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"QUALITY AIR FORCE "AND DEMING'S "FOURTEEN POINTS"

by

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A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE CURRICULUM

REQUIREMENT

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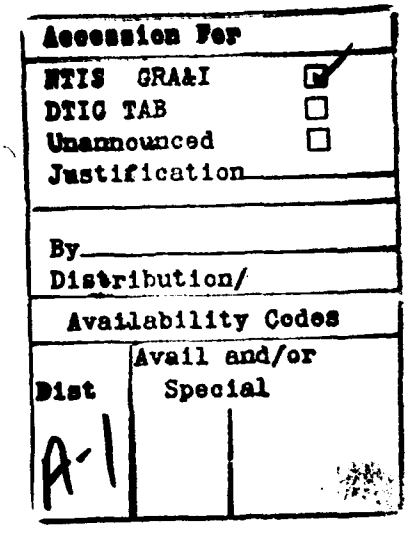

ABSTRACT

TITLE: "Quality Air Force" and Deming's "Fourteen Points."

AUTHOR: Tomasz M. Kocon, Lieutenant Colonel, Polish Air Force.

As a result of the changing international and domestic environments the United States Air Force is in the midst of the most significant change since the end of the World War II. This enormous effort is being led by the Air Force senior leadership with a great deal of Total Quality Management (TQM) involvement. TQM is perceived as a method that should provide what seems to be impossible: not only maintaining, but also improving the quality of a downsized organization. The application of the TQM philosophy to this military organization, known as Quality Air Force (QAF), is believed to be the right methodology for change. The main thesis of this paper is: *The TQM approach in its pure form is not fully applicable to any military organization or military environment.* Not TQM, but rather an adapted version should be implemented. According to many authorities, the success of this modern management philosophy has its roots in Deming's theories. Therefore, the main principles of his teaching will be surveyed for the answers to the two following questions. First, are those principles implemented in the Quality Air Force (QAF) approach? Second, if yes, to what degree is each principle applicable? The answers to those questions will allow to test the main thesis of this paper by using the USAF, as the main example. The brief review indicates that from the Fourteen Points, nine are now fully applicable and in use under the QAF program. The rest of them are partly implemented. In the general analysis was deduced that QAF should not merely be more or less mechanically adopted or processed TQM, but should be expanded by adding specific methods more oriented toward "total quality command" as well. As a general conclusion it can be said that QAF's failure to make the proper adjustments to specific conditions or environments is the main reason limiting TQM implementation.

BIOGRAPHICAL SKETCH

Lieutenant Colonel Tomasz M. Kocon (Dr., Educational Technology, National Defence Academy, M.A. Cybernetics-Electronics, Military Academy of Technology, Poland) a member of the Air War College, class 1994, became interested in the quality issues inspired by the Quality Air Force Course. Rethinking American experiences in the military field should provide interesting material for the potential implementation of some ideas, principles, and methods from the Quality Air Force program to the improvement process in the military organization in his home country.

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CHAPTER I

INTRODUCTION

"Success comes from having the proper aim

as well as the right ammunition."

Proverb.

As a result of the changing international and domestic environments the United States Air Force is in the midst of the most significant change since the end of the World War II. The process of reorganizing the Air Force goes from the top to the bottom. This enormous effort is being led by the Air Force senior leadership with a great deal of Total Quality Management (TQM) involvement. TQM is perceived as a method that should provide what seems to be impossible at first blush: not only maintaining, but also improving the quality of a downsized organization. Advocates of the application of the TQM philosophy to this military organization, known as Quality Air Force (QAF), believe that the more radical the reduction of the size of the military force be, the more significant role the appropriate implementation of TQM and of continuous process improvement will have as the right methodology for change.[1]

The Air War College quality course, which provided both familiarization with the basic concepts and methods ("Introduction to QAF") and also examined many aspects of senior leaders' concern ("Senior Leader in the QAF"), stimulated my personal interest in this subject. However, the very way of propagandizing quality, which to a certain degree

[1] For instance, such an argumentation was used to provide foundation for Quality Air Force Course: "Faced with unprecedented downsizing, Air Force senior leadership sought a method to maintain and even improve the quality of a first class force. The answer was to adopt the Quality Air Force (QAF) approach." Richard A. Khalar, Course Director's Letter. In: Senior Leader in the Quality Air Force -- NS 621 (Maxwell Air Force Base, Alabama 1993) p. iii.

reminded me of the best patterns of ideological indoctrination, I witnessed in communist times, was the most surprising. In addition, the critical attitude toward the quality issue presented by many American class members gave me another good reason to deal with the subject. Moreover, I hope that rethinking my American experiences in the military field should provide interesting material for the potential implementation of some ideas, principles, and methods from the Quality Air Force program to the improvement process in the military organization in my home country. After having studied a great deal of sources devoted to quality in both civilian and military fields, and after taking into consideration my professional experience connected with the subject, I came to some conclusions that will be presented below. Even so, I am entirely aware of many limitations which may affect my deliberations. As a foreigner staying in this country for the first time and only for a year, I have learned a lot, I may not have learned enough, to know the Air Force well, especially in the broader context (social, cultural), or to formulate a firm, conclusive judgment about it. On the other hand, my position gives me some advantages, too. First, as a newcomer and foreigner I have been able to take a fresh, unbiased look at some domestic American issues. Second, in spite of many obvious differences between the American Air Force and the Polish Air Force, I believe the very nature of any military organization is essentially the same, or at least comparable. Consequently, as a military officer with twenty-five years of service, I probably have enough experience to make an attempt at assessing how advantageous the policy of QAF implementation may be. Finally, as an outsider, I may be more able to be impartial, because I do not have any reason to restrain me from expressing freely my critical, unbiased judgment.

The main thesis of this paper is: *The TQM approach in its pure form is not fully applicable to any military organization or military environment.* I deem that <u>not</u> TQM, but rather an adapted version should be implemented. Why?

First, I would like to begin my argumentation with the name itself, specifically addressing the initial word of TQM buzzword. The very adjective, brings back to my mind absoluteness, and arouses my concern, insofar as I strongly oppose totalitarianism in any shape or form, because it excludes critical thinking and requires taking one particular solution for granted.[2] One may argue that ***Total*** Quality Management suggests management or leadership style composed of a total framework built around the concept of ***Quality***. Another may argue that there is no implication that TQM requires individuals in an organization to be subordinate to or centrally controlled by some autocratic leader(ship). If that is so, how can this position be reconciled with the hierarchical nature of every military organization? From my personal stand point, I would argue that there is as much need for freedom of choice and as great a place for independent thinking and especially acting, required by the TQM approach, as can be allowed by senior military leaders. The extent to which they are willing to delegate their power creates the major limitation. This very factor is particularly important, considering the fact that the empowerment of individuals and teams creates the essential precondition for successful TQM implementation.[3]

Second, the implementation of the TQM approach seems to be appropriate and natural for some areas or fields of military activity similar to the spheres of economics for which TQM was primarily designed. The scope of branches where this method is successfully used embraces all kind of companies working on production or in service fields. Consequently those areas of military activity that are similar in their nature to them -- mainly support, logistics, and maintenance functions -- are the "safe" fields auguring for the successful implementation of the TQM philosophy. On the other hand,

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[2] In the aftermath of being exposed for a long time on the influence of totalitarian communist ideology I acquired my strong bias against totalitarianism.

[3] More systematic approach, allowing successful achievement of empowerment is presented in Douglas Carroll's article: "Empowerment... Making It Work for You." The Quality Exchange, Vol. 1, No 2, Fall 1993, p.7.

those components of organizations which perform missions closely connected with combat -- like: force application or force enhancement -- by their nature do not seem to present the most favorable conditions for TQM experiments. Having said that, I would like to characterize this as a general opinion and explain that I do not perceive all these kinds of units as being completely exempt from the introduction of quality principles. I do believe they are rather more suitable for limited implementation, the limit being imposed by warfare. Although not applicable in combat operations, QAF tools and principles can be very useful during the planning and preparation phases for future war fighting, because they enable improvement of team work and of staff activity.

Combat operations are quite different in nature, perhaps even the opposite of "production" or "rendering services." Fighting is a destructive not a creative process. Therefore the attributes of a good quality worker are not necessarily the same traits as a good soldier (airman, marine, sailor). On the contrary, the demands and expectations pertinent to civilian workers and soldiers are different, and sometimes opposite. Moreover, the very act of applying TQM terminology to combat situations makes that it sounds improper a certain degree it even sounds ridiculous. Arriving at a functional definition for the "customer" and then identifying: who that customer is, can be extremely difficult for a civilian company and even more so for the military.

The possible answers to the seemingly trivial question: "Who is your client on the battlefield?" provide a good illustration of the issue. Is the customer your superior, your government, your nation, or maybe your enemy, whom you can "serve" with your weapon? If the answer is: "enemy," and that seems to be correct from the standpoint of clear logic, the next implied question must be about the customer's "satisfaction." In the context of combat, the quality approach, based as it is on customer satisfaction, leads to pure nonsense. Although many sources provided some suggestions on how to avoid such

an oxymoron, I do not think they provided answers that were quite convincing.[4] Moreover, I doubt whether it really makes sense to ask such a question of soldiers in combat situations. In my opinion, other more general and important issues related to the matter should be raised instead. For instance, the ways in which the quality approach affects discipline, and the results of military operations. And, last but not least, whether the quality approach is really new. These issues, however, are beyond the scope of this paper and will not be examined directly.

Like every successful movement, TQM claims many "founding fathers." Although the current quality philosophy is based primarily on the work of Deming, Juran, and Crosby, the scope of achievements and popularity place the name of W. E. Deming in the first position. According to many authorities, the success of this modern management philosophy has its roots in Deming's theories. Therefore, I am going to survey the main principles of his teaching looking for the answers to the two following questions. First, are those principles implemented in the Quality Air Force (QAF) approach? Second, if yes, to what degree is each principle applicable? The answers to those questions will allow me to test the main thesis of this paper, which I hope to prove by using this particular military organization, the USAF, as the main example. The choice is by no means accidental. Studying in the Air War College I have access to a wealth of materials pertaining to the United States Air Force. There are also other reasons: my professional expertise relates to the same domain (the Polish Air Force), and, last but not least, to my knowledge the QAF is the most advanced and holistic application of TQM among the other services in the American military establishment.

The rationale of Deming's philosophy of management was described in the so-called "the Fourteen Points," which depict the main obstacles or barriers impeding the

[4] Compare suggestions pertaining: customer definition, focus, and satisfaction on DoD level (in: Total Quality Management Guide. Volume II -- A Guide To Implementation. pp. 2-12, 2-13) and on the Air Force level (in: Quality Air Force Criteria pp. 6, 25).

development of quality.[5] In attempting to make a QAF assessment I am going to use Dr. Deming's terminology as milestones and tools, which I hope will provide a more systematic approach to my evaluation. In my opinion it may be interesting and, more importantly, appropriate to use the notions created by the most popular "Father" of modern management theory for analysis.[6] My research comprises books and articles--including works of other scientists and practitioners, also of many AF officers--as well as handbooks, brochures and other materials propagating quality. Furthermore, I occasionally dare to express my personal appraisal of the relevance or usefulness of that theory and practice for implementation in the USAF environment.

[5] All the names of points and obstacles are quoted after: Mary Walton, The Deming Management Method,(New York: A Perigee Book, 1986). Chapter 3.

[6] The similar approach is presented in many articles dealing with some specific issues. For instance R. Zultner (The Deming Way to Software TQM. In: TQM. Selected Readings p. 245) uses Deming's notions in the sphere of software engineering.

CHAPTER II

THE FOURTEEN POINTS IN QAF

1. Create constancy of purpose for improvement of product and service.

There are in fact two messages in the First Point: that of knowing what to do--establishing constancy of purpose--and then doing your best at maintaining consistency of purpose. The former affects the opportunities for tomorrow, but in order for that to occur the course needs to be set today. The latter makes it the responsibility of the managers to provide a road map for the rest of the organization to follow. Only top management can make policy, establish the set of core values, chart the long-term course for an organization, and finally lead it tenaciously in the chosen direction.

The present challenging international and domestic situation urged the USAF senior leadership to seek appropriate responses to the challenges. Nowadays the quest for quality appears to be necessary because of the less predictable circumstances caused by the diminishing of the former well-known threat, which in turn creates political pressure for the significant reduction of military funds. Simultaneously, uncertainty and instability in the international arena resulted in the emergencies of new sources of regional conflicts. Economic disputes and arms proliferation issues (including nuclear, biological, and chemical weapons) create new and challenging tasks for the US military establishment. Therefore, while economic and political constraints affect the quantitative force structure, a plausible solution to the dilemma was adopted: stress quality and qualitative improvement. The implementation of TQM philosophy began with the adoption of the First Point. The following question: "...how can you build a Quality Air Force if you cannot say what the purposes of our organization are...," was asked by Gen. Merrill A. McPeak, when the USAF was at the starting point on its way down the quality

road.[7] Subsequently, the Air Force senior leadership accepted that the quality principles would be used for formulating the general purpose of the organization (establishing constancy), and for accomplishing the objectives of the transformation (maintaining consistency). Those actions provide evidence of both complete understanding of the First Point by AF senior leaders and its full implementation. In the aftermath, the foundations for quality were soundly created by analyzing the AF mission, vision and core values. Thus, I conclude that this principle seems to be well-understood, fully accepted, and put into practice in the AF environment.

2. Adopt the new philosophy.

In this Point Dr. Deming indicates that Americans are too tolerant of poor performance. He postulates the need for "a new religion" in which mistakes and negativism are unacceptable. However, the adoption of anything new is difficult, because people tend to resist change.

The current AF policy pertaining to the application of quality application is based on a tenacious recognition of this belief. QAF ideology is very intensively disseminated among AF personnel. It is done with such exaggeration that, in my opinion, may cause even the opposite effect: to create some forms of resistance. Even though I share the view that quality should be promoted and intensively deployed, any strong form of total social indoctrination may in fact be ignored by people while verbally being fully accepted. A case in point is the lack of authenticity on the part of senior leaders'--they content themselves with making declarations instead of showing the real acceptance of quality by their actions. This seems to be a very dangerous symptom threatening further quality employment. If the perception is that the senior leadership is only making statements

[7] Gen. Merrill A. McPeak, Does The Air Force Have a Mission? Air Force Update, Secretary of the Air Force, Office of Public Affairs, Washington DC.

about quality and not implementing it at their level, why should the rest of the USAF people adopt QAF?

In conclusion I would say that although the Second Point is fully applicable and put into practice, the way in which it is applied may cause some reservations and as a result makes it ineffective, if not counter productive in the worst case.

3. Cease dependence on mass inspection.

Build quality into the product in the first place, says Deming. This hint means that quality comes only from the improvement of a process at its very beginning, not from inspection, traditionally performed at the end of the production process.

Regardless of the many successful efforts aimed at increasing QAF deployment there are numerous obstacles that make it relatively more difficult in the military environment than in civilian institutions. An expanded institutional structure, which provides inspection function (e.g., I.G.) still exists. On the other hand, the role and mission of the inspection function are being changed nowadays. The experiment with the Quality Air Force Assessment (QAFA), conducted by the Air Mobility Command and then expanded to the rest of the Air Force shows that more emphasis can be put on self-assessment. The intention is to assure active engagement of the people in the particular unit with the inspection process and combine their efforts with oversight (I.G.) participation to neutralize the disconnect between their purposes, which over time had been perceived as contradictory. Success in that job will also help in the promotion of improving the overall operational performance of the organization.[8] First of all, the self-assessment itself creates the opportunity for unit personnel to use the quality tools and the methods in practice. Second, by comparing the self-assessment results to that of other units in the organization a benchmark for future actions and basic professional standards

[8] Richard A. Mallahan, Erwin F. Lessel, The HQ AMC/IG QAFA Process -- Implementation of the Quality Air Force Criteria.

is created. Last, but not least, the biggest value of the self-assessment is that it gives specific information on current quality practices within the unit and their results, and provides the feedback necessary for further improvement. The framework for assessment is provided by Quality Air Force Criteria based on the Malcolm Baldridge National Quality Award.[9]

However, implementing the self-assessment process will be probably neither an easy nor a painless procedure. Self-assessment is a very detailed, time-consuming process, especially during the introductory phase.[10] The results of unit self-assessment are a validation of higher echelons to ensure that commanders implement QAF approach. It is worth mentioning that not only the implementation of the Baldridge Award in the QAF but the Award itself are questioned by some authors as ineffective, neither assuring achievement of genuine excellence, nor giving guarantee against failure in the real market to Baldridge winners.[11]

In conclusion, it can nonetheless be said that this Point is fully applicable and put into practice, although at first blush its title may be associated as being much closer to the domain of mass production than to military organizations.

4. End the practice of awarding business on price tag alone.

Deming believes that an organization aspiring to quality is to view itself as one complete system, in which awarding should not be oriented on measuring individual performance, because "...reward for performance is like rewarding the weather man for a good day."[12] He suggests the need to create a system depending on meaningful measures of quality, along with price, in which everyone may take a joy in their work. Criterion-

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[9] Quality Air Force Criteria 1993.

[10] The conclusions driven during one of the Air War College seminars--while the example of self-assessment of the hypothetical wing was being analyzed -- entirely confirmed those disadvantages.

[11] In: Senior Leader in the Quality Air Force--NS621. The last four articles discuss the issue.

[12] Deming's opinion quoted after: Mike Bradley, Systematic Rewards, ibid. p. 17.

based performance appraisals allow people to be evaluated in comparison to standards and expectations, rather than compared against each other. It is really a promising idea, but there are many reasons that make it less useful in reality. Many management consultants rebut Deming's charges as centering on one only specific method of management, management by objectives.[13] This very method--typically quantitative, focused only on results, concerned with a few aspects of the job, and discouraging the setting of difficult objectives--is not often encountered in its pure form in practice and can easily be improved.

Regardless of Deming's criticisms of performance appraisals, in the military field they do perform a number of valuable services when implemented properly, especially the promotion system, so crucial in a strictly hierarchical organization like the military. The military promotion system is based on achievements evaluation, and is to a certain degree contradictory to Dr. Deming's guidance, because it inevitably leads to rivalry. In the military, promotion is not only evaluation, it is in fact the very act of ranking people. Any informal, subjective system is unacceptable and formal criteria for promotions--linked to the organization's mission and additionally to customer satisfaction--provide solution to that problem.

All in all it appears that the recommendation of the fourth point cannot be adopted fully in the military field.

5. Improve constantly and forever the system of production and service.

Although the Fifth Point seems to pertain to production workers, continual reduction of waste and improvement of quality cannot be achieved only by worker's efforts. The lion's share of improvement must originate in management.

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[13] Jim M. Graber, Roger E. Breisch, Walter E. Breisch, Performance Appraisals and Deming: A Misunderstanding? In: Senior Leader in the Quality Air Force -- NS 621, ibid. p. 20-23.

This guidance was followed precisely in case of the QAF program. That improvement, as not a one-time effort, is characteristic of the QAF approach. Numerous manuals, guides, and plans which describe TQM implementations in the military, emphasize the "Continuous Improvement Process." They stress the proper use of characteristic concepts (examining, bench marking, and using metrics are the typical ones), and selected QAF tools (for instance the Shewhart Cycle, also referred as Ishikawa Circle or Deming Wheel, seem to be the most popular and versatile).[14] In the authors' opinion, these methods and tools provide a systematic approach to achieving continuous improvement for everybody in the Air Force. Nonetheless, without questioning their utility, I am convinced they are too general, and unless adjusted to the military environment they cannot be easily adopted by all the military officers. Fortunately there are more and more publications that are oriented toward filling the gap. For instance, Michael R. Schlegel presented an interesting proposition, appropriately tailored to the military environment.[15] He suggested not only the five-step architecture for change (change the culture in the organization, understand, document, simplify, and provide automation) but gave also some guidelines which show how to select a process for improvement and make it work as well. Nevertheless, even this example does not testify persuasively for the possibility of implementing TQM methods in the realm of pure military missions. This is because all its authors' considerations are focused on strictly economic areas, which more appropriately pertain to the financial managers' or comptrollers' field rather than to the commanders' domain.

Besides, the next crucial factor for maintaining constancy of purpose for improvement is senior and mid-level leaders' awareness of this necessity. "We must strive for an obsession for product quality and a passion for customer satisfaction and an

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[14] The Quality Approach ... Your Guide to Quality in Today's Air Force (Maxwell Air Force Base, Alabama: Air Force Quality Center, Fall 1993) p. IV-2,3.

[15] Michael R. Schlegel, TQM and continuous Process Improvement: Can We Make It Work? In: Senior Leader in the Quality Air Force -- NS 621 (Maxwell Air Force Base, Alabama 1993).

abiding commitment to continuous improvement." This closure to a speech given by General Mike Loh may serve as the best example of a senior leader's commitment to this issue.[16]

As I have shown, all the necessary conditions are fulfilled to implement successfully the continuous improvement process within the USAF environment. Obviously, it means that the Fifth Point guidance is also satisfied.

6. Institute training.

According Dr. Deming everyone must be well trained, since solid skills are essential for improvement. But in practice poor training and dependence on unintelligible printed instructions too often seem to be characteristic in American industry.[17]

On the other hand, the USAF policy and practice pertaining to this element of Deming's guidance are not only obeyed, but I think are also exceeded. They include training and, what is more important, education as well. All AF personnel receive adequate training during their military careers. Now there are many institutionalized courses dedicated to the subject of quality. The education and training strategy is focused on the preparation of all personnel: civilians, enlisted, and officers, and for playing different roles in developing a quality environment, as team member, leader, facilitator, or advisor. It also embraces higher positions like mid-level managers, senior leaders, and quality council members. What seems to be significant and specific, what distinguishes the quality training from numerous professional career development courses, is the training for team building. In addition, this particular area also requires the participation of specific professional advisors, such as organizational psychologists. There are some publications that can provide an excellent guidance in how to avoid common pitfalls in

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[16] General Loh speech: National Quality Month Kick-off, Hampton Roads Quality Council, reprinted in: Senior Leader in the Quality Air Force--NS 621 (Maxwell Air Force Base, Alabama: Air War College, November 1993) p. 5.

[17] M. Walton, The Deming Management Method,(New York: A Perigree Book, 1986) pp. 35, 68.

team-training and team-building.[18] These seem to be relatively easier tasks, for in fact team work is nothing new. Indeed, it is characteristic of military organizations.

In summary, I would like to highlight the fact that the QAF program transcends requirements of the Sixth Point.

7. Institute leadership.

It is a leader's job to help their people, not to judge them. It is important to know when their people need special help and to provide it. This particular point may be thought of as the most relevant and essential one for the application of the quality approach to the military organization. However, it does not add anything really new, since leadership traditionally has been practiced in the armed forces for ages. Obviously, there is no need to "institutionalize" something that not only exists, but also is routinely and successfully exercised. Yet, leadership may be seen as a novelty in the field of economics. Therefore, military experience with leadership may serve as an example for the civilian managers rather than the other way around. Indeed, while reviewing Deming's suggestions pertaining to this point and attempting to look for those which are suitable, I did not find many. A survey of other sources led me to a book devoted to transformational leadership.[19] The considerations given by authors seem to be appropriate to the military, because they not only pertain to the specific situation of an organization in the process of transformation, as is the case of the American military nowadays, but they also provide a great amount of valuable, versatile advice, on how to create a new vision and to institutionalize change.

Although many Air Force leaders have always practiced a quality-focused leadership style, in my opinion they owed it more in the past to the individual

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[18] The most useful and systematic seems to be The Team Handbook by Peter R. Scholtes. The article by Gregory E. Huszczo, Training for Team Building . Ibid. p. 29. contains also many valuable advice.

[19] Noel M. Tichy and Mary Anne Devanna show many examples of managers as successful economic leaders in their book: The Transformational Leader (New York: John Wiley & Sons, 1990).

predisposition of the particular person occupying leader's position, rather than to the systematic, scientific approach (presented in the above-cited book) or to the institutional demands required from leaders by QAF today. Today quality is perceived as a fundamental responsibility of leadership that cannot be delegated. Speaking about quality leadership we can distinguish its several essential, inherent factors. First, only leaders' full commitment to the clearly defined and communicated mission and vision can provide for every team mission accomplishment. Next, leaders must take holistic approach to an operating style which creates a work climate that inspires genuine trust, real team-work and the quests for continuous improvement in all we do. Finally, leadership style also plays essential role. It should be participative, egalitarian and astute.

However, some features pertaining to top leadership are absolutely crucial for TQM successful implementation. Those are connected with the leaders' prime obligation and ability to create and maintain an understanding of the vision. David K. Carr and Ian D. Littman stress the role of top leaders in developing a vision and energizing the effect in many governmental organizations including the military.[20] I must admit that the Air Force's current vision: "Air Force people building the world's most respected air and space force...global power and reach for America" is not only very attractive, but convincing as well.[21]

Visions are developed by leaders, but to be successful they should meet the following requirements formulated by Dr. Deming. First of all, full acceptance is necessary--they must be shared by all the team and the leaders as well. Then, they must be comprehensible and precise. They are supposed to be detailed enough that everybody can participate. Finally, they should be positive and inspiring. While vision determines the destination, values settle the way in which one measures the direction in which the

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[20] In: Excellence in government. Total Quality Management In The 1990s (Arlington, VA: Coopers & Lybrant, 1993) pp. 127-131.

[21] I quote the Air Force Vision after: The Quality Approach ...Your Guide to Quality in Today's Air Force (Maxwell AFB, Alabama: Air Force Quality Center, Fall 1993).

organization is headed. Top leadership commitment and support are essential to modern quality management.

Without a doubt, I would say that this Point is relevant and fully adopted by the Air Force in the QAF program.

8. Drive out fear, so that everyone may work efficiently for the company.

It is really hard to overestimate the meaning and importance of this piece of advice offered by Dr. Deming. He has found, according to W. M. Scherkenbach, that the removal or reduction of fear should be one of the first of the fourteen obligations which top management starts to implement, because it affects nine of the other points.[22] Fear causes resistance to change, particularly if improvement efforts forced individuals to spend great amounts of exertion for opposing transformation that might have been used more productively in actual improvements activities. One main source of fear is the "shoot the messenger" tendency. Blaming individuals who report problems is common in many organizations, although those problems actually are opportunities for improvement that would not otherwise have been discovered. Likewise, penalizing the individual reporting the problem by making its solution his responsibility is also not advisable, unless the individual owns the process that has the problem. Another common individual or group fear is that of survival in a new environment, (the fear of becoming a victim of quality). Moreover, driving out fear means simply to empower individuals, let them do their jobs well, while management should be held responsible for the faults of the organization.

The idea of empowerment seems to be very attractive, but I suspect that its full implementation in the military would be neither easy in some fields, nor possible in the others. It will demand the transfer of some power from the higher to the lower levels. In

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[22] William W. Scherkenbach, The Deming Route to Quality and Productivity. Road Maps and Roadblocks, (Washington, DC. Milwaukee, WI.: CEEPress Books, 1990) Chapter 6, p.75.

spite of their solemn declarations, probably not all commanders are so eager to deprive themselves of any portion of their power and its attributes. Consequently, the following questions should be posed: how to obligate commanders to do that, how much power, or what kind of decisions can be relegated without jeopardizing the vital interests of the military, and without threatening commanders' prerogatives? Providing a good answer is not easy, especially bearing in mind that the idea of empowering, leading as it does towards decentralization, is to certain extent contradictory with the hierarchical nature of any military organization. That factor is primarily important when taking into consideration the strictly combat operations the military is called upon to engage in. In the case of combat operations any concessions of hierarchy are not likely possible. Therefore I believe the application of this Point will be limited to non-combat areas only.

9. Break down barriers between staff areas.

People in departments and staff areas usually work in teams in order to foresee and better solve problems they may encounter. In practice it often happens that staff areas have conflicting goals (one department's goal may cause trouble to another) or are competing with each other.

However, a survey made in the Air Force Logistics Command did not show that barriers of this kind are perceived to be a real threat.[23] Hall A. Rummy and Philip E. Miller asked participants of a quality symposium to identify the most formidable barriers to TQM in their organizations and then, analyzing the answers, developed a ranking and categorization. The table presenting the results of barriers to TQM does not contain barriers between staff areas. Obviously it does not mean that barriers of this kind do not exist, they are just not perceived as significant. The conclusion may be that work organizations, awareness of common interests, and team spirit are at least satisfactory in

[23] Hal A. Rumsey Philip E. Miller, Barriers to Total Quality Management in the Department of Defense. In: Senior Leader in the Quality Air Force--NS 621 p. 48-51.

the AF. In my opinion it is quite evident that in order to function efficiently each military organization had to do that a long time ago, before TQM was discovered. Moreover, attention should be paid to preventing the institutionalized forms of quality management to dominate the process itself. This sometimes happens even to the extent that institutionalized forms of quality management themselves are substantial obstacles to TQM. John MacDonald, while analyzing the main reasons for the failure of quality in the Air Force, indicates such a threat, describing how a proliferation of quality improvement teams, facilitators, coordinators, and centers "...establish a permanent ownership of quality," creating another fortress of bureaucracy.[24] In this case only the "quality people" are empowered to deal with the quality issue. Other can feel free of the obligation.

Consequently, this Point, though relevant, does not seem so significant for QAF implementation, because the organization was seemingly able to avoid such a kind of barrier.

10. *Eliminate slogans, exhortations, and targets for the workforce.*

Deming argues that these never helped anybody do a better job and are neither useful nor effective, unless they are created by people themselves. Imposed slogans, exhortations and targets may create adversarial relationships and "generate frustration and resentment."[25]

Studying numerous official USAF documents and publications, including but not limited to the QAF domain, I was amazed that the word *quality* is so overused. It is obvious that proper propaganda for quality is necessary. However, in my opinion, it should be authentic, more subtle, and not limited merely to providing every single noun with adjective 'quality' regardless whether it describes something really new, specific to the quality approach, or whether it depicts ordinary procedures or things. Such a way of

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24 John MacDonald, Reasons for Failure. In: Senior Leader in the Quality Air Force--NS621 pp. 52-55.
25 Walton, The Deming Management Method,(New York: A Perigree Book, 1986) p.76.

popularization can cause much more harm than good and may also arouse suspicion that, instead of authentic implementation, some organizations are merely interested in keeping up appearances. Therefore the results of the survey mentioned above in point nine, should not be surprising, that they showed the lack of worker motivation (rank 1) and the lack of effective communication (rank 4) among highly ranked barriers to TQM in the DoD.[26] Such a high priority for that particular category (interface barriers) is partly related to the Tenth Point--ineffective implementation--which is among other things responsible for those negative occurrences. In short, popularization of quality by using slogans or establishing targets for the service members should be more authentic and created with their active participation.

I would say that the Tenth Point is fully applicable though not quite efficient, because the common practice of spreading slogans instead of more subtle and useful popularization may threaten its usefulness or even make it counter productive.

11. Eliminate numerical quotas.

According to Dr. Deming quotas and other numerical work standards impede quality. They are usually a guarantee of inefficiency and high cost, and also do other damage to the company. To be effective and profitable, quotas should be defined in terms of quality. The responsibility of supervisors must also be changed from emphasizing sheer numbers to emphasizing quality. This point is one of the more difficult ones to understand. A clear explanation and interpretation, illustrated by American and Japanese management examples, was provided in Scherkenbach's book.[27] According to the author, people think it is very logical and orderly to work to a standard. They need standards for planning. In actual fact, however, the figures needed for

[26] Hal A. Rumsey Philip E. Miller, Barriers to Total Quality Management in the Department of Defense. In: Senior Leader in the Quality Air Force--NS 621 p.49.
[27] William W. Scherkenbach, The Deming Route to Quality and Productivity. Road Maps and Roadblocks, (Washington, DC. Milwaukee, WI.: CEEPress Books, 1990) Chapter 9.

planning purposes should not come from fixed or negotiated work standards, but from analyzing both: the process instead (or rather its model) and customer needs.

Regarding the military field I would say that total elimination of numerical quotas is impossible. Some kinds of numerical quotas are necessary. They allow the organization to measure and compare varying level of mission accomplishment. However, they should be obtained as a result of reflection, after listening to those who "own" the process and to the customer, because the target (described in terms of numerical quotas) can be achievable only when it is a part of the system, and only then when the people have a chance to meet it.[28]

As it was in the case of the former Point, the implementation of the Eleventh Point is not quite satisfied in the military field. According to Rumsey and Miller's survey, production quotas were ranked in the eighth place among the third category barriers to TQM in the DoD. Especially confusing for the workforce were contradictory demands: to produce to a certain level, but "to not sacrifice the quality of production to meet production quotas."[29] Therefore, it is important not to put too much emphasis on numerical results, or quality in its less easy to measure aspects will be neglected. There is also a strong connection between this guideline and the Seventh Point.

A careful examination of the Twelfth Point assumes elimination of management by objective, by numbers, by numerical goals, while suggesting that they should be replaced by leadership. Thus, I would say that the Eleventh Point is also applicable, although its implementation faces some obstacles.

12. Remove barriers to pride of workmanship.

[28] In his book W. W. Scherkenbach gives excellent, also graphical, explanation of those relations. Ibid. pp. 86-88.
[29] H. A. Rumsey... ibid. p. 50.

Dr. Deming believes people are eager to do a good job and they are distressed when they cannot. Barriers in management and in engineering rob people of their right to pride of workmanship. This means abolishment of the annual or merit rating and reinforces the need to eliminate management by objective.

The existence of these barriers in the military organization was confirmed by the results of the previously mentioned survey made by the Air Force Logistic Command. The corollary showed that a lack of worker motivation and a lack of effective communication were ranked at first and fourth place as obstacles to quality. It is interesting that the same obstacles were mentioned by Dr. Deming while describing Point Twelve.[30] Though both the above cited examples do not deal with strictly military combat tasks, this Point seems to be relevant and appropriate in the military context. Thus it should not be surprising that vast numbers of the instructional materials issued for purpose of promoting quality in the military environment, dedicate a substantial amount of space and attention to the problem by giving specific advice about how to deal with it. Removing barriers to pride in employees is seen in this literature as a result of creating favorable conditions by building the trust and respect essential for individual participation. In the TQM Guide the military leader is admonished "...you are responsible for maintaining each individual's sense of self-worth and self-esteem."[31] I think there is no need to question the significance of the soldier's pride and spirit, as well as the influence of those elements on military performance in general and in the field of quality in particular.

Therefore the relevance of the Twelfth Point to the QAF is proven, although I cannot confirm how successfully this Point is implemented in actual practice.

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[30] Walton, The Deming Management Method,(New York: A Perigree Book, 1986). p. 82.
[31] Total Quality Management Guide. A Two Volume Guide for Defense Organizations, (Washington DC.: Department of Defense, 1990. Volume II -- A Guide To Implementation.) p. 2-22.

13. Institute a vigorous program of education and training (self-improvement).

In the regard of this guidance there is not much more to add to what was said while the Point Six was considered, except for one more of Dr. Deming's relevant observations. The author noticed that as long as management treats people as a commodity, the need for education and training will not be recognized. Managers must realize that people are an asset and not an expense.[32] Obviously, in the military the human factor is always valued appropriately. Furthermore, the deeper understanding of the importance of this particular issue in the Air Force is absolutely crucial for the success of the QAF program. There are many examples that illustrate its comprehensive implementation on a daily basis. First of all, the goal and activity of a significant constituent of the Air Force -- the Air Education and Training Command (AETC) -- is dedicated to this issue. It is important especially nowadays, when its role is to be "the world's most respected education and training organization -- recruiting, motivating, and preparing quality airmen for America's Air Force."[33] All Air Force organizations, whether aimed at a general purpose -- like AETC -- or specifically focused on quality issues -- like Air Force Quality Institute -- can serve as good examples of putting TQM ideology into practice. In addition, there are many other activities which support and popularize the QAF. For instance, the first annual Quality Air Force Symposium, which was organized in Montgomery, Alabama in the fall of 1993, enabled the consolidation of efforts, promoted competition among teams, and provided for a valuable exchange of experience among military and civilian people who quest for quality.

It is clear that the implementation of the Thirteenth Point is also as well advanced as is the implementation of the Sixth Point.

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[32] After W. W. Scherkenbacher, ibid. p.125.

[33] The AETC role quoted after brochure: Foundations for Quality: Air Force Core Values. Personal Application Handbook,(U.S. Government Printing Office, 1993).

14. Take action to accomplish the transformation.

The last hint indicates how to organize effort to advance the thirteen other points. Following the Shewhart Cycle is suggested as one of the basic procedures which will lead to continual improvement. Deming also stresses the widespread participation of the workforce. He suggests that a critical mass of people in the company must understand the quality philosophy. Almost everybody in the company should work toward and participate actively to accomplish the transformation. It is by no means an easy task for at least two reasons.

First, the complexity and the magnitude of the organizational structure demand different approach as for companies of a big- mid- or small-size. In the case of such a huge organization as the Air Force, which is a multilevel, hierarchically structured, and formalized command and staff organization composed of numerous elements (each of them is, in fact, an organization itself), simple implementation of ready-to-use procedures without proper adjustment is neither possible nor advisable. Existing patterns appear to have been developed for industrial companies, indeed for smaller and less sophisticated ones.

Second, as John MacDonald indicates, the overall philosophy of quality management is being artificially divided by TQM consultants into two distinct and competing implementation strategies. The two approaches are categorized as the "overall culture change route" and the "project by project approach." According to MacDonald "the promotion of either approach as competing rather than as integral implementation philosophies is leading... into very dangerous waters."[34] The Air Force was fortunate to avoid that pitfall. The strategy adopted by the Air Force -- accepting the QAF as the official approach to managing change -- is based on a flexible attitude. The assumption was made that only the general foundations for quality would be centrally undertaken.

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[34] John MacDonald, Reasons for Failure. In: Senior Leader in the Quality Air Force--NS621 pp. 52-55.

These included establishing mission, vision, inclusive rules, and the general directions which secure achievement of the objectives. But the exact method or approach is left up to each organization to determine on its level. To provide standardization a benchmark was created to measure, compare, and ensure balanced development among organizations. For this purpose the Air Force Quality Council has adopted the assessment criteria based on the Baldridge Award. The Air University QAF Implementation Plan, based on a multi-level approach, provides a good example how those foundations and criteria can be incorporated and adjusted to local conditions.[35] The plan presents a gradual approach: moving from small scale implementation to full employment.

Doctor Deming also emphasizes the importance for people to work together with a mutual understanding of all the foregoing Thirteen Points while trying to accomplish them. That is only feasible in an organization that has been able to achieve that level of understanding by creating cultural change, or a new mind-set. All these measures should lead to creating the Quality culture in the AF as well. It also means that Point number Fourteen is fully adopted in the QAF practice

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35 *Quality Air Force. Implementation Plan.* (Maxwell AFB AL: Air University, 1992) p. ii.

CHAPTER III

CONCLUSION

"The ideas of W. Edwards Deming have become a powerfully effective force for change in American industry.
***With appropriate adaptation,** Total Quality Management offers the framework and the tools to be equally effective in government."*

President Bill Clinton [36]

This survey of Deming's "Fourteen Points" was made in order to provide the answer to the question whether TQM works under the QAF program. It should not be surprising that, being an engineer, I have confidence in statistics as an aid to decision making. Therefore the summary of my considerations is based on a simple mathematical calculus: comparing the number of analyzed Points, determining which are fully applied and which are partly utilized. I accept that this procedure may lead toward oversimplification, because neither all of the Fourteen Points are equally important nor their implementation was measured precisely. Nonetheless, it is one way to provide a factual foundation for an effective analysis of my thesis.

The brief review indicates that from the Fourteen Points, nine are now fully applicable and in use under the QAF program. The rest of them are partly implemented. The very fact that no single Point was totally neglected may manifest the relevance of the TQM theory to the military environment and may also provide evidence of good application of that theory in the QAF approach. However, my survey showed also that five of the analyzed Points are not fully employed. It seems to confirm my assertion that

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[36] **Quoted after:** Excellence in Government...

not every area in the military environment, examined using the USAF example, is within the domain of TQM application.

All the patterns described in the literature pertain to the specific, non-combat, and rather economic aspects of the functioning of military organizations.[37] The outcome of the above calculus should not be surprising at all, taking into consideration that not every domain in the sphere of military activities can be subject to "management." Those spheres that are not susceptible to it are simply the domain of command, which must be exercised under actual or simulated combatant circumstances, when the object is to conduct real or virtual war. Attempts to implement the QAF procedures in real or simulated combat environments seem to me neither augur success nor even be harmless, because the QAF is essentially nothing more than the total quality management implemented within the environment of this particular organization. In short, TQM cannot be a proper tool for solving the kinds of problems for which the method was not designed.

Moreover, treating TQM like a panacea can be, in my opinion, one of the reasons for failure. It deprives the QAF program of authenticity by creating some kind of a new cult with quality people in the role of priests. It may also lead toward improper, or ineffective implementation that ends up being more harmful than beneficial.[38] Consequently, command and control, which as a process is, in fact, quite different from "management" and requires a different approach. In the general analysis I deduce that QAF should not merely be more or less mechanically adopted or processed TQM, but

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[37] Even newly published list of Program Action Teams that were nominated in AETC for Team Quality Award does not contain any example of pure military mission. The most often occurring are teams working in: civil engineering, communications, legal/medicine, maintenance, and personnel. Even the only one team, described as devoting to operations, turned out to be working on organizational and maintenance aspects of military operations in the flying wing.

[38] Although economic aspects of QAF were not a subject of my considerations, it is noteworthy that only comparison between the means spent on quality and gains provided by it would allow to assess the effectiveness of the quality implementation. Many critics believe the substantial portion of funds spent for quality could have been used more advisable, especially resources allocated for the popularization of QAF.

should be expanded by adding specific methods more oriented toward "total quality command" as well.

As a general conclusion it can be said that QAF's failure to make the proper adjustments to specific conditions or environments is the main reason limiting TQM implementation. It less not without good reason that President Clinton recommended that "appropriate adaptation" is necessary for making Total Quality Management effective in government. The validity of the argument is even stronger for the military establishment since no other governmental organization is like the military establishment.

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