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INCULCATING QUALITY CONCEPTS IN THE US AIR FORCE:

RIGHT MUSIC, WRONG STEP

by

Barbara A. Kucharczyk
Lieutenant Colonel, USAF

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A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE CURRICULUM

REQUIREMENT

Advisor: Colonel Richard A. Khalar

MAXWELL AIR FORCE BASE, ALABAMA

APRIL 1994

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ABSTRACT

TITLE: Inculcating Quality Concepts in the US Air Force: Right Music, Wrong Step

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In its effort to inculcate total quality management concepts, the Air Force neglected to consider critical aspects of educational psychology. As a result, concepts were neither universally understood nor accepted, and an attitudinal backlash undermines the future Quality Air Force culture. Subject matter based on military history and experience, and a reoriented philosophy toward initial quality education and training, provides a different approach to inculcating quality concepts.

Life's a dance you learn as you go,
Sometimes you lead, sometimes you follow.
Don't worry 'bout what you don't know,
Life's a dance you learn as you go.¹

--John Michael Montgomery, "Life's A Dance"

In 1986, Congress passed the Goldwater-Nichols Department of Defense Reorganization Act. Typically, this Act is thought of in terms of the reorganization requirements--changes in the powers and duties of the Secretary of Defense and the Chairman of the Joint Chiefs of Staff, joint staff officer policies, and lines of authority from the President to the warfighting commanders-in-chief. Another, less often addressed, aspect essentially called for the adoption of basic "quality" concepts: ". . . this bill seeks to correct the operational and administrative deficiencies that have repeatedly occurred since the last reorganization legislation was enacted in 1958."² The Act further expands this basic statement in the list of provisions:

. . . increase the decentralization of authority within the Department of Defense; reduce and streamline the defense bureaucracy; provide for the more efficient use of resources; require elimination of duplication between the headquarters staffs. . .³

The Air Force did not publicly pursue "quality" oriented activities until 1991 when General McPeak, Air Force Chief of Staff, announced the birth of the Quality Air Force (QAF)--a mad dash to incorporate quality began. Three years later, we have an Air Force Quality Institute, mandated quality education and training, a quality evaluation system (Unit Self Assessments and refocused Inspectors General), quality oriented awards, and a perceived attitudinal backlash.⁴ While basic quality concepts are certainly the right music, many Air Force members are dancing the wrong step. Why?

This paper shows how the Air Force (inadvertently) fostered "the wrong step," even as it orchestrated a quality symphony. By examining the nature of the effort to change--to inculcate quality concepts--as opposed to psychological research describing how conceptual and attitudinal changes occur, the paper suggests why, three years later, some Air Force people refuse to attend the concert, much less become proficient, effective dance partners. By applying the psychological principles, and adjusting the education and training curricula, the Air Force

¹Montgomery, John Michael. "Life's A Dance." Atlantic Recordings, 1993.

²*Goldwater-Nichols Department of Defense Reorganization Act of 1986, United States Code Congressional and Administrative News, 99th Congress--Second Session, 1986, Vol. 4, West Publishing Co., 1987, pp. 2168-2255.*

³*Ibid.*, pp. 2170-2172.

⁴Attitudes perceived of senior officers through observation of their comments and nonverbal signals, both on- and off-stage, at the Air War College, Aug 93-Apr 94.

can get its people on the dance floor, stepping in the same direction, in time with the music. Finally, this paper proposes curricula subject matter and a lesson outline for an improved QAF introductory course.

THE SITUATION

CONCEPTUAL LEARNING AND ATTITUDE CHANGE

"We must understand the ways human beings learn and acquire new information."⁵ Learning and understanding concepts often prove more difficult than simply memorizing facts and figures. Children quickly learn words, however, understanding how to put them together to form coherent sentences takes much longer. Therefore, teaching concepts, or attempting to inculcate concepts, requires a different approach than teaching factual information. A renown educator, Walter B. Kolesnik contends "a new, unfamiliar concept is best introduced by relating it to a known idea."⁶ The educator must appreciate which ideas, concepts, values, attitudes, and beliefs, are vital to the students before he or she can define how the new concepts relate. In short, the educator must understand the student's frame of reference before he or she attempts to change them by instilling new concepts.

Instilling new concepts requires attitudinal reform. According to James M. Olson and Mark P. Zanna's "Attitudes and Attitude Change," "The frames of reference we build up are composed of the attitudes we have and the beliefs we have."⁷ Attitudes and beliefs develop over time based upon experiences, relationships with people, and other interactions within the individual's living sphere. These collective results build frames of reference which become the comparative scales people use to make decisions, including the acceptance or rejection of new concepts, ideas, or ways of doing things. A new concept or idea which is not compatible with an individual's existing frame of reference will probably be rejected. Likewise, a new concept or idea which is compatible to some degree may be totally or partially accepted (many people choose the "wait-and-see" option).⁸ The educator is the critical element; the presentation, a crucial component.

⁵Bettinghaus, Erwin P., *Persuasive Communication*, Third Edition, Holt, Rinehart and Winston, 1980, p. 49.

⁶Kolesnik, Walter B., *Educational Psychology*, Second Edition, McGraw-Hill Book Co., 1970, p. 280.

⁷Bettinghaus, p. 24.

⁸Olson, James M. and Mark P. Zanna, "Attitudes and Attitude Change," *Annual Review of Psychology*, Vol. 44, 1993, p. 130.

The individual should not be made to feel that his existing attitudes are basically unsound or are all wrong. Rather he should be led to believe that the proposed new position is but a relatively minor adjustment of his original one and that it is compatible with his own set of values.⁹

The successful presentation effort requires an appreciation for the student's frame of reference combined with effective communication skills. "The communicator either has to be able to bring a new frame of reference into play or has to continue communicating until enough information has been added to force changes in the receiver's attitude structure."¹⁰ In this sense, the educator becomes a persuasive communicator; trying to persuade the student to accept the new concept. Erwin Bettinghaus, a well-known authority on effective communication, believes that "to be labeled as persuasive, a communication situation must involve a conscious attempt by one individual to change the attitudes, beliefs, or behavior of another individual or group of individuals through the transmission of some message."¹¹ Taken a step further, the persuasive communication effort relies not only on the educator's mastery of communication skills and techniques, but on his or her mastery of educational psychology, understanding of the nature of change, and appreciation of the group under persuasion. Attempting to affect change is difficult, especially when attitudes and beliefs are involved. Kolesnik best sums up the challenge: [it] "is not a 'one shot' affair to be accomplished some Tuesday between 10 and 10:30. The process requires sustained effort."¹² The sustained effort must include repeated message transmission, public commitment to the change, a plan of instruction founded on sound educational theory and psychology, and educators skilled in communication appreciative of the nature of their students, the nature of the change, and the nature of the environment after the change occurs. These aspects represent the crux of the difficulty experienced during the Air Force effort to inculcate quality.

THE NATURE OF THE AIR FORCE EFFORT

When the Air Force initiated its quality inculcation efforts, it focused on Total Quality Management (TQM), as espoused by W. Edwards Deming the acknowledged "Father of TQM". Students of the Executive Quality

⁹Kolesnik, p. 485.

¹⁰Bettinghaus, p. 26.

¹¹Ibid., p. 4.

¹²Kolesnik, p. 488.

Leadership course, conducted by the newly formed Air Force Quality Center, received *The Deming Management Method* (Mary Walton) as part of their course materials. Predictably, course content focused on the industrial application of Deming's theories and a history of the Japanese technological and industrial revolutions. Instructors introduced a new vocabulary, addressed new statistical processes, and discussed barriers to TQM implementation. Unfortunately, rather than addressing the direct relationship between the old management techniques and operating styles and those required by TQM (and why TQM was the new method), much of the material required a "leap of faith." This course violated the first principle. It failed to establish relationships between old and new! Further, instructors failed to appreciate the student's frame of reference, thereby giving less than adequate consideration to the second principle--understanding frames of reference.

Military members, as a group, share a frame of reference different from that of other social groups. Much of that frame of reference is based on the nature of the profession--the profession of arms. Reference points such as authority, loyalty, standardization, and status represent factors the educator must consider when attempting to define an Air Force frame of reference. Bettinghaus describes the challenge of addressing this phenomenon through his description of authoritarian figures.

People possessing an authoritarian personality tend to be highly reliant on the moral authority of their own reference group, tend to adhere fairly rigidly to middle-class values, and become preoccupied with the relative power and status of other people and with their own power and status. Such people tend to make absolute judgments regarding the values they hold, and to see the world in black and white. They are not easily swayed by messages that might seem to contradict the beliefs they have or the authorities they rely on, despite the judgments of others that the message is rational and logical.¹³

Because it failed to focus on the group frame of reference, the Air Force missed an opportunity to structure introductory course content to facilitate the understanding and acceptance of the new quality concepts. Rather than the stereotypical "do-it-because-the-boss-said-so" approach, the Air Force should have related quality concepts to current modes of operation, widely recognized organizational problems, and military history. Had such relationships been explored during course development, those designated (vice volunteers or recruits) to instruct would be more operationally knowledgeable, as well as more highly skilled in persuasive communication techniques.

¹³Bettinghaus, p. 58.

As a result, the Air Force violated the third principle, in that instructors were not provided adequate instruction and training for the type of courses they were charged to teach. Although many attended civilian courses and clinics targeting TQM, the focus remained (rightly) on civilian business/industry application and provided no military-specific relationship analysis. Therefore, the newly TQ'd communicators shared no comparative reference point from which to teach, nor did they share a common foundation to provide their students basic information. Failure to take maximum advantage of senior Air Force leaders with quality experience and orientation (to teach the instructors and provide a historical reference point) put the designated communicators in the position of attempting to persuade a tough audience without a full compliment of tools. The overall end result. The Air Force manufactured a perceived lack of credibility which exacerbated the beginnings of an almost universal attitudinal backlash.

By 1994, that backlash is real and expressed openly among senior officers attending the Air War College and among some who addressed the college from the stage. If the Air Force is committed to the quality culture, it must be concerned about this phenomenon. Recouping those who reject the quality culture may not be entirely possible, particularly as long as mixed signals come from the highest levels of command. The Air Force can, however, make a commitment to those who will next lead.

SOLUTION SUGGESTIONS

Possible solutions take two forms: curricula (subject matter) and presentation (educator training). From an implementation standpoint, both areas should be addressed simultaneously. Meaning that educators receive additional training with the new curriculum material. From a resource accounting standpoint (critical budgets), curriculum must serve as the primary focal point. Curriculum developers can change subject matter content and lesson focus quickly and relatively inexpensively. Presentation, or educator training, is more time intensive and involves greater resource expenditure. The remainder of this paper describes suggested subject matter which address basic quality concepts through the educational psychology principles mentioned above. Basic QAF concepts and definitions are outlined in *The Quality Approach*, a quick reference guide published by the Air Force Quality Institute.

SUBJECT MATERIAL

"Quality Air Force is an integrated system of three components built on Leadership, Quality Focus, the Improvement Process, and Quality in Daily Operations are the system elements."¹⁴ Conceptual adjectives further define each of those elements, and leadership. Those adjectives are the QAF "basic concepts": visioning, customer focus, empowerment, teamwork, data-based decision making (using tools and metrics), process improvement, and leadership involvement. Each concept is historically proven; addressing that historical relationship helps students begin to expand their frames of reference.

The military student does not seek to learn from history the minutiae of method and technique. In every age these are influenced by the characteristics of weapons currently available and the means at hand for maneuvering, supplying, and controlling combat forces. But research does bring to light those fundamental principles, and their combinations and applications, which, in the past, have produced success.¹⁵

General Douglas MacArthur

QAF Leadership

QAF leadership is the basis of the QAF culture. Chapter II in The Quality Approach provides a quick reference guide for aspiring, quality leaders--definitions, recipes, and duty descriptions. It does not provide an historical foundation for those definitions, recipes, or duty descriptions. Carl von Clausewitz wrote about the military genius or the genius for war in his classic study, On War. He described key attributes of the military genius which apply directly to the QAF leadership style addressed in The Quality Approach. Among the attributes Clausewitz described are: courage; intellect; *coup d'oeil*; determination; strength of character, will, and body; self-control; and a sense of human dignity.¹⁶ A brief comparison of definitions, 1832 to 1994, demonstrates the direct application between the military genius and the QAF leader.

Clausewitz addresses courage from two perspectives: "courage in the face of personal danger, and courage to accept responsibility."¹⁷ The first relates to physical courage--bodily strength and stamina, and emotional courage--feelings such as patriotism and enthusiasm. The second relates to ethical courage--"right" decision making ("right" defined by a higher standard--God's Law for example), and moral courage--conformation to socially approved standards of conduct and behavior. Comparable QAF attributes include courage (moral

¹⁴Ibid., p. I-2.

¹⁵Westenhoff, Charles, M., *Military Power: The Digest of Air Power Opinions and Thoughts*, AU Press, 1990, p. 11.

¹⁶Clausewitz, *On War*, Howard, Michael and Peter Paret, eds., Princeton University Press, 1984, p. 100.

¹⁷Ibid., p. 101.

strength), patriotism (sacrificing for the greater good), and integrity (standing by one's word and one's commitment to honesty).¹⁸ Ethical courage also requires intellectual integrity as well as intellectual capability.

Clausewitz refers to "the powers of intellect"--combinations of intelligence, sensitivity, discrimination in judgment, and the ability to remain calm even amid turmoil (classic chance, fog, and friction). The genius has "first, an intellect that, even in the darkest hour, retains some glimmerings of the inner light which leads to truth; and second, the courage to follow this faint light wherever it may lead."¹⁹ QAF Values and Principles address competence, tenacity, respect for the individual, and dedication to the mission as critical QAF leadership aspects²⁰ Powers of the intellect directly relate to perceptiveness and insightfulness.

The Clausewitzian concept of *coup d'oeil* "refers to the quick recognition of a truth that the mind would ordinarily miss or would perceive only after long study and reflection."²¹ Today we might call this capability intuitive insight. Within the QAF culture, intuitive insight is part of the visioning process. A vision is more than a statement of "what we want to become."²² The visioning process includes picturing the future, determining direction, and focusing on what's important.²³ The leader's intuitive insight, or perceptiveness, produces the vision. In her essay, "Order Through Chaos", Isabelle Stengers stated, "Perceptiveness on the other hand deals with problems which as yet have no significance but which acquire significance in the future."²⁴ In these fast-changing times, the leader must be perceptive and determined while pursuing his or her vision.

The attribute of determination is linked to intellect. Clausewitzian determination "proceeds from a special type of mind, from a strong rather than a brilliant one."²⁵ This is the determination the QAF leader uses when making a decision that may have undesirable consequences, but is the correct and proper decision to achieve the goal. It is the determination the leader maintains as he or she manages the change to a quality culture.

Determination is also closely linked to strength of character, will, and body. In this "catch-all" category, Clausewitz describes several leadership attributes which can be grouped as personal and physical coping skills.

¹⁸*The Quality Approach*, pp. II-3 - 5.

¹⁹Clausewitz, p. 102.

²⁰*The Quality Approach*, pp. II-3 -5.

²¹Clausewitz, p. 102.

²²*The Quality Approach*, p II-2.

²³*Ibid.*, p. II-2.

²⁴Isabelle Stengers, as quoted by Tom Peters, *Thriving On Chaos*, Harper Collins Publishers, 1991, p. 473.

²⁵Clausewitz, p. 103.

These attributes reflect the leader's ability to maintain a positive influence on his or her subordinates ("his inward fire must revive their hope"²⁶), especially under stressful conditions. They address the leader's emotional ties to the goal, from altruistic to self-serving, and his or her ability to move people toward that goal successfully.

Closely related are self-control and a sense of dignity; Clausewitz uses these terms in the same manner we do today. The critical point regarding self-control is "the urge to act rationally at all times."²⁷ The effective QAF leader maintains equilibrium, both internally and externally, even amidst the chaos of change. The QAF leader demonstrates his or her sense of dignity through respect for the individual; "each individual is valued for their own worth as a professional."²⁸ Additional related QAF attributes address the leader's responsibility to create a working environment that inspires trust, teamwork, and pride; to give everyone a stake in the outcome; to delegate responsibility and authority; and, to listen.²⁹

In summary, the QAF leadership attributes are founded historically--Clausewitz's writings are but one example. The Clausewitzian "military genius" was the QAF leader of the early 19th century. Aspiring QAF leaders who refine their skills, through study and practice, may become the military genius of their time.

What this task requires in the way of higher intellectual gifts is a sense of unity and a power of judgment raised to a marvelous pitch of vision, which easily grasps and dismisses a thousand remote possibilities which an ordinary mind would labor to identify . . . the sovereign eye of genius itself, would still fall short of historical significance without the qualities of character and temperament we have described.³⁰

Quality Focus

Quality Focus is dominated by senior leader activity. It includes the vision of the quality culture subordinates work toward, strategies and plans to get there, and a public (demonstrated) commitment to quality concepts. It also includes leaders at every level who support the vision by aligning local strategies and plans with those at the top and who likewise demonstrate their commitment through daily activities and operational procedures.. The process of working toward a defined vision, in the quality culture, is cyclical: determining direction toward a goal, developing

²⁶Ibid., p. 105.

²⁷Ibid., p. 106.

²⁸*The Quality Approach*, pp. II-2 - 6.

²⁹Ibid.

³⁰Clausewitz, p. 112.

activities to get there, implementing the activities, determining if progress is made, and adjusting as necessary (determining direction). The cycle continues for every activity. Communication skills are critical during each phase of the cycle because "everyone must know the organizational plans and strategies, and understand how those plans and strategies relate to the mission and the individual's job."³¹ Working or planning in cycles and communication skills are also timeless concepts. Sun Tzu, 4th century B.C., commented on these concepts in his classic, The Art of War.

Therefore I say: 'Know the enemy and know yourself; in a hundred battles you will never be in peril. When you are ignorant of the enemy but know yourself, your chances of winning or losing are equal. If ignorant of both your enemy and of yourself, you are certain in every battle to be in peril.'³²

Arguably Sun Tzu's most often used quote, this concept was critical to his theories of warring and leading. It is no less critical to the QAF leader as he or she implements those activities which inculcate quality into day-to-day activities. Knowing oneself (one's strengths, weaknesses, biases, paradigms) and one's enemy (opponent, subordinate, superior, circumstance, situation, goal) allows the QAF leader to envision a future point (capability, accomplishment). He or she can better develop strategies to reach that point and ways to evaluate those strategies. Further, the QAF leader learns to realize when change needs to be made. The successful QAF leader uses this knowledge to make ordinary resources and forces (capabilities) extraordinary.³³

Now the resources of those skilled in the use of the extraordinary forces are as infinite as the heavens and earth; as inexhaustible as the flow of great rivers. For they end and recommence; cyclical, as are the movements of the sun and moon. They die away and are reborn; recurrent, as are the passing seasons.³⁴

From Sun Tzu's perspective, it is a matter of recognition, willingness to innovate, and technique. The QAF leader recognizes the limitations and endless possibilities in every situation. The cyclic nature of work in the quality culture provides opportunities for developing that recognition skill. The cyclical quality focus process is also circular. Not in the "what goes around comes around" circle of repetition, but in a circle of reproduction. As each cycle ends, a new cycle begins; it is a continuous improvement cycle/circle.

... there are only the normal and extraordinary forces, but their combinations are limitless; none can comprehend them all. For these two forces are mutually reproductive; their interaction as endless as that of interlocked rings. Who can determine where one ends and the other begins?³⁵

³¹*The Quality Approach*, p. 1-2.

³²Sun Tzu, *The Art of War*, translated by Samuel B. Griffith, Oxford University Press, 1963, p. 39.

³³Sun Tzu defines extraordinary forces by example: they act when and where their blows are not anticipated. *Ibid.*, p. 91.

³⁴*Ibid.*, p. 91.

Understanding and appreciating the cyclical, circular, nature of continuous improvement is one thing. Being able to communicate it to superiors and subordinates alike is quite another. "Strong communication skills are critical,"³⁶ not only within an organization, but with the organization's suppliers and customers as well. How else are needs, requirements, and capabilities determined? How are they translated within the organization? How is the quality culture inculcated? Vision transmitted? Communication skills involve more than simply speaking; written and non-verbal skills are also important. Confucius said, "the beginning of wisdom is calling things by their right names."³⁷ The QAF leader describes the vision, strategies, and quality culture with word pictures superiors and subordinates understand and relate to. The QAF leader demonstrates quality cultural techniques and his or her belief in that culture through non-verbal communications (by example, facial expressions, body language). As Tom Peters states, "What matters is that everyone who works for you and with you observes you embracing the topic with both arms . . . What they need to observe is your obvious, visible and dramatic, determination to batter down all barriers to understanding, and then implementation."³⁸

The need for open lines of communication (LOC) is no less important for effective organizational functioning than it is for effective battle management--LOC, a concept we routinely study vis-a-vis winning battles. The skilled communicator can keep those LOCs open, often without saying a word. The former Chief of Naval Operations, Elmo Zumwalt, relates the following story when describing how his ship moved from last to first in efficiency and effectiveness among those in his battle group:

What I tried hardest to do was ensure that every officer and man on the ship not only knew what we were about, not only why we were doing each tactical evolution, however onerous, but also managed to understand enough about how it all fitted (sic) together that he could begin to experience some of the fun and challenge that those of us in the top slots were having. Our techniques were not unusual . . . More important than any of these details, of course, was the basic effort to communicate a sense of excitement, fun, and zest in all that we were doing.³⁹

The Improvement Process

³⁵Ibid., pp. 91-92.

³⁶*The Quality Approach*, p. III-1.

³⁷Westenhoff, p. 174.

³⁸Peters, p. 501.

³⁹Peters, Thomas J. and Robert H. Waterman, *In Search of Excellence*, Harper & Row Publishers, 1982, pp. 236-237.

In the QAF, the Improvement Process defines the organization's operating style. The QAF Credo calls for an operating style that inspires continuous improvement.⁴⁰ Aspects of this continuous improvement process include a team environment, a disciplined approach to accomplish objectives, and empowerment. The concept of teamwork is not historically new to the military. The Phalanx of the 7th century B.C. Greek infantry is a classic case of teamwork; without the team effort the entire army could be overrun.⁴¹ Likewise, today's US Army platoon system is based on small team activities. Overcoming the bureaucratic tendency to emphasize the individual is a key task for the QAF leader. The goal is to take advantage of the "two-heads-are-better-than-one" theory without falling victim to the "design-by-committee" syndrome. A disciplined, or structured, approach to process improvement achieves this goal.

The structured approach to process improvement includes using cyclic problem-solving techniques (described under Quality Focus above) and basic analytical tools. The end result is a data-based decision making process, or "management by fact."⁴² The basic analytical tools provide varying types of information about an activity, or process. Broadly categorized, that information can be described as comparative, cycle time, or cost analysis based. Comparative data collection, or benchmarking, has its historical basis in the 4th century B.C. Sun Tzu's concept of knowing your enemy is exactly what benchmarking data gives you.

The elements of the art of war are measurement of space, estimation of quantities, calculations, comparisons, and chances of victory. Quantities derive from measurement, figures from quantities, comparisons from figures, and victory from comparisons.⁴³

Military benchmarking efforts typically center around war-winning intelligence data: how many troops, what kind of armament, intended plans, for example. QAF benchmarking efforts gather data to improve ways and means of conducting day-to-day business. Tom Peters credits Charlie Chick, President of Presidio Theaters in Austin, Texas, with the term "creative swiping."⁴⁴ It means taking the best (idea, technique, system) from the best and incorporating it into your own processes. Benchmarking against a defined standard or goal is also common within the military. In the Air Force, we use battle damage assessment to benchmark air strike results against the

⁴⁰Team Leader Course Materials, USAF Quality Center, May 1993, p. 1-3.

⁴¹Hanson, Victor Davis, *The Western Way of War*, as quoted in the AWC Military Studies Course Readings Book 1, pp. 77 - 81.

⁴²*The Quality Approach*, pp. II-6 - 7.

⁴³Sun Tzu, as quoted by Capt Randell Cross in *Quality Exchange*, Fall 1993, p. 5.

⁴⁴Peters, *Thriving On Chaos*, p. 280.

intended goal, and units routinely benchmark against other unit's operational readiness inspection results.

Benchmarking is not the "be all or end all" answer. The QAF leader, certain of his or her objectives, discriminates between "fog and friction" and the true facts. For example, General Mike Loh, Air Combat Command Commander, relates how the army commanders of France, England, and Austria went to Prussia to find out what made Frederick the Great's army so successful (benchmarking).⁴⁵ They were, as Napoleon noted, "so infatuated with the manoeuvre of the oblique order, which was fit for nothing but to gain a few adjutant-majors a reputation."⁴⁶ They missed the point entirely, and Frederick reigned supreme for several more years. The key to Frederick's success was his understanding of the second category, cycle time.

Cycle time refers to a measurement of how long a process takes. A day is a 24-hour cycle; humans gestate on a 9-month cycle; the F-16 20mm cannon cycles 6,000 rounds per minute.⁴⁷ Frederick the Great understood this concept well.

He realized how artificially slow and heavy were the tactics of his age, and from the outset of his career he determined to base his system of war on what these tactics lacked--mobility and rapidity of fire. He states, 'A Prussian battalion is a moving battery . . . the rapidity in loading is such that it can triple the fire of all other troops. This gives to the Prussians a superiority of three to one.'⁴⁸

Frederick the Great succeeded because he trained his troops to fire and reload fast and to maneuver faster, than other nations'. Napoleon likewise understood the concept. "Time to him was everything . . . , he once said, 'The loss of time was irreparable in war; reasons alleged for it were always bad, for operations only fail through delays'.⁴⁹ Napoleon also understood to third concept, cost analysis.

Cost analysis involves more than a dollar computation. Cost can be calculated in terms of manpower, food, equipment--any resource required to complete a process. War in the 17th century was an expensive undertaking, for both the victor and the vanquished. Napoleon's army was the most skilled at "living off of the land."

The French soldier lived on the enemy's country, and therefore the French trains needed but a fraction of the animals to be found in the Prussian supply columns. This added enormously to French mobility.⁵⁰

⁴⁵General Loh addressing the Air Command and Staff College, November 1992.

⁴⁶Fuller, J.F.C., *A Military History of the Western World*, Vol. II, De Capo Press, 1955, p. 196.

⁴⁷*Modern Fighting Aircraft, F-16*, Bernard Fitzsimons, ed., Salamander Books, Ltd., 1983, p. 40.

⁴⁸Fuller, p. 194 - 195.

⁴⁹Ibid., p. 414.

⁵⁰Ibid., p. 415.

The cost of feeding Napoleon's troops and animals was borne by the local population. Thus the cost of the war was less for Napoleon and doubled for the local population. Cost can drive a nation to its knees--witness the fall of the Confederacy after Sherman's March to the Sea. The QAF leader appreciates the value of data based decision making (analyzing costs, for example) and encourages and empowers his or her subordinates to manage by fact.

Empowerment is the third aspect of the Improvement Process. Empowerment in the QAF means delegating responsibility and authority when appropriate and giving people ownership of the processes they control. Again, this concept is not new to the military. General U.S. Grant said to General W. T. Sherman in April, 1862, "I do not propose to lay down for you a plan of campaign; but simply to lay down the work it is desirable to have done and leave you free to execute it in your own way."⁵¹ Empowerment embodies the US Army concept of Commander's Intent.

Every individual from the highest commander to the lowest private must always remember that inaction and neglect of opportunities will warrant more severe censure than an error of judgment in the action taken. The criterion by which a commander judges the soundness of his own decision is whether it will further the intentions of the higher commander.⁵²

The QAF leader anticipates mid-level managers' difficulty with the concept and encourages them to view empowerment not as a win-lose situation (their loss of power and their subordinates gain), but as a win-win situation (a sharing of responsibility and accountability for processes). The QAF leader emphasizes that sharing responsibility is not the same as abandoning responsibility, and that sharing actually expands responsibilities in two directions (upward and downward). The QAF leader also emphasizes that being empowered is not simply a receiving notion, but it is, to a larger extent, an accepting notion. The subordinate who becomes empowered accepts responsibility and accountability for the process; without acceptance, there is no empowerment.

For unto whomsoever much is given, of him shall much be required: and to whom men have committed much, of him they will ask the more.⁵³

Luke 12:48

Quality In Daily Operations

Quality in Daily Operations is simply applying the concepts already addressed consciously in day-to-day activities. It means applying QAF leadership techniques, empowering people, focusing on quality, and making data

⁵¹*Leadership: Quotations from the Military Tradition*, Robert A. Fitton, ed., Westview Press, 1990, p. 44.

⁵²US Army Field Manual 100-5, Ibid., p. 45.

⁵³*Holy Bible*, King James Version.

based decisions. Today, because the quality culture is still developing, Quality in Daily Operations may involve risk taking; it certainly involves coping with change.

We need leaders who are grounded in the principles of command, yet who are responsive to new ideas; who have not only the flexibility to cope with and direct change, but the audacity to take the measured risk in order to gain victory on the battlefield.⁵⁴

The QAF leader demonstrates Quality in Daily Operations in the way he or she conducts themselves and in the ways they interact with subordinates and superiors. For example, using quality concepts during staff meetings (start on time, stop on time, stick to the agenda [passed out before hand], use a facilitator to keep things on track, and so forth) sets the tone and the example. The QAF leader rewards and recognizes those actions (individual and team) that support the quality culture and organizational goals. A simple voice in praise can reap huge returns.

You must get around and show interest in what your subordinates are doing even if you don't know much about the technique of their work. And when you are making these visits, try to pass out praise when due, as well as corrections or criticisms.⁵⁵

Quality in Daily Operations may mean changing the way business is typically done. The QAF leader encourages team efforts by forming teams to deal with problems, questions, or processes. The leader also provides the resources to ensure team members are properly trained before they begin the team's task. Through the process of chartering teams, the QAF leader specifically defines team tasks. Specific direction and training are as critical to the quality culture as they are to the warrior culture.

Do essential things first. There is not enough time for the commander to do everything. Each commander will have to determine wisely what is essential, and assign responsibilities for accomplishment. He should spend the remaining time on near essentials. This is especially true of training. Nonessentials should not take up time for essentials.⁵⁶

Finally, the QAF leader continually assesses Quality in Daily Operations. This assessment concerns behaviors throughout the organization, techniques for solving problems and reaching goals, and communications and working relationships within and outside of the organization. By applying techniques and concepts historically proven, the QAF leader demonstrates the commitment and operating style that inspires trust, teamwork, and continuous improvement--the Quality Air Force Culture.

⁵⁴John O. Marsh, Jr. *Leadership: Quotations from the Military Tradition*, p. 251.

⁵⁵General Omar N. Bradley, *Ibid.*, p. 233.

⁵⁶General Bruce C. Clark, *Ibid.*, p. 284.

A leader is best when he is neither seen nor heard. Not so good when he is adored and glorified. Worst when he is hated and despised. "Fail to honor people, they will fail to honor you." But of a Great Leader, when his work is done, his aim fulfilled, the people will all say, "We did this ourselves."⁵⁷

Lesson Summary

Basic QAF concepts are timeless. During the past 50 years, technology advancements caused minor evolutions in leadership styles and organizational structures, particularly in the military services. The 20th century Air Force remained individually focused in a stove pipe. Leaders concentrated on promotability rather than accountability, acceptability rather than responsibility, and on retainability rather than sustainability. The demands of the 21st century require change--change in organization and another evolution in leadership style. Overcoming the comfort of the old is difficult only if history's security blanket is not used to warm modern men and women to the task at hand.

Let it be admitted that the modern technological revolution has confronted us with military problems of unprecedented complexity, problems made all the more difficult because of the social and political turbulence of the age in which we live. But precisely because of these revolutionary developments, let me suggest that you better study military history, indeed all history, as no generation of military men have studied it before.⁵⁸

The Quality Air Force culture is not a new concept. It is a combination of the best aspects of cultures, management techniques, leadership styles, and organizational structures from military history. It is this combination that makes understanding and acceptance difficult for some. It is on the one hand, a radical change, while on the other hand, a renewal from a distant past. Some aspects feel familiar, some feel new. Against the backdrop of an entire world in change, adopting the QAF culture now may seem foolish. In fact, now is the only time available. QAF leaders have the courage to move forward into the 21st century while honoring our quality heritage.

In essence, courage is the ability to react positively to the challenge of the unknown. The unknown is in the main synonymous with the future, whose events are anticipated only in the light of experience, the sole heritage of the past.⁵⁹

J.M. Cameron

PRESENTATION TECHNIQUES

⁵⁷Lao-Tzu, *Ibid.*, p. 182.

⁵⁸Frank Craven, *Ibid.*, p. 170.

⁵⁹Westenhoff, p. 147.

Presentation techniques focus on the educator as the primary communicator. However, communication is a continuous process and anyone who stands in front of an audience must be aware of the message they send--verbal and non-verbal. Bettinghaus' research indicates that "a single experience is all it takes for attitudes to begin to form."⁶⁰ Senior leaders must decide to publicly commit to the quality culture and demonstrate their commitment both verbally and non-verbally at every opportunity. Their efforts help shape attitudes and frames of reference, and support classroom presentations by providing examples.

Classroom presentations must focus on quality concepts, described in day-to-day language. This language should encourage students to think in terms of the concepts, rather than learning a new vocabulary. "Too often students memorize definitions without having a real understanding of the concept defined."⁶¹ It is permissible to use local terminology--it is not the word, but rather the concept that is critical. Supporting this idea, Tom Vanderpool, a quality expert at Gemini Consulting, says, "Abandoning the TQM acronym may be correct, abandoning the principles is not."⁶² Additionally, educators must be enthusiastic, yet controlled, in their presentations. Individual and program creditability is on the line because "the quality movement's passion can be energizing, but it can also stray into zealotry"⁶³; an educator must not be viewed as a zealot. Finally, educators must feel free to exercise initiative and be creative in their approach to communicating: As Mary Stevens, director of product development at Herman Miller cautions, "Don't negate the uniqueness of your organization by adopting an off-the-shelf quality program."⁶⁴

In the final analysis, creativity, combined with sound educational techniques based on proven educational theories, can ease the transition into the quality culture. Senior Air Force leaders must empower those chosen to educate to seize the initiative. Inculcating quality is a difficult task, requiring ingenuity, creativity, and a strong sense of who we are, where we are, and how we will cope with 21st century challenges. J.F.C. Fuller's timeless words best describe the continuing challenge.

⁶⁰Bettinghaus, p. 22.

⁶¹Kolesnik, p. 281.

⁶²Jacob, Rahul. "TQM: More Than A Dying Fad?." *Fortune Magazine*. October 18, 1993, p. 66

⁶³*Ibid.*, p. 72.

⁶⁴*Ibid.*

If we wish to think clearly, we must cease imitating; if we wish to cease imitating, we must make use of our imagination. We must train ourselves for the unexpected in place of training others for the cut and dried. Audacity, and not caution, must be our watchword.⁶⁵

J.F.C. Fuller

SUMMARY

The quality culture is part of the Air Force today, yesterday, and tomorrow. It is, however, dependent upon each Air Force member: the senior leader for demonstrated guidance, the educators for communicating the concepts, and each individual member for accepting the challenge to carry on the heritage of excellence they inherited. The transmission methods and techniques continue to be critical steps in the folk dance of quality. Without those steps, dancers cannot keep time to the rhythm of change-- there can be no dance. This is a 21st century concert: Those attuned will lead; the rest will follow, learning as they go.

⁶⁵Westenhoff, p. 144.

Let it be said: 'It was done right, it was done well.' Perfection must be your credo of work and quality your way of life.

Konstantin

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BIOGRAPHICAL SKETCH

Lieutenant Colonel Barbara A. Kucharczyk (MA, New York University) is a career aircraft maintenance officer. Serving tours of duty in the Pacific and European theaters, as well as in the US, she held various unit level positions, including Equipment Maintenance Squadron commander. Her staff duties include a tour on the USAFE Inspector General Team and faculty duty at the Air Command and Staff College. She is a graduate of the Squadron Officer School, Air Command and Staff College, and the Air War College, Class of 1994.