	-0.011	-0.049	-0.045	-0.055	-0.122	0.082	0.23
	Sig. (2-tailed)	0.35	0.116		0.939	0.741	0.759	0.712	0.407	0.578	0.116
	N	48	48	48	48	48	48	48	48	48	48
SVC	Pearson Correlation	0.137	-0.012	-0.011	1	-0.033	0.113	-0.094	0.132	-0.03	-0.282
	Sig. (2-tailed)	0.352	0.933	0.939		0.823	0.446	0.526	0.371	0.837	0.052
	N	48	48	48	48	48	48	48	48	48	48
GR	Pearson Correlation	0.235	0.205	-0.049	-0.033	1	0.149	-.324(*)	-0.012	-0.135	-0.224
	Sig. (2-tailed)	0.108	0.163	0.741	0.823		0.311	0.025	0.937	0.361	0.126
	N	48	48	48	48	48	48	48	48	48	48
SIT	Pearson Correlation	0.077	0.172	-0.045	0.113	0.149	1	0.048	0.156	-0.129	-0.143
	Sig. (2-tailed)	0.605	0.242	0.759	0.446	0.311		0.748	0.289	0.383	0.333
	N	48	48	48	48	48	48	48	48	48	48
POS	Pearson Correlation	0.127	0.062	-0.055	-0.094	-.324(*)	0.048	1	0.126	0.249	0.175
	Sig. (2-tailed)	0.388	0.674	0.712	0.526	0.025	0.748		0.392	0.088	0.235
	N	48	48	48	48	48	48	48	48	48	48
SCE	Pearson Correlation	-0.218	-0.052	-0.122	0.132	-0.012	0.156	0.126	1	-0.052	-0.022
	Sig. (2-tailed)	0.136	0.728	0.407	0.371	0.937	0.289	0.392		0.724	0.88
	N	48	48	48	48	48	48	48	48	48	48
ETH	Pearson Correlation	-0.02	-0.05	0.082	-0.03	-0.135	-0.129	0.249	-0.052	1	-0.129
	Sig. (2-tailed)	0.892	0.736	0.578	0.837	0.361	0.383	0.088	0.724		0.383
	N	48	48	48	48	48	48	48	48	48	48
GDR	Pearson Correlation	-0.255	-0.067	0.23	-0.282	-0.224	-0.143	0.175	-0.022	-0.129	1
	Sig. (2-tailed)	0.08	0.649	0.116	0.052	0.126	0.333	0.235	0.88	0.383	
	N	48	48	48	48	48	48	48	48	48	48

* Correlation is significant at the 0.05 level (2-tailed).