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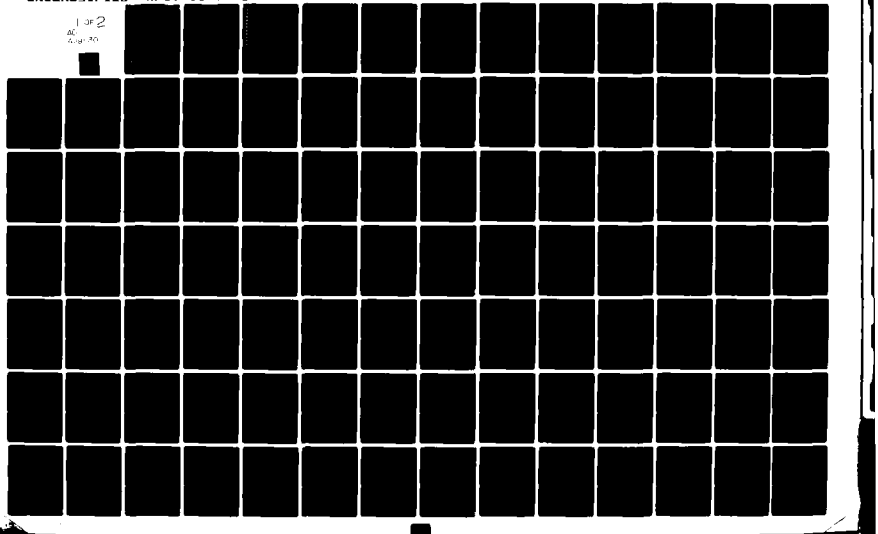

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Abstract

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ANALYSIS OF THE 323rd FLYING TRAINING WING USING ORGANIZATIONAL DEVELOPMENT AND THE ACTION RESEARCH MODEL: A COMMUNICATIONS AUDIT

by

Lloyd W. Patterson

Statement of Problem: Organizational Development techniques were used to find and correct problems within the 323rd Field Maintenance Squadron at Mather Air Force Base, California. The questionnaire developed for the study was left in the wing for use by the rest of the squadrons in the wing. The data obtained was fed back to a representative group of the organization who made recommendations for improvement to the unit commander. The commander implemented changes based on the suggestions of the feedback group.

Sources of Data: Respondents to the questionnaire included 206 of the 273 members of the 323rd Field Maintenance Squadron. They included civilian employees, enlisted Air Force members, and officers. This sample was an attempt for a census survey.

Conclusions Reached: This study presents evidence that a servicewide organizational development program could be beneficial to the Air Force. To date, the Army is the only armed service with a servicewide organizational development program. The Navy does employ some civilian organizational development consultants. The Air Force could slightly modify its Organizational Climate Survey program, and create a servicewide program with very little increase in cost. The Air Force should therefore adopt organizational development techniques.

Committee Chair's Signature of Approval Albert C Kaun

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Name of Student: Lloyd W. Patterson

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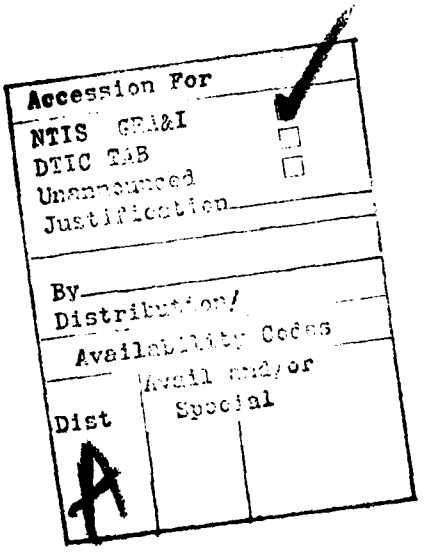

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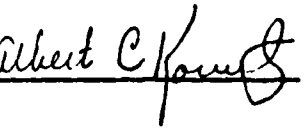
Committee Chair's Signature of Approval 

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Dr. Albert Kowitz spent many hours with me in preparation of the survey instrument, analysis of the data, and preparation for the feedback session. I deeply appreciate his devotion of time, energy, and expertise, without which this project would not have been possible. I would also like to acknowledge Dr. Raymond Koegel for suggesting the project; and Miss Dottie George for her indispensable copy editing; members of the 323rd FMS for their particpation in the survey and feedback session; the commanders of the 323rd FMS and the 323rd FTW, without whose approval this project could not have been done; members of my committee; and last but not least, my wife Sharon for her patience throughout the project and her helpfulness in completing the project on time.

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CHAPTER I

Introduction

This study is an application of the applied behavioral science technique called organizational development (OD) to the improvement of a military organization. Specifically, analyzed in depth was a unit of the 323rd Flying Training Wing, the host wing at Mather Air Force Base, California. The instrumentation and procedures were left behind in the organization with specific instructions for use throughout the wing at the discretion of the various squadron commanders.

The action research model, a method of survey research and feedback techniques, was used to find and correct problems within the 323rd Field Maintenance Squadron, a unit of the 323rd Flying Training Wing.

The definition of OD used was:

> "Organizational development is a long-range effort to improve an organization's problem solving and renewal processes, particularly through a more effective and collaborative management of organization culture--with special emphasis on the culture of formal work teams--with the assistance of a change agent, or catalyst, and the use of the theory and technology of applied behavorial science, including action research."[1]

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[1]Wendell L. French and Cecil H. Bell, Jr., Organizational Development, (New Jersey: Prentice-Hall, Inc., 1978), p. 14.

Action research is composed of the following basic steps: 1) diagnosis, 2) data gathering, 3) feedback to the client group, 4) action planning, and 5) action.[2]

Several basic models have been used in OD with some success. Examples of these are the managerial grid model, developed by Blake and Mouton, the contingency model, of which two were developed, one by Fiedler and the other by Vroom, and finally the action research model proposed by French and Bell. All three have a different emphasis.

The contingency model usually advocates some type of change in the organizational pattern.[3] The managerial grid involves a deeper intervention in the organization, and generally requires a long time. (three to five years) The action research model offers the advantage of being relatively quick, more flexible as far as depth is concerned, and can be tailored easily to the client and his budget.

Given the nature of fixed structure in military organizations, and the time constraints for this study, the action research model was chosen. The survey technique this model employs allows for a relatively quick return of the data, at less cost and manhour loss in the information gathering phase.

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[2]Ibid., p. 89.

[3]Virginia E. Schein and Larry E. Greiner, "Can Organization Development be Fine Tuned to Bureaucracies," Organizational Dynamics (Winter 1977):52.

Background

In reviewing organizational communications, two early pioneers appear in much of the literature, Fredrick Taylor, with his scientific management, and Henri Fayol. From their initial works in the early 1900s has grown much of the classical theory of management. The findings of the Hawthorne studies of the 1920s and 30s brought attention to the worker as well as the team.[4]

The role of managers and leaders was emphasized in organizations. When an organization had good leaders and managers, it was generally effective. Leadership style varied so much that it was difficult to accurately describe good leaders. It was also difficult to predict their effectiveness. Successful management stlye varied depending on the particular situation.

Later, emphasis shifted toward the individual with a trend toward human relations. It was recognized that when workers were happy and involved, production increased, sick time was cut, turnover dropped, and overall, the organization was more effective.

The structural approach to organizations and human

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[4]Stephen W. Littlejohn, Theories of Human Communication, (Ohio: Charles E. Merrill Publishing Company, 1978), pp. 291-296.

relations were brought together with the systems approach to organizations.[5] It was at last recognized that organizations were made of managers, leaders, and individuals, as well as the organization itself, or the structure, and the goals of the organization.

The process of making those things work together more effectively has become known as organizational development. The concept came about in the late 1950s and early 1960s, and by 1966 had become known as organizational development. By 1969, one consulting firm using OD listed among its subscribers some 45 of the nation's top 100 corporations.[6] Final recognition came in 1973 when Research in Education documents began listing the term, textbooks by that title were published, and the primary journal in the field began publishing.

The following are a few of the journals that have carried articles about OD: Harvard Business Review, American Psychologist, Organizational Behavior and Human Performance, Organizational Dynamics, Journal of Applied Behavioral Sciences, and Personnel Psychology.

The three with the greatest application are Organizational Behavior and Human Performance, which began in 1966, Organizational Dynamics, which began in 1973, and the Jour-

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[5]Ibid., p. 303.

[6]George Strauss, "Organizational Development: Credits and Debits," Organizational Dynamics (Spring 1973):2.

nal of Applied Behavioral Sciences, which pioneered the first articles on the subject of OD.

Two major input branches make up the OD movement. The first is the survey and research methods, developed to get one-time instantaneous data, or a "still picture" of an organization's status at any given time. The second is the applied science of laboratory training in organizations.

The survey and research feedback methods began in 1945 at the Massachusetts Institute of Technology under Kurt Lewin, and later moved to the University of Michigan. Its proponents included, among others, Ronald Lippitt and Douglas McGregor. Field theory of social psychology and applied behavioral sciences were key inputs in its development.

In addition to those three names, the laboratory training branch of the OD movement included the names of Shepard, Blake, and Mouton. It was begun about the same time as the survey branch and initially included the T-group process, which dealt with sensitivity training. Later this idea was given less emphasis and was credited with advancement of OD. The development of the managerial grid, a long-range OD tool, and the team development concepts were important contributions of Blake and Mouton.[7]

Important writers including Argyris, Bennis, Bass, and Shepard contributed articles to the "Landmarks" edition of the April 1967 Journal of Applied Behavioral Sciences,

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[7]French and Bell, Organizational Development, p. 22.

which brought OD into a prominent focus.

One of the things this issue emphasized was feedback. Human organizations are open systems, dependent on feedback for survival. Rubin and Goldman,[8] and Nadler, Mirvis, and Cammann[9] stress the importance of feedback to managers.

To what extent, and exactly how this feedback can be used, is dependent on the type of organizational structure that exists. For example, a vertically structured organization is not conducive to upward information flow. Cummings and Berger,[10] and James and Jones,[11] point this out.

Although some writers argued that bureaucracies were antipathetical to human development, there are some possibilities for OD use in bureaucracies. Although earlier OD operations stressed changing organizational structure, Schein and Greiner contend that in bureaucracies, such as the military, the existing structure is probably the most efficient. They also point out that benefits can still be

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[8]Irwin M. Rubin and Max Goldman, "An Open System Model of Leadership Performance," Organizational Behavior and Human Performance 3(1968):143.

[9]David A. Nadler, Philip H. Mirvis, and Cortland T. Cammann, "The Ongoing Feedback System: Experimenting with a New Managerial Tool," Organizational Dynamics (Spring 1976): 63.

[10]L. L. Cummings and Chris J. Berger, "Organizational Structure: How Does It Influence Attitudes and Performance," Organizational Dynamics (Autumn 1976):35.

[11]Lawrence R. James and Allan P. Jones, "Organizational Structure: A Review of Structural Dimentions and Their Conceptual Relationship with Individual Attitudes and Behavior," Organizational Behavior and Human Performance 16(1976): 75.

derived from the application of OD.[12]

Even with some evidence that OD applies to organizations structured like the military, our armed services have been slow to adopt the process. They have done so independently and to varying degrees.[13]

The Army was perhaps the first of the services to anticipate benefits from a servicewide OD program. In 1977 the Army instituted an optional low key OD program with its Organizational Effectiveness program.[14] This program makes widespread use of consultants at the individual unit level. Some applications have been very successful. For example, the Army's First Battalion achieved a drop in absent without leave rate from 15 a month to only six. Sick call rate was reduced 40% in three months, and the unit experienced a steady decline in official complaints from members.[15] Final evaluation of the Army's OD program has not yet been completed, however.

The Navy is one service where the widespread use of OD might have emerged. However, despite numerous studies

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[12]Schein and Greiner, "Can Organizational Development be Fine Tuned to Bureaucracies?", p. 49.

[13]Michael F. Padilla, "An Organizational Communications Audit and Empirical Action Research Study of a National Guard Unit," (Master's Thesis, California State University, Sacramento, 1978), P. 5.

[14]Army Regulation 600-76,(Washington, D.C.: Headquarters, Department of the Army, 8 November, 1977) para. 1-1.

[15]Colonel Heath Twichell Jr., "And a Civilian Management Technique Helped First Battalion," Army, (September 1977):25.

on leadership and management funded by the Office of Naval Research, there is still not a servicewide OD program, although the Navy does employ some 300 OD consultants.[16]

While the Air Force does not have a servicewide OD program, it is leaning in that direction with its Organizational Climate Survey program. This program uses a 128 item attitude questionnaire to measure the climate in any Air Force orgaization that requests it. The questionnaire is reproduced locally, and the answer sheets are sent to the Air Force Personnel Center at Randolph Air Force Base, Texas. There the scores are sent back to the requesting unit for whatever action it wants to take. The significant thing missing in this program is a consultant or change agent to oversee the administration of questionnaires and the interpretation and feedback of the data. Also, the same questionnaire is used by the entire Air Force, or at least that portion of it that elects to use the survey. As such it is not tailored to the using unit. Instructions for the use of the survey are included in a book called the Climate Survey User's Guide. This book can be found on every Air Force Base in the Consolidated Base Personnel Office.

According to the captain I contacted by telephone at Randolph AFB, the program has existed since 1977, and has experienced a 56-60% return rate on questionnaires. He said they normally process data for about two units a week

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[16]French and Bell, Organizational Development, p. 25.

using computer scoring by two shifts of personnel a day. Any reuse of the program is at the discretion of the individual commanders, and Randolph does not get involved in what, if anything, is done with the information that is given back to the unit.

While this program falls short of organizational development as such, it does provide a framework on which a true OD program can be built.

Much of the information learned in OD programs belongs to consulting firms. Much of it is constrained by agreements with the clients, and as such, most of it is not published. What is published is usually in summary form, giving figures for example, on increased production or a drop in absenteeism.

Of the information available on military OD studies, one closely resembles my study. Michael F. Padilla's study of a California National Guard unit gave further evidence to support the idea that OD could be successfully applied to the military structure.[17] Although this study by Padilla uses a somewhat smaller scale than mine, it is similar in enough respects to warrant comparison. He administered 25 questionnaires to a random sample of the unit. An action program was implemented based on the finding of the first survey. Finally, a second survey was given to determine the effect of the action program. Several areas of improvement

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[17]Padilla, "An Organizational Communications Audit and Empirical Action Research Study of a National Guard Unit.", p. 24.

were noted.

There are some criticisms of OD. Even OD's strongest advocates give examples and reasons for OD failure, and claim it should not be seen as a cureall. Strauss cites some reasons for failure:

1) Using hard-sell techniques; raising false expectations.
2) Not getting support from top management.
3) Not letting the client "own" the process.
4) Improper use of feedback.
5) Failing to carry over from laboratory to organization with T-groups.
6) Using the wrong depth of intervention.
7) Not letting the client choose the problems to solve.
8) Treating OD as something done to the organization, rather than the process done by the organization.[18]

Awareness of those potential problems enables one to be more careful in designing his or her OD program.

Summary

The increased use of OD by consultants has found the practice used in places and situations never before tried. If this increase is due to the number of successful applications of OD, one might logically conclude that the process has a wider application than the more traditional uses of OD would imply.[19]

It was this logical extention of current OD usage that led me to apply OD in this study. The first chapter

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[18] Strauss, "Organizational Development: Credits and Debits.", p. 13-19.

[19] C. Alderfer, "Organization Development," Annual Review of Psychology 28(1977)197-223.

has been a discussion of the rise of OD to a position of prominence. Chapter two describes in detail the procedures, instrumentation, and administering of the survey questionnaire, as well as the feedback of the data. Chapter three compares this study to the Air Force's Organizational Climate Survey. Chapter four examines the results and findings of this study. Chapter five discusses recommendations and gives a summary of the study.

CHAPTER II

Procedures

The first problem I faced in this project was the selection of the organization with which to work. Since I am a career Air Force officer with almost 17 years of military and paramilitary service, I chose a unit at nearby Mather Air Force Base. This allowed the Air Force to benefit from the project, and at the same time allowed me to work in an area that has not received much attention: OD use in the United States Air Force.

Having selected the installation, I had narrowed my choice to about 5,000 people in the two wings at Mather. I now had to choose between the 323rd Flying Training Wing, which is the host wing at Mather, and the Strategic Air Command's 320th Bombardment Wing, a tenant unit. Since the 323rd is the host wing, and includes many functions not found in a tenant wing, I selected them for the study.

Having now made the choice of wings, I was faced with selecting the best method to institute an organizational development program. The first step was to obtain the permission of the wing commander to do the project in his wing. After a brief discussion, he gave me his consent.

With approximately 2,500 people in the wing to work with, it was apparent that I would need to work with some sort of

sampling technique in order to complete the project in the allotted time.

Following this line of reasoning, one possibility was to randomly sample the entire wing. Another possibility was to intensively study a smaller section of the wing. I elected the latter because I felt the data I got would be more valid and I could develop a process that each individual squadron of that wing could use, thus benefiting the entire wing, and yet allowing timely completion of the project.

The final unit selection was based on finding a squadron with potential problems with which to work, and yet not be overwhelming for my first intervention effort.

The 323rd Field Maintenance Squadron seemed to fit this category nicely. The structure of the squadron was vertical with a large span of control, i.e., many layers from top to bottom. See appendix E. This structure facilitated communications failures. Additional information I was able to gather on the organization showed there were some discipline problems. In the past year, the number of non-judicial punishments administered in the squadron had tripled from five to 15.

Having selected the unit with which to work, I approached the squadron commander with my idea for the project. His immediate concern was for the ownership of the data I was to gather. He wanted to solve his own problems in-house and not necessarily let the world, and particularly

his commander, see all his "dirty laundry."

Since all this was before the fact, and neither of us could forsee what we would find, his concern was understandable. Beyond use of the data in my project, I assured him the data would belong to the organization to keep or release as they saw fit. With this initial concern taken care of, he saw many advantages to the project, and readily agreed to allow me to do it.

We had now reached a stage important to an effective OD process: the contract between the agent and the client. This agreement would be specific as to how and what kind of data would be collected, how much time would be taken away from the organization's primary job, who would be responsible for what, and what would be done once the data had been gathered and problems had been uncovered.

Equally important would be the things the organization was doing right, and exactly how this information would be fed back to the organization. The better these things could be worked out in advance, the less the chance there would be for any later misunderstanding, which might adversely affect the project. I was careful to insure we both understood the terms of the contract. I felt the option of a written contract was not warranted in this case for two reasons. First, I was not being paid for my services, and second, the short-range nature of the project would preclude us forgetting the terms of the the contract.

Our verbal agreement called for me to design a ques-

tionnaire to be administered to as near to 100% of the 323rd Field Maintenance Squadron's personnel as possible. I would be responsible for reproduction and administration of the questionnaire. To keep to a minimum the amount of of time lost to the project, I agreed to a length of no more than 50 questions and half an hour for administration of the questionnaire. I also agreed to go to each of the many sections to administer the instrument. This would save the time it would take for each person to go to and from a central point to complete the questionnaire.

Once the questionnaire had been administered, I had three weeks for processing the data and preparing for the feedback meeting. A tentative date was set for the meeting with the understanding it could be changed if necessary with a minimum of three days notice. The group to receive feedback was to be made up of a cross section of the organization to include one top level manager, three middle level managers, and six lower level workers. This group representation would roughly approximate the size of these groups found in the organization. In addition, women, civilians, and minorities would be represented in approximate proportions to unit populations.

The feedback meeting was to be four hours long. The findings would be fed back to the entire group first, then the group would split into three groups to discuss the problems specific to their group: upper management, middle management, or line worker. Once the groups had reached a

consensus of opinion on what they thought should be done to alleviate problems, the entire group would meet once again and go over all the suggestions together. When the ideas were finalized, they would be presented as recommendations to the squadron commander. He would evaluate the suggestions and base his decisions on the information he received from the feedback group. He was not bound, however, to act on the findings.

This left him in a position where he did not feel dictated to. On the other hand, if he saw the information as valid, as the people in the feedback group did, and he did not act on it, he would lose credibility. By his even consenting to the project, I felt he would try to implement as many of the recommendations as possible, or at least use them for guidance in whatever solution he chose.

With the contract complete, I was now ready to get on with the process of designing the instrument to use for the study. The squadron commander had several specific questions he wanted answered, which I agreed to include in the survey. The rest of the inputs were up to me.

Instrument

I carefully weighed my decision on what instrument to use. The low budget I had to work with and the number of people whose attitudes I wished to measure, would lead me to select a questionnaire as the most feasible, and yet allow for useful data to be gathered. It could be administered in a relatively short time compared to interviewing, and

would be easy to computerize with minimum hand grading.

Since a good Air Force oriented attitude survey questionnaire did not exist, I constructed my own rather than extensively modify an existing one. That way I could tailor the questionnaire specifically to the organization I was working with.

After careful consideration, I chose a five-point Likert-type scale. A statement would be made, and the respondent would choose his or her answer from a list, depending on their reaction to the statement. Answers were: strongly disagree, disagree, uncertain, agree, or strongly agree. I was able to use this type of question on all but one of my desired questions.

With the exception of the first three questions, which were for civilians only, and the last question, which was the only non-Likert-type question, the questions were presented in random order. In addition to the Likert-type questions, there was a written response space provided on the answer sheet for areas in which the respondent felt the organization did extremely well, or needed improvement in. This section was used for respondents to explain the multiple choice answers more fully and to elaborate on problems they saw.

Following Rensis Likert's advice on asking for more information than I thought I would use, I developed a separate section for completion of demographic

data.[1]

For additional information, I grouped questions together. I developed 18 specific areas that I wanted to examine. These areas are: coordination, equipment, manning, coworkers, job assignment, discipline, fairness, support, rewards, decision making, training, job performance, information flow, policy, supervision, responsibility level, commitment, and civilian information flow.

In deciding what questions to ask, I drew on the perceptions of the squadron commander, the maintenance supervision complex(the next step down the chain of command), and the impressions I got from visiting several of the shops with one of the branch chiefs. I also drew on my knowledge of the Air Force, including the two years I spent as an enlisted maintenance man. Army Regulation 600-76 and an interim report on work environment questionnaires provided additional information.[2]

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[1]Gary M. Maranall, ed., Scaling: A Sourcebook for Behavioral Scientists, (Chicago: Aldine Publishing Co.), pp. 233-243. Chapter 19 which I am quoting from was written by Rensis Likert. In addition to his comments in this book, there are many others by noted authors in the field, including a comparison of the Likert-type scale to the Thurston method. Likert's scale proved to be much easier to use, and proved to be just as reliable as the more difficult Thurston method. This book was an excellent source, and was instrumental in my choice of the Likert-type scale.

[2]Lyle M. Spencer Jr., George O. Klemp Jr., and Bernard C. Cullen, Work Environment Questionnaires and Army Unit Effectiveness and Satisfaction Measures (Boston: McBer and Company, [1977]), pp. 2-105. This work also contains one of the best and most extensive bibliographies or attitude measures I have seen.

Once the instrument was complete and checked, I tested it on five military personnel at the base information office. From this test I determined that some questions needed to be reworded to avoid confusion, and that I should change the wording of several sentences to negative wording if I wanted to achieve an overall average exactly in the middle. This would help reduce any bias from seeing the instrument as either a positive or a negative factor. Thus, the respondent would approach the next question each time with an equal expectancy of either agreeing or disagreeing with what I had to say, and not blindly agreeing all the way down the line. (Actual mean was 3.11).

Once these changes had been made, I reproduced 25 copies of the five-page questionnaire, and 300 copies of the one-page answer sheet. I was ready to administer by the last Monday in March as my contract called for.

I had asked I be introduced at a commander's call[3], but the squadron commander declined. He did agree to mention my program to the members of the squadron, however.

Administering

I administered the survey to 206 members of the 323rd Field Maintenance Squadron over a period of two weeks. This represented slightly more than 75% of the squadron's 273 members. The members I missed were out of the work center,

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[3]Commander's call is an information sharing meeting between a commander and his unit held anywhere from one to three month intervals.

on leave or on temporary duty to another location when I administered the survey. Of the 208 people I offered the survey to, only two declined to participate. One of those had only a few days left in the squadron, and did not have time to take it.

I attribute this high rate of acceptance to the way I presented the material in my briefing, and the true desire of the members to have some input to the decisions that were made by management. From the large number of those who responded with duty section and other demographic material, it was apparent that they believed my statement about their individual data remaining anonymous, reported only in the form of summarized data.

My survey appeared to be well received and squadron members seemed open and responsive with me. Many volunteered additional information and facts that I found useful in interpreting the data I received. I visited many of the work centers several times to catch different shifts and give members who were out on a job an opportunity to participate.

The amount of time it took to administer the survey was greater than anticipated. Also, the squadron members did not know I was coming. The word had not been received at commander's call. This necessitated slightly longer briefings. In addition, survey groups were small, and several visits to each area were required. By visiting each individual work center, however, I obtained firsthand information about attitudes and working conditions. It would

help me to understand responses to the questions and to prepare a more useful presentation for the feedback meeting.

Squadron members and supervisors were extremely helpful in getting me to the flightline areas when I needed transportation, and helping me arrange to administer my survey in some of the busier shops. Many people saw the survey as useful. On the other hand, I was careful not to raise false hopes about what would be done with the information. Many were willing to participate just to help me complete my project, but a vast majority saw real advantages to the process. I tried to prepare the feedback for the unit as rapidly as possible. The feedback meeting was delayed one day beyond the planned date at the request of the squadron.

Feedback

The feedback meeting began at 8 a.m. on the April 19, 1979. With one exception the group was representative of the organization. Due to supervisory error, no civilian employees were present. To compensate for this oversight, I fed the results back to the civilian branch cheif right after the meeting was over, and asked for his opinions before preparing the list of recommendations for the commander.

The people detailed for the meeting did not know what it was all about. After I explained it to them, some were relieved that it was not some kind of punishment. Once the ground rules for the meeting were established, I began

to feed back the data I had obtained. This took approximately one hour. For the remainder of the meeting, the group members were quite involved in the process. At one point, I said "Let's take a break." The groups who were meeting elected to stay in the conference room and continue to work on the problems rather than take a break.

The group perceived the data as accurate, and each group readily took responsibility for those areas attributed to there work group.

The individual groups worked on three to four items of the selected problems found in the squadron. In several instances, I assigned the same item to more than one group if it affected them. In the final period, these areas were consolidated. In addition to the answers the individual groups came up with, the entire group reviewed each area. Some additional suggestions were made, and a consensus of opinion reached. The actual time for the planned four-hour session was three and a half hours. When the meeting was over, I asked what everyone thought of it. One member said, "It is kind of nice to have somebody ask me for a change what I think." Most members were willing to reserve judgment until they saw which if any of their suggestions would be implemented. All I could tell them was that if the commander saw the data as being accurate, he would probably want to take action.

Significant in their concern was the fact that the former squadron commander had been suddenly returned to flying duty and a new commander was taking over. I pointed out

that the timing could not be better for either of us. First, the data would provide a new commander with a good profile of his new organization, especially problem areas and areas of excellence. This would preclude him changing good things instead of bad ones. On the other hand, he could not possibly be held responsible for any of the problems we found, only for not fixing them now that he had been made aware of them.

Having already given the data to the former squadron commander before the feedback meeting, I was now faced with asking the new squadron commander to accept my data and recommendations without a contract existing between us. I found that he welcomed the information. In a two-hour meeting between the two of us, I covered all of my data and the recommendations of the feedback group.

The effect was immediate and encouraging. One positive feedback item was the squadron members appreciated the orderly room reminding each person of appointments. This practice had prevented many people from missing them. Earlier that day the squadron commander had decided to end the practice as a waste of time to the person who spent nearly two hours a day on the phone doing that task. As a result of the feedback, he indicated to me that he would immediately reverse his decision and continue the practice. On some of the other ideas he took them as they were suggested. Other items he expanded on suggested ideas and came up with solutions which were even more pleasing to the squadron.

This completed the feedback phase. The new squadron commander expressed a desire to use the instrument again at a future time. I suggested about six months as ideal, and agreed to make it available to him in a modified and improved form.

CHAPTER III

Air Force Organizational Climate Survey Comparison

I became aware of the existence of the Air Force Organizational Climate Survey(OCS) at the very end of my project when I was discussing the feedback with the new squadron commander. He indicated that he had ordered the OCS for his former squadron, but had not administered it due to resistance from the local civilian union.

I contacted the project officer in his former squadron and got a copy of the survey and the User's Guide, and talked with the center at Randolph AFB, Texas where the instrument was developed.

Had I known in advance that the OCS existed, I may have tried to modify it for my purposes. After the fact, however, it is interesting and worthwhile to draw on the differences and similarities between my instrument and the OCS. Keeping in mind that the two instruments were developed separately in different locations; the similarities are striking.

The Air Force, which obviosly had a larger budget and a larger manpower resource to draw on, came up with a seven-point Likert-type scale for their measurement. Their scale included the additional choices of "slightly agree"

and "slightly disagree." This gave me further confidence in my choice of instruments. Of the 20 areas they chose to measure, many were exactly the same as those I selected. Many others were nearly the same but labeled differently. They did choose to measure several areas of Air Forcewide concern that I had no interest in due to their enduring and unchangeable nature. Their areas of measurement are: achievement, assignment locality, commitment, communication, concern for individual, confidence in management, contribution/participation, group cohesion/worker relations, identification, independence, interest, organizational effectiveness, pay & benefits/economic security, personal growth & development, promotional opportunities, recognition, responsibility, supervision, utilization, and working conditions.[1]

Although the OCS is similar in most ways to my instrument, there are differences. The OCS uses more than twice the number of questions, with two additional responses per question. In addition, the use of the computer optical scan sheet for answers makes the time to complete the OCS much longer. There are also additional chances that errors will be made by marking the wrong space of the nine side-by-side answer spaces. Also, any stray marks or bent paper may cause a sheet to not be scored properly, if at all. By not scanning and key punching the data obvious errors can pass unnoticed. For instance, I found one place where a staff

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[1]Department of the Air Force, "Organizational Climate Survey User's Guide.", p. III-12

sergeant listed his time in service as 43 years. I scored his answer as no response since I know that the Air Force does not have any 43-year staff sergeants. In all probability a computer would not have caught this error.

The OCS also provides space for the squadron commander to include up to ten of his own questions on the survey, but the red tape involved makes it prohibitive. The questions must be sent back to Randolph for approval first, and must conform to the rest of the survey format. Since Randolph does its business by mail, there is the additional chance that the answer sheets may be lost or damaged in shipment, and nullify the entire program after all the work has been done at the unit level.

A squadron that does not have a member familiar with computers and statistics cannot use the program since no change agent or consultant is provided with the program. The data is fed back in a form that requires knowledge of computers and statistics to understand it.[2] Some units are precluded from using it since they have no such qualified member. If a change agent was provided as part of the deal, everyone could use it.

The major differences then between the OCS and my instrument are in the answer sheet, length, number of responses, and change agent. (The level of response, my 75% compared to their 56-60%, could be due to these other fac-

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[2]Ibid., p. II-3

tors, especially the length and change agent.) Since the higher the percentage of population sampled, the more reliable the sample, mine should be more reliable than theirs.

Validity

Since this is the first use of my instrument, I will not be able to report any test-retest reliability. There are several things, however, that indicate the validity of my survey instrument.

With regard to content validity, the fact that I asked more than one question in most areas would help keep me from measuring something other than what I was trying to measure. The factor analysis of items to insure they correlated more with each other than other items in the survey also helps.[3]

Construct validity can be addressed based on confirmation of certain hypothesis used in constructing the instrument. For example, I predicted that the vertical structure of the organization may cause some information flow problems. Actually, information flow turned out to be the number one problem area. The fact that the OCS uses a similar area called communications lends further support to the significance of measuring that particular variable.

Perhaps the best measures available for comparison of

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[3]Gene F. Summers, ed., Attitude Measurement (Chicago: Rand McNally & Company, 1970), p. 92-93.

findings of my instrument is the recorded tangible factors available outside of the instrument. For instance, ten times as many respondents(70) listed mission accomplishment as the one thing the unit did well compared to the next closest item. Not so strange then that the 323rd Field Maintenance Squadron received an award during the study for best maintenance squadron in Air Training Command for 1978. As further evidence of their performance, the wing commander was notified that he had been promoted from colonel to brigadier general.

An earlier increase in the number of non-judicial punishments seemed to go along with the fact that discipline and rewards were seen as problem areas by the respondents on the survey. The finding that most people did not know exactly what would happen to them if they violated a rule may also have had something to do with this statistic.

The problems I mentioned earlier about the study not being mentioned at commander's call, the fact that no civilian employees were present for the feedback meeting, and the fact that most people at the meeting did not know why they were there, tends to lend credibility to my finding that information flow in the organization was a problem.

All these things lead me to believe that my instrument is valid. The fact that the Air Force's OCS so closely resembles my instrument is further evidence. Also, see validity coefficients table on page 30.

Reliability Coefficients

FACTOR	ITEMS	ALPHA
Coordination	26,35,47	.71
Equipment	30,40	.74
Manning	11,15	.41
Coworkers	37,42	.30
Job Assignment	16	*
Discipline	36,38	.45
Fairness	6,7,38	.66
Support	13,41,42	.75
Rewards	18,27	.68
Decision Making	20,24,32,34	.81
Training	5,10,14	.60
Job Performance	9,10	.52
Information, Informal	4	*
Information, Formal	17	*
Supervision	13,20,32,36,41	.90
Responsibility	8	*
Commitment	46,48	.38
Policy	21,38,44	.40
Civilian Information	2	*

* cannot compute for single question areas

CHAPTER IV

Results

As soon as my data was on the computer, I requested a listing of the first 48 questions using the Likert-type five-point scale by response frequency and percentage. On a positively worded question, a response of agree or strongly agree(coded four and five respectively) was considered a positive response. On a negatively worded question, a one or a two response was considered favorable.

I then computed what is called the percent favorable response.[1] This was done by dividing the total number of positive responses to a question by the number of valid cases, or total number of people who responded to that question. This gave me the percentage of people who responded with a positive answer to that question.

Using the percentage of 70% and above to indicate exceptionally good areas, and 30% and below to indicate definite problem areas, I could find the areas of interest on individual questions. With this criteria, 15 questions came out exceptionally good, and only one question came out as

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[1] U.S. Depatment of Labor, "Management Audit Survey: Handbook for Supervisors.",(1974).

PERCENT FAVORABLE RESPONSE

ITEM	HIGH	MED	LOW	MEAN
1		68.4		3.8
2		44.4		2.9
3	70.8			3.7
4			20.5	2.4
5		66.8		3.5
6		61.1		3.4
7		64.8		3.4
8		62.9		2.6
9	90.2			4.4
10	82.9			4.1
11		65.5		2.5
12		50.0		3.4
13		55.6		3.4
14		52.1		3.3
15	86.7			2.0
16	76.2			2.1
17		40.9		2.9
18		49.5		3.1
19		61.5		3.5
20		64.3		3.5
21	86.7			4.1
22	83.8			4.0
23	75.9			2.3
24		60.5		2.5
25	76.5			2.1
26		68.7		2.4
27		49.0		3.1
28		50.2		2.6
29		65.3		2.5
30		63.2		3.4
31		64.7		3.4
32		53.6		3.2
33		52.7		2.8
34		64.3		3.5
35		42.6		3.2
36	82.1			2.0
37	76.0			3.8
38		43.4		3.1
39		58.3		2.7
40		57.0		3.2
41	70.2			3.7
42	76.4			3.8
43	73.5			3.6
44	83.3			4.0
45		34.9		2.7
46		65.5		3.7
47		55.1		3.4
48		46.7		3.1

a definite problem area. Most questions fell into the middle category, which left room for interpretation. As a rule of thumb, I decided if the area was below 50% favorable response, it was worth looking at as a possible problem area. Nine more questions fell into this category. This information is listed in appendix D as negative factors. The questions with 70% favorable response and better are listed as positive factors. Included on these pages is information from question 50, which is a narrative question on things in which the organization does extremely well, and those areas where improvement is needed.

In addition to the information I was able to get from answers to individual questions, by planning ahead, I was able to group questions into prearranged areas to obtain additional information. When I originally wrote the questions, I grouped them into areas such as supervision, fairness, etc. When I obtained the results, I used factor analysis to insure that the groupings were still valid. Where a question did not fit the group, I dropped it from the category. The only remaining questions in each group correlated with one another. In some cases, new groupings were justified based on correlation of questions with a common element. Where this common element could be positively identified, a new category was established. The final list of categories and question numbers for each is located in appendix C.

By averaging the percent favorable response for each

question in a category, a percent favorable response for the area was determined. By using the 50% favorable response and below rule, I identified four possible problem areas: Information Flow, Discipline, Civilian Information, and Rewards. The areas of Job performance, Job Assignment, Coworkers, Manning, Policy, and Support, were identified as overall exceptional areas.(See feedback handout in appendix D.)

In order to gain further information, I asked for demographic information at the end of the answer sheet. For the purposes of this study, five age groups were used: 21 and under, 22-25, 26-30, 31-36, and 37 and over. Responses were also asked for sex(male or female), and marital status(married or unmarried). The race categories were Caucasian, Black, Mexican American/Spanish, Oriental/Asian, and Other.

Rank categories were made to separate military from civilian, and identify upper managers, middle managers, and line workers. Military personnel were divided into E-1 to E-4, E-5 to E-7, E-8 and E-9, and officers. Civilian groups were GS-1 to GS-5, GS-6 to GS-10, and GS-11 and above, WG-1 to WG-5, WG-6 to WG-10, and WG-11 and above. I considered E-1 to E-4, GS-1 to GS-5, and WG-1 to WG-5 to be line workers. The E-5 to E-7, GS-6 to GS-10, and WG-6 to WG-10 groups were considered middle managers. Finally, the top managers category included E-8, E-9, and officers; GS-11 and above; and WG-11 and above.

All responses to primary shift fell into day shift, swing shift, midnight shift, or other. (The only "other" group was five people who worked four days and one swing shift a week in the transient maintenance shop.) Two categories asked for on the answer sheet were not used in final data analysis. They were time in squadron and months of total service. The final category requested was the shop or section a person worked in. I placed this one last since it was potentially the most threatening information in conjunction with other information. Some sections only had one person working in them, others could have been identified by being the only female in that section, or the only minority member of that rank in the section. By placing that item last, I hoped that the person answering would have established the habit of answering the questions and not having found any other threatening thing in the entire survey, and knowing there would not be any other threatening questions asked, would choose to answer it based on the trust of change agent and the validity of the instrument. There were several errors noted where people responded with a time in section since the question followed two other time related questions. Even coding these as no response, over 70% of the respondents replied with which section they worked in, including the only one-man section in the organization. Several others who were the only person in that section on that shift responded for both section and shift. In no case

was there an attempt to attribute answers to any individual. All answers are grouped in summary form. Group sizes were kept at five or more wherever possible. One exception was on shop location, where a smaller section was checked to see if their section location made it easier or more difficult to get the job done. When section size made grouping of sections necessary, they were grouped with other sections in their major branch. Sections having more than five people in them were reported individually. See appendix F for section groupings.

Crosstabulation for the coordination area, which included questions 26, 35, and 47, resulted in a highly significant (.001) chi-square for rank, marital status, and age. Coordination was linear by rank groups. The higher the rank, the better the coordination. Married people coordinated better than unmarried. Coordination was also linear by age. The older a person was, the better he or she coordinated. There was no significant difference at the .05 level for race, sex, or section.

Crosstabulation for the equipment area, which included questions 30 and 40, showed a significant (.05) chi-square for section only. It was not significant for rank, race, sex, marital status, or age. The sections which had a mean of less than 3.0 were those which dealt with many parts and supplies. In talking with the people in the sections during the survey,

I was told the supply system for the T-43 aircraft, which was contracted, was outstanding. The T-37 section, which dealt with the military supply system, had more problems. Areas with below 3.0 average on equipment questions were fabrication section, electric shop, repair and reclamation, and inspection section.

Crosstabulation for manning, which included questions 11 and 15, resulted in a highly significant (.001) chi-square for section. It was not significant at the .05 level for rank, race, sex, marital status, or age. The sections which scored low on this area, which would indicate undermanning, were transient maintenance, egress, and non destructive inspections (NDI).

Crosstabulation for the coworkers area, which included questions 37 and 42, did not result in a significant (.05) chi-square for rank, race, sex, marital status, age, or section. This was an indicator of a good working atmosphere.

Crosstabulation for job assignment, question 16, did not result in a significant (.05) chi-square for rank, race, sex, marital status, age, or section.

Crosstabulation for discipline, which included questions 36 and 38, did not result in a significant (.05) chi-square for race, sex, marital status, or age. It was significant (.05) for rank, and highly significant (.001) for section. The higher the military

rank, the better the discipline appeared to be, while the highest civilian ranks scored lower than the other two civilian groups. Two sections stood out as having averages below 3.0 in this area. They were electric shop, and fabrication section.

Crosstabulation for fairness, which included questions 5, 7, and 38, did not result in a significant (.05) chi-square for race, sex, or shift. It was significant for rank, marital status, and age, and highly significant (.001) for section. The race and sex findings were very useful to know. For military rank, fairness appeared to increase with rank. For civilian employees, the lowest ranks saw themselves as treated most fairly, followed by the highest ranks, then the middle ranks. Married people saw themselves as treated more fairly than unmarried people. The age group of 22-25 saw themselves as treated the least fairly, and the 31-36 group saw themselves as treated most fairly. The other age groups were linear, with older groups treated more fairly. Three sections were below 3.0 average for the fairness questions: electric shop, T-43 flight, and engine shop.

Crosstabulation for support, which included questions 13, 41, and 42, did not result in a significant (.05) chi-square for race, sex, marital status, or age. It was significant for rank and highly significant (.001) for section. Military middle ranks received

the best support, followed by the highest ranks, and the the lower ranks. For civilians, the lowest ranks got the best support, followed by the highest ranks, then the middle ranks. Sections scoring below 3.0 were electric shop and T-43 flight.

Crosstabulation for rewards, which included questions 18 and 27, did not result in a significant (.05) chi-square for race or sex. It was highly significant (.001) for rank, and significant (.05) for marital status, age, and section. Military was linear with higher ranks believing rewards were better. Again the lowest ranked civilians felt rewards were best, followed by highest ranks and then middle ranks. Married people felt rewards were better than unmarrieds. The same age pattern repeated itself again, with 22-25 lowest and 31-36 highest, the remainder were linear. Sections scoring below 3.0 average on rewards were electric shop, T-43 flight, engine shop, repair and reclamation, and AGE (aerospace ground equipment).

Crosstabulation for decision making, which included questions 20, 32, and 34, did not result in a significant (.05) chi-square for race or sex. It was highly significant (.001) for rank, and significant (.05) for marital status, age, and section. Military ranks were linear with the highest ranks most involved in decision making. The highest ranking civilians made the most decisions, followed by the lowest ranks and finally

the middle ranks. Marrieds made more decisions than unmarrieds. Age followed the same pattern as before with the 22-25 age group at the bottom and 31-36 at the top. Sections below 3.0 on decision making were electric shop and T-43 flight.

Crosstabulation for training, which included questions 5, 10, and 14, did not result in a significant (.05) chi-square for rank, race, sex, or age. It was significant for marital status and section. Marrieds thought training was better than unmarrieds. Systems branch, (which includes electric shop), scored below 3.0 on training questions.

Crosstabulation for job performance, which included questions 9 and 10, did not result in a significant (.05) chi-square for rank, race, sex, age, or section. It was significant for marital status, with marrieds scoring higher than unmarrieds.

Crosstabulation for informal information flow, which included question 4, did not result in a significant (.05) chi-square for rank, race, sex, marital status, age, or section. In general it was scored low equally by all groups.

Crosstabulation for formal information did not result in a significant (.05) chi-square for race, sex, age or section. It was significant for rank and marital status. The highest ranks thought formal information was best, followed by middle ranks and finally the lowest

ranks. Marrieds thought formal information was better then unmarrieds did.

Crosstabulation for supervision, which included questions 13, 20, 32, 34, and 41, did not result in a significant (.05) chi-square for race or sex. It was significant for marital status and age, and highly significant (.001) for rank and section. The marrieds saw supervision as better than the unmarrieds. Again the 31-36 age group saw supervision as the best followed by 37 and over, 26-30, 21 and under, and 22-25. Military ranks were linear in their feelings about supervision, with the higher ranks seeing it as better. The higher ranking civilians saw it as best followed by the lowest ranks, then the middle ranks. Sections scoring below 3.0 were electric shop and T-43 flight.

Crosstabulation for responsibility, which included question 8, did not result in a significant (.05) chi-square for sex and marital status. It was significant for race and section, and highly significant (.001) for rank and age. Sections scoring above 3.0 were transient maintenance, electric shop, pneudraulics, and egress. In comparison with other groups, the Mexican American/ Spanish group felt they already had as much responsibility as they could hope to get. Military ranks were linear in how much responsibility they saw themselves as having, with higher ranks seeing themselves as having the most. The civilian ranks were just the

opposite with the lowest ranks seeing themselves with the most responsibility. The two lowest age categories were the lowest for responsibility, and were identical in their scores, followed by the 31-36 group, then the 26-30, and finally the 37 and over group.

Crosstabulation for commitment, which included questions 46 and 48, did not result in a significant (.05) chi-square for race, sex, age, or section. It was significant for rank, and highly significant (.001) for marital status. Military ranks' commitment increased linearly with rank. The civilian middle ranks had the most commitment, followed by the low ranks and finally, the high ranks. Marrieds were far more committed than unmarrieds.

Crosstabulation for policy, which included questions 21, 38, and 44, did not result in a significant (.05) chi-square for rank, race, sex, marital status, or age. It was significant for section, with electric shop the only one below a 3.0 average.

Crosstabulation for civilian information, which included question 2, did not result in a significant (.05) chi-square for rank, race, sex, marital status, age, or section. It was viewed as equally poor by all categories.

All these results were presented during the first hour of the feedback meeting with the organization. The problem areas to work on were divided among the

three groups with the top management working on information flow, civilian information, and internal communications. The middle management group worked on the areas of discipline, training, coordination, and internal communications. The line workers dealt with the areas of rewards, sports participation, and squadron functions. These areas included those found from percent favorable response comparisons and those found in question 50 responses.

When each group had developed its recommendations for each area, the entire group met again to finalize the list of recommendations. The list, which was presented to the new squadron commander is as follows: Information Flow--Weekly meeting should be held in all shops. Shop supervisors should get together with branch chiefs prior to daily shift briefings. This will improve the horizontal information flow by making everyone aware of problems and special situations. Downward flow can be improved by all supervisors realizing what a hindrance a tall vertical pyramid is, and attempting to pass information down without cutting too much of it out. Defining and redefining contacts for all supervisors will help. Finally, to avoid the "password-around-the-table" problem, (the last person repeats what he or she hears, and it is entirely different from what began with the first person), written communications should be used

wherever possible. This insures that th last man gets the same undistorted information that the first man received.

Discipline--Many people do not know exactly what will happen if they break a rule. Shop supervisors should establish a common policy on discipline and then make that policy known to all. A new person should be briefed on exactly what to expect from his or her supervisor. There should be room for discretion from the supervisor, however. The mixed atmosphere of military and civilian discipline is also a problem, particularly when there is a civilian supervisor over a military member. The difference in haircut and discipline regulations makes for friction. Military members also note that hair length and dress may not relate to job performance. Uniform Code of Military Justice briefings were noted as being inadequate in getting information out. Form 18s, record of individual counseling, were generally not viewed as effective. Some mention was made of more immediate punishment for infractions, such as four hours of extra duty the same day as opposed to weekend duty.

Civilian Information--It was generally agreed that this lack of sufficient information was due to policies of persons in the Civilian Personnel Office. Some felt this problem had bottomed out and would improve with the new civilian personnel officer. In general, civilians felt this information was slow, especially when

it concerned a reduction-in-force, etc.

Rewards--Letters of appreciation were generally viewed as the most rewarding thing to get. T-37 rides as rewards were seen as an effective incentive for personnel in shops other than just T-37 flight line, especially inspection section and engine shops. Time off was seen as an adequate reward where it did not happen frequently, such as the T-37 flight line. A day off to an overmanned shop with little work to do anyway, was not viewed as much of a reward. Personal involvement was also seen as a good reward. One example: a commander sent each person a form letter on their birthday saying, "Congratulations, you have a day off coming, work it out with your supervisor." This was seen as caring.

Sports participation--It was generally agreed that in sports participation, this squadron is the worst organization for participation and support most members had served in. They cited other squadrons as having support from almost every off-duty member, especially commanders, first sergeants, and supervisors. This organization is fortunatd to have three spectators at a squadron sports event. Favoritism on some teams in the past was cited. Perhaps when there are enough people interested, two or more teams could be formed so everyone can participate. Possible solutions include time off from overmanned shops for members to

participate in or watch practices and event. Even a few people to watch would help. Most events occur at times convenient for dayshift and impossible for swings. Perhaps changing shifts for interested participants or time off to participate will help.

Training--The only real training problem is that new arrivals sometimes do not get proper training before being put on the job, especially T-37 and AGE.

Internal Communications--Needs careful attention at all levels. The particular vertical structure of this organization makes for special problems. Introducing new supervisors at commander's call can help. Everyone must pass information on; again, writing it down will help a lot.

Coordination--In Job Control, no immediate answer is available to solve this problem. With Supply, it could be improved by better understanding the system. Supply classes have been reported as totally over people's heads, and using too much jargon without explanations. More in-depth classes are needed. The orderly room policy of reminding everyone of appointments is seen as excellent!

Squadron Functions--Seen as a good way to meet others and improve morale. Picnics and other special events can provide a great deal of fun. More are needed. Also, challenge games of volleyball, etc., between sections can improve relations and provide a means of meeting new people.

In a two-hour meeting with the new squadron commander, this information was presented in detail. He was very receptive to the information and the ideas. He indicated he was very grateful to have this picture of the organization as he was coming in. He said every commander should have such a luxury.

He indicated that every area that showed up as a problem area would receive attention. In some cases the suggested action was contrary to regulations, such as the suggestion about quicker punishment. In the case of providing more T-37 rides as rewards, it was not financially feasible; however, his alternate suggestion of flying them on a larger aircraft in a group, perhaps somewhere in the area of the Grand Canyon, will probably meet with their approval.

The new squadron commander has already taken action to reinstate the appointment reminder calls. He has also promised to provide feedback on the recommendations to all members of the squadron at commander's call. He also indicated that he planned to institute the birthday letter idea, and that sports participation and support should be helped by the fact that his new first sergeant was both an avid player and watcher of squadron sports.

My overall impression of his intent and ability to make good use of the information he had been given was very encouraging to me. His expressed desire to reuse

my survey also indicated his intention to seek and use additional feedback from members of his squadron. With the squadron commander listening so closely to their suggestions and inputs, squadron members will have more reason than ever to keep channels of communication open, and offer more suggestions to top management. This attitude should go a long way toward solving the problems of information flow and internal communications.

In my opinion, the high point of the study was the enthusiastic acceptance of the information by the squadron commander as valid data, and his desire to use that information. It made the many hours spent on the project worthwhile.

CHAPTER V

Summary

This study employed a survey and feedback technique as part of an organizational development program using the action research model to find and correct problems within the 323rd Field Maintenance Squadron, a unit of the 323rd Flying Training Wing. The squadron was first analyzed, then a questionnaire was developed and administered to the squadron members. The results were fed back to a group representing a cross section of the organization. This group made recommendations which were presented to the squadron commander. He initiated an action program based on the action plan and ideas of the feedback group, as well as his own knowledge and expertise.

The basic findings of the survey were that the organization was doing well in the areas of job performance, job assignment, relationships with coworkers, manning, policy, and support. They needed improvement in information flow, discipline, civilian information, and rewards.

The action planned by the squadron should improve all these areas except possibly civilian information, which was actually a responsibility of the civilian

personnel office and not under direct control of the squadron. In spite of this, there were indications that this problem may also improve.

In order to determine the effect of this action, the survey will be administered to the same squadron at a future date, and scores compared to determine whether improvements have been made in the problem areas. This will also provide information on the test-retest reliability of the instrument.

Recommendations

Some of the questions did not fit into one of my categories, some were specificly requested by the squadron commander. Some of these did not provide useful information, and some provided information on which no action could be taken. These questions, 1, 2, 3, 12, 19, 23, 25, 28, 29, 33, 39, 45, and 49, should therefore be dropped from future use of the survey. Of the questions retained that did not fall into a category, three did provide useful information. Number 22 provides useful information on problem solving, number 31 on shift information, and 43 on shop location, and therefore should be retained in their own category. Civilian information was dropped as a category because there would be no control over the situation once the data was gathered. That makes the new total number of areas equal to 20.

With this reduction in the size of the questionnaire, there is plenty of room for additional questions by the squadron commander using the instrument. He can check on any areas of particular interest to him that are not covered by the survey questions.

The answer sheet should be changed to delete the responses for the demographic questions on time in squadron and months of total service. I did not use this data, and these items caused confusion on the section response. Of course, the extra questions will also be deleted as indicated. Even with demographic responses counted as questions, the number would now stand at 44. Since it took a maximum of 15 minutes to complete before, it should now be about 10 minutes long. This is important to any potential user as it will keep the required time down to a very reasonable figure. The expected benefits should far outweigh the time spent in taking the survey. The response should also be greater considering the amount of time and effort being asked of someone who is asked to complete the questionnaire.

The questionnaire should be administered at the work centers as before to insure the same high rate of return and low loss of time to individuals taking the survey. In view of the positive results of the first survey, squadron members should be more interested than before since they now know they will be listened to, where before there was no guarantee their ideas would be heard

or acted on.

Since data processing at the base level is very difficult to arrange, I recommend that the next time my survey is used, the results be sent to AFMPC/MPCYPS, Randolph AFB, Texas, for processing. First of all, they have the computer program already written and operational. Secondly, when they see the data produced by my survey, they may wish to incorporate some parts of my survey into theirs. Finally, AFMPC/MPCYPS is probably the place that will ultimately be responsible for the OD program should the Air Force elect to adopt one.

I further recommend, based on the results of this study, that the Air Force modify the Organizational Climate Survey program to include a change agent or consultant at each base. This would preclude each organization from having to have a man well versed in statistics in order to use the survey. While each squadron may not have such a person, each base certainly will. In addition, this person will be someone from outside the organization to provide an unbiased view on the data. This is also more economical than having an individual change agent with each organization in the Air Force. The change agent is one reason I feel my 75% response rate as opposed to the Air Force experience of 56-60% occurred.

The other reason for this response rate is the shorter length of my survey instrument. With the

Air Force survey over twice as long as the one I used, this could well be a factor. The Air Force should have a large enough data base to know things in career questions that will not change rapidly over time. These items could well be dropped to make a shorter, but equally as meaningful survey. The added response rate will increase the reliability of the data due to the larger percentage of the population being sampled.

Some combination of my instrument and the OCS would probably be the best system to use. When Randolph gets the data from the second use of my survey, they can make a decison based on that information.

Each base already has a survey section in its consolidated base personnel office. With very little additional training, one of its staff members could attain the expertise required to act as a change agent for that base. This training would be a small price to pay for the gain in effectiveness of the OCS program.

What is done with the data is probably the most crucial step in an OD program. This is where the aid of a change agent would be most beneficial. If the survey instrument was outstanding, the response was good, the data was meaningful, and the results presented back in a timely manner, it would all be for nothing if it was not acted upon.

My only other recommendation for improvement of the OCS concerns publicity for the program. It is

currently publicized through major commands and to the individual base directors of personnel. The base director then informs squadron and wing commanders any way he chooses.

With wider dissemination of the fact that the program exists, and the assurance that someone will be there to explain it to them, they will probably use it more. As it stands, the squadron commander wishing to use the program contacts Randolph AFB, is sent one copy of the questionnaire, a user's guide, and some answer sheets.. He is then on his own to implement the program.

This study indicates to me that the Air Force could benefit from a servicewide OD program. Furthermore, the changes required to implement it would be minimal.

APPENDIX A

Air Force Organizational

Climate Survey Factors

by Item

Factor	Item
Achievement	3,16,27,59.
Assignment Locality	8,24,61,80,93.
Commitment	4,44,65,67,81.
Communication	2,29,45,78,83.
Concern for Individual	13,31,48,69.
Confidence in Management	11,32,37,53.
Contribution/Participation	15,26,30,34,46.
Group Cohesion/Worker Relations	5,17,35,47,73.
Identification	9,36,50,73.
Independence	18,40,64,76.
Interest	19,39,60,70,86.
Organizational Effectiveness	20,41,56,82,92.
Pay & Benefits, Economic Security	7,25,51,85.
Personal Growth & Development	21,52,62,70,75,77.
Promotion Opportunities	10,33,52,68,89.
Recognition	38,63,87,91.
Responsibility	6,28,49,57.
Supervision	1,14,23,42,55,66,71,79,88.
Utilization	22,43,58,74,90.
Working Conditions	12,54,72,84.

Taken from page III-12 of the Organizational Climate User's Guide.

APPENDIX B

Air Force Organiztional Climate Survey

GENERAL INSTRUCTIONS

1. All statements may be answered by filling in appropriate spaces on the answer sheet. If you do not find the exact answer that reflects your opinion, use the one that is closest to it. Do not answer in the survey booklet; use the separate answer sheet.

2. The answer sheet is designed for machine scanning of your responses. Please use a Number 2 pencil and observe the following requirements:

- Make heavy black marks that fill the spaces.
- Erase cleanly any answer you wish to change.
- Make no stray markings of any kind on the answer sheet.
- Do not staple, tear or fold the answer sheet.

3. Below is a list of key words and their definitions as they are used in this survey:

UNIT/ORGANIZATION: your Squadron/Division

SUPERVISOR/BOSS: the person to whom you report directly (the reporting official on your performance report)

WORK GROUP: all those persons who report to the same supervisor as you do

MANAGEMENT: levels of management from Squadron/Division through Wing/Center

CIVILIAN SERVICE: all appropriated and non-appropriated civilian employees

SECTION I

Beginning on the next page are a series of statements about your job. Using the scale below, you are to indicate how much you agree or disagree with each statement.

STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEITHER AGREE NOR DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
A	B	C	D	E	F	G

Mark A in the answer sheet if you STRONGLY DISAGREE
Mark B " " " " " " DISAGREE
Mark C " " " " " " SLIGHTLY DISAGREE
Mark D " " " " " " NEITHER AGREE NOR DISAGREE
Mark E " " " " " " SLIGHTLY AGREE
Mark F " " " " " " AGREE
Mark G " " " " " " STRONGLY AGREE

The scale above will be at the top of each page in this section. Please respond to every statement. While some of the statements may appear similar to each other, no two statements are identical. Please do not go back to previous statements. Try to give as accurate a picture as possible of your feelings and opinions about all aspects of your unit.

DO NOT STAPLE OR OTHERWISE DAMAGE THE ANSWER SHEET.

CONTINUE ON TO NEXT PAGE

STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEITHER AGREE NOR DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
A	B	C	D	E	F	G

1. My supervisor sets an example by working hard.
2. Information is usually widely shared in my unit so that those who make the decisions will base their decisions on the best available know-how.
3. In looking back, it is difficult to point to my accomplishments on the job.
4. I feel I am doing something important by serving as a member of the Air Force team.
5. I have confidence and trust in the persons in my work group.
6. The opportunity to take on new responsibilities is available if I want it.
7. I feel my career provides sufficient economic security.
8. The recreational opportunities in this geographic area are satisfactory.
9. In general, I am more satisfied with my unit as compared to other units to which I've been assigned.
10. I have a good chance for promotion.
11. For most situations I have confidence and trust in my unit management.
12. For the most part, my working hours are not excessive.
13. Management recognizes my ability.
14. My supervisor tries to strike a balance between people needs and production needs.
15. I would say that the lowest level supervisors in my organization usually have enough say or influence about what goes on.
16. Most of the time I get a feeling of achievement from my job.
17. Persons in my work group are friendly and easy to approach.
18. In general, I decide for myself how to accomplish a job.
19. I do not look forward to coming to work each day.
20. The people in my unit seem to get maximum output from the resources (money, people, equipment, etc.) they have available.
21. My job provides an opportunity for career broadening.
22. In my job I utilize my civilian/military education and training.
23. Most of the time my supervisor will not back me up.
24. All things considered, I am satisfied with living in this geographic area.
25. Most of the time my military/civilian service pay is adequate to cover the basic expenses with a little left over.
26. I do not believe my job contributes a lot to the success of my unit's mission.

STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEITHER AGREE NOR DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
A	B	C	D	E	F	G

27. In my job I have the chance to feel I am accomplishing something.

28. I am often given responsibility for a total project.

29. My immediate supervisor usually tells me what's going on at higher levels of management.

30. In my unit, employees who do not supervise others have an adequate amount of say or influence on what goes on.

31. Management shows respect for me as a person.

32. Most of the time the right decisions are made at upper levels of supervision.

33. Opportunity for promotions in my career field/job series is fair and equitable.

34. For the most part, I have no impact on work objectives. They are announced with no opportunity to participate or contribute.

35. The people in my unit work together effectively as a team.

36. I feel very little loyalty toward my unit.

37. Management in my unit is capable of operating effectively under stress.

38. When I do a good job I can expect praise from my supervisor.

39. My job is boring.

40. I have a say in setting my work goals.

41. The quality of work produced by the people in my unit is not too good.

42. My supervisor handles the technical side of his/her job well -- for example, general expertness, knowledge of job, technical skills needed in his/her profession or trade.

43. There is not much similarity between my abilities and the requirements of my job.

44. The people in my work unit believe that they are doing something important for the country by working in the Air Force.

45. Our work unit receives little information about what is going on in other sections or branches.

46. In my job I make a meaningful contribution to the organization.

47. Persons in my work group know what their jobs are and know how to do them well.

48. Management cares what happens to me.

49. I usually don't get the chance to handle the tough and highly visible projects.

STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEITHER AGREE NOR DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
A	B	C	D	E	F	G

50. I feel a real responsibility to help the organization be successful.

51. My military/civilian service income provides me with an acceptable standard of living.

52. My present job assignment offers the opportunity for future advancement.

53. Upper levels of management do not understand the problems I face in doing my job.

54. In general, my work schedule is flexible enough so that I can make personal plans.

55. My supervisor has poor leadership qualities.

56. Most of the time my unit meets mission requirements.

57. Very little responsibility goes with my job.

58. My work assignment is challenging.

59. Rarely do my efforts lead to positive results.

60. I enjoy my job.

61. I dislike the geographic area to which I am assigned.

62. I feel I have the chance to "grow" in my job.

63. My unit usually recognizes good performance.

64. Rarely am I given the opportunity to make decisions for myself.

65. I am proud to be a member of the Air Force team.

66. My supervisor is not effective in handling personnel problems.

67. I see the Air Force as a way of life and not simply a place to work.

68. Promotions are usually based on performance and ability.

69. My unit is not sensitive to the problems of the individual.

70. My job gives me the chance to "dig deeper" into work activities which interest me.

71. My supervisor is well qualified for his/her job.

72. Working conditions are usually below average.

73. Morale in my organization is good.

74. My present assignment does not give me the chance to do the kind of work I do best.

75. My job provides no new challenges.

76. I generally decide the work methods and procedures for my job.

STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEITHER AGREE NOR DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
A	B	C	D	E	F	G

77. There is very limited opportunity for personal growth and development in my job.

78. Our work unit is usually aware of important events and situations.

79. My supervisor is not a capable individual.

80. Most of the people of this local area have a positive attitude toward Air Force employees.

81. The Air Force usually tries to take care of its own.

82. The people in my unit do a poor job in anticipating problems that may come up in the future and preventing them from occurring.

83. When decisions are being made in my unit, the persons who will be affected most are asked for their ideas.

84. Working conditions associated with my job are acceptable.

85. I feel secure that I will be able to make ends meet on my military/civilian service pay.

86. I get to do a lot of interesting work in my present job.

87. I am usually given the opportunity to present the results of my work to others.

88. I have confidence and trust in my supervisor.

89. Promotion policy is unfair.

90. In general, most of my skills and abilities are being used in my present job.

91. My job does not give me much opportunity for recognition.

92. In general, when emergencies arise, such as short suspenses, crash programs, and schedule changes, the people in my unit do a poor job in handling these situations.

93. I am satisfied with the number and types of social activities in the surrounding area.

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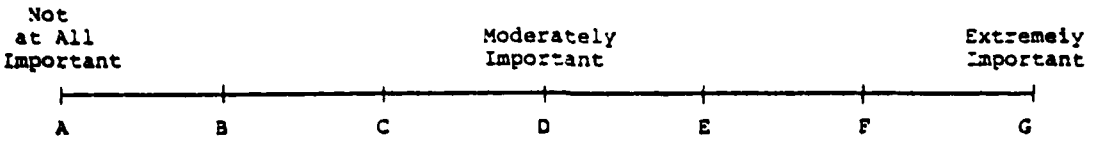
SECTION II



Listed below in items 94-113 are a number of factors and their descriptions which are often used to describe organizational well being.

Using the scale above, please indicate the amount of importance you personally place on each of these factors. Mark the appropriate letter of the scale next to the appropriate number on the answer sheet. For example, if you feel that ACHIEVEMENT is between not important and moderately important, then darken either the B or C oval next to number 94 on the answer sheet. If, however, you feel ACHIEVEMENT is extremely important, then you would mark G on the answer sheet. Indicate only how important each factor is to you, not how satisfied you currently are with each factor in your organization.

94. ACHIEVEMENT - Feelings of accomplishment derived from job performance. The pride and pleasure associated with a job well done.

95. ASSIGNMENT LOCALITY - The desirability of the current assignment locality. Includes characteristics of the base as well as characteristics of the surrounding community.

96. COMMITMENT - A feeling or belief that the Air Force mission is important to our country. Dedication to the mission. Acceptance of the Air Force as a way of life. Purpose for belonging to the Air Force goes beyond monetary reward.

97. COMMUNICATION - Adequacy of communication structure. Free flow of dialogue up, down and across organizational structure. Well defined feedback loops.

98. CONCERN FOR INDIVIDUAL - Belief that management cares about the welfare of each person. The person is not treated as just another worker but as a unique individual.

99. CONFIDENCE IN MANAGEMENT - Belief that leaders make the right decisions most of the time. Management is heading in the right direction.

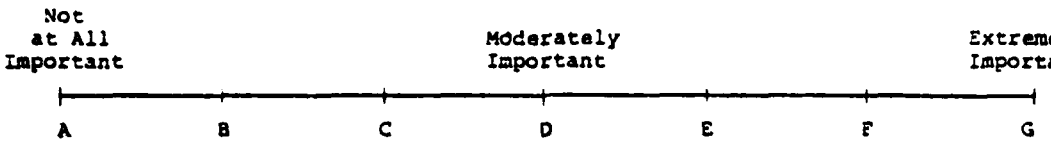
100. CONTRIBUTION/PARTICIPATION - The feeling that the individual's work is valuable to the Air Force. The individual has an impact on the mission. The individual is a part of the decision and management processes, and assists in establishing the goals of the organization.

101. GROUP COHESION/WORKER RELATIONS - The compatibility of coworkers. Includes characteristics of coworkers such as how friendly, cooperative, competent, and sociable they are.

102. IDENTIFICATION - Individual considers himself/herself as a member of a special group. The individual is not only a worker but also a part of the Air Force and unit.

103. INDEPENDENCE - The chance for the individual to plan and carry out work activities rather than be directed by others. The chance to work with minimal supervision, and to have some independence in planning and implementing work.

104. INTEREST - The chance to perform work activities which are consistent with personal preferences or interests. The chance to do work which is pleasurable.



105. ORGANIZATIONAL EFFECTIVENESS - The quality and quantity of work is consistent with the capabilities of the organizational personnel. Productivity is at the highest level; people are doing the best they can.

106. PAY AND BENEFITS/ECONOMIC SECURITY - The level of pay and the desirability of military/civilian service benefits. Included (as applicable) are incentive pay, retirement, medical care or insurance, BX, commissary, etc. Feeling that the job is secure even if economic situation changes. The feeling that basic needs will be met.

107. PERSONAL GROWTH AND DEVELOPMENT - The opportunity for self-fulfillment in the job. The chance to "grow" in the job, by developing new interests and skills.

108. PROMOTION OPPORTUNITY - The operation of the military/civilian service promotion system. Includes opportunity for promotion, the criteria for promotion, etc.

109. RECOGNITION - The opportunity to obtain clear recognition or appreciation for work activities. This acknowledgement may come from sources inside the Air Force (such as supervisor, unit commander, etc.) or outside the Air Force (community, family, etc.) Included is recognition based on the work performed rather than the position occupied.

110. RESPONSIBILITY - The amount of responsibility for your actions, decisions, and their consequences. Includes responsibility for the welfare of people, for accomplishment of a mission, for tools or equipment and other property, or for financial assets.

111. SUPERVISION - The ability of the boss or supervisor to handle human or social situations on the job. The amount of concern displayed by supervisor for the welfare of his/her people. The competence displayed by supervisor dealing with technical problems encountered in the job. Supervisor's ability to develop technical skills in his/her people.

112. UTILIZATION - The extent to which the job makes use of individual abilities, training, and expertise.

113. WORKING CONDITIONS - Characteristics of immediate work area, such as lighting, noise level, cleanliness, work space, etc. Also included are characteristics such as duty hours and time off.

CONTINUE ON TO NEXT PAGE

SECTION III

Refer to the ladder illustrated below. Regarding your working environment, (including the nature of the job, worker relations, etc.) suppose that the top of the ladder (step A) represents the best possible work life and the bottom (step G) the worst possible work life.

114. Where on the ladder do you feel you stand at the present time? Select the letter that corresponds to your answer.

115. Where on the ladder would you say you stood one year ago?

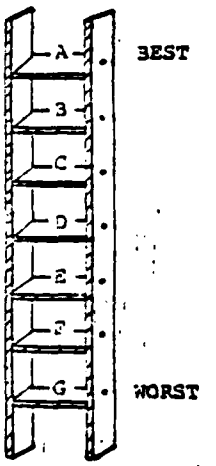
116. Where do you think you will be on the ladder one year from now?

Looking at the ladder again, suppose the best possible unit is at the top and worst possible unit at the bottom.

117. Where would you put your unit on the ladder at the present time?

118. Where do you think your unit stood one year ago? If you feel you have not been in your unit long enough to give a good evaluation, mark response "H" on the answer sheet for Item 118.

119. Just as your best guess, where do you think your unit will be on the ladder one year from now?



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SECTION IV

For the following questions choose the response that best reflects your feeling about your job. Darken the letter that most accurately reflects your feelings.

120. WHICH ONE OF THE FOLLOWING SHOWS HOW MUCH OF THE TIME YOU FEEL SATISFIED WITH YOUR JOB?

A. All the time
B. Most of the time
C. A good deal of the time
D. About half of the time
E. Occasionally
F. Seldom
G. Never

121. CHOOSE THE ONE OF THE FOLLOWING STATEMENTS WHICH BEST TELLS HOW WELL YOU LIKE YOUR JOB.

A. I hate it
B. I dislike it
C. I don't like it
D. I am indifferent to it
E. I like it
F. I am enthusiastic about it
G. I love it

122. WHICH ONE OF THE FOLLOWING BEST TELLS HOW YOU FEEL ABOUT CHANGING YOUR JOB?

A. I would quit this job at once if I could
B. I would take almost any other job in which I could earn as much as I am earning now
C. I would like to change both my job and my occupation
D. I would like to exchange my present job for another one
E. I am not eager to change my job, but I would do so if I could get a better job
F. I cannot think of any jobs for which I would exchange
G. I would not exchange my job for any other

123. WHICH ONE OF THE FOLLOWING SHOWS HOW YOU THINK YOU COMPARE WITH OTHER PEOPLE?

A. No one likes his job better than I like mine
B. I like my job much better than most people like theirs
C. I like my job better than most people like theirs
D. I like my job about as well as most people like theirs
E. I dislike my job more than most people dislike theirs
F. I dislike my job much more than most people dislike theirs
G. No one dislikes his job more than I dislike mine

CONTINUE ON TO NEXT PAGE

SECTION V

124. To which group do you belong?

A. 01, 02, 03
B. 04, 05, 06
C. E-1, E-2, E-3, E-4 (Sr Amn)
D. E-4 (Sgt), E-5, E-6
E. E-7, E-8, E-9
F. GS 12-15, WS 14-19, WL-15, UA-12
G. GS 7-11, WS 8-13, WL 6-14, WG 12-15, WP 17-18, UA 7-11
H. GS 5-6, WS 1-7, WL 1-5, WP 11-16, UA 5-6
I. GS 1-4, WG 1-8, WP 4-10, UA 1-4, all AS, NA, NL

125. Are you a supervisor in your present job?

A. Yes
B. No

126. What is your sex?

A. Male
B. Female

127. What is your racial or ethnic background?

A. Black/Black American/Afro American
B. Oriental/Oriental American (Filipino, Chinese, Japanese, Korean, Asian American)
C. Spanish Speaking Origin (Chicano, Mexican American, Puerto Rican, Latin American, Cuban)
D. Caucasian/White (Other than Spanish Speaking)
E. American Indian
F. Other

128. What is your aeronautical rating?

A. N/A, non-rated
B. Pilot
C. Navigator

APPENDIX C

*=p<.05 **=p<.001

Factor Significance of This Study

Factor	Rank	Race	Sex	MS	Age	Sect	Shift
Coordination 26,35,47.	**			**	**		
Equipment 30,40.						*	
Planning 11,15.						**	
Coworkers 37,42.							
Job Assignment 16.							
Discipline 38.	*					**	
Fairness 6,7.	*			*	*	**	
Support 13,41,42.	*						
Rewards 18,27.	**		*	*		*	
Decision Making 20,32,34.	**			*	**	*	
Training 5,14.				*			
Job Performance 9,10.				*			
Information Flow 4 Informal							
17 Formal	*				*		
Supervision 13,20,32,34,41.	**			*	*		
Responsibility Level 8.	**	*			**		
Commitment 46,48.	*			**			
Policy 21,38,44.							
Civilian 2.							

APPENDIX D

Feedback Information

OVERALL EXCEPTIONAL AREAS	QUESTION #	% FAVORABLE RESP.
JOB PERFORMANCE	9,10	86.5
JOB ASSIGNMENT	16	76.2
COWORKERS	37,42	76.2
MANNING	11,15	76.1
POLICY	21,38,44	71.1
SUPPORT	13,41,42	67.4

OVERALL PROBLEM AREAS	QUESTION #	% FAVORABLE RESP.
INFORMATION FLOW	4,17	30.7
DISCIPLINE	38	43.4
CIVILIAN INFORMATION	2	44.4
REWARDS	18,27	49.2

DEMOGRAPHICS

RACE: Generally no difference except question 6.

SHIFT: No significant differences in fairness or info.

SEX: No significant differences, but slightly lower score.

AGE: Significant for

Coordination- linear

Fairness- 2,1,3,5,4

Rewards- 2,1,3,5,4

Decision making- 2,1,3,5,4

Supervision- 2,1,3,5,4

Responsibility- 1=2,4,3,5

NOTE: Scores on Age from lowest to highest by categories on answer sheet.

MARITAL STATUS: Significant for

Coordination, fairness, rewards, decision making, training, job performance, supervision, commitment. Married better in all.

RANK: Significant for

Coordination, discipline, fairness, support, rewards, decision making, supervision, responsibility, cimmitment. Linear military, civilian uneven.

SECTION: Significant for

Equipment- Fab, Elect, R&R, Insp.

Manning- Trans maint, Egress, NDI.

Discipline- Elect, Fab.

Fairness- Elect, T-43, Eng.

Rewards- Elect, T-43, Eng, R&R, AGE.

Decision making- Elect, T-43.

Training- Systems Branch.

PROBLEMS TO WORK ON:

Information Flow	Training
Discipline	Internal Communications
Civilian Information	Coordination
Rewards	Squadron Functions
Sports Participation	

POSITIVE FACTORS

Civilians prefer additional information from commander on civilian employment.

Close supervision is not required.

Most know what is expected of them in their job.

Overall manning is good.(enough time for work)

Work crew size is large enough.

Being on time for work is emphasised.

Most know where to go to solve problems.

Most don't have too many meetings to attend.

Most would volunteer for overtime if neccessary.

35-10 is emphasised.

Fellow workers are seen as helpful and encouraging.

Supervisors seen as someone to talk to about problems.

Fellow workers support good job.

Shops gernerally well located.

Supervisors generally have "open door" policies.

FROM # 50	SECTIONS MENTIONED
Mission accomplishment.	Sq. CC and First Sergeant
Atmosphere	Inspection section
Supervision and management.	Machine shop
All areas.	Fabrication
Safety	Chem plating and Heat treating

NEGATIVE FACTORS

Inadequate information on civilian employment factors. (CPO)

Inaccurate rumors.

Formal communications channels slow.

Appropriateness of rewards.

Extra hard work not always rewarded.

Work delays due to coordination with another shop.

Understanding punishment policies.(Knowing where they stand.)

Promotion system fairness. (Especially enlisted)

Opinion of the Air Force has not increased here.(AF wide factors enter here)

Upward mobility is blocked for some.

Over and under manning.

Supply problems for some shops.

Shop location for engine shop.

From # 50	SECTIONS MENTIONED
Supervision, management, top sup visibility.	Hosp
Internal communications at all levels.	Job control
Training on FL and AGE, esp on arrival.	supply
Morale.	T-43 FL
Coordination between Job, Maint sup, spec shops, shifts.	
Discipline	Trns maint, NDI, manning
Sports participation/Sq functions	NP AGE equip and upkeep
upward mobility blocked.	Elect shop no open door
working conditions.	CPO

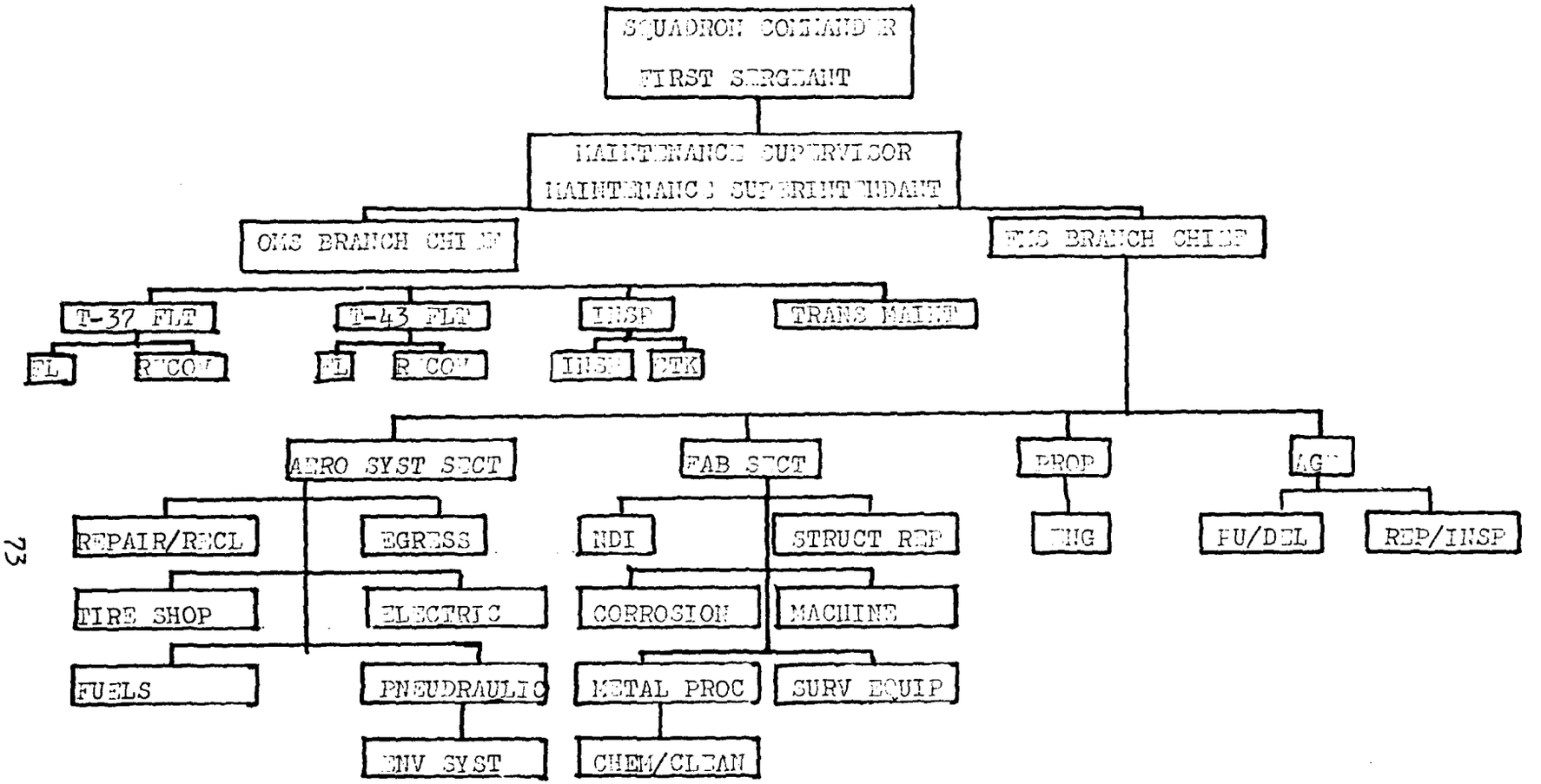
Equal treatment, Mil/Civ relationship.

Awards and recognition, support, getting rid of poor performers, 35-10.

Written change notice.

APPENDIX E

323rd FMS Organizational Chart


SQUADRON COMMANDER
FIRST SERGEANT
MAINTENANCE SUPERVISOR
MAINTENANCE SUPERINTENDANT
OMS BRANCH CHIEF
MMS BRANCH CHIEF
T-37 FLT
T-43 FLT
INSP
TRANS MAINT
FL
RECOV
FL
RECOV
INSP
CTK
AERO SYST SECT
FAB SECT
PROP
AGE
REPAIR/RECL
EGRESS
NDI
STRUCT REP
ENG
PU/DEL
REP/INSP
TIRE SHOP
ELECTRIC
CORROSION
MACHINE
FUELS
PNEUDRAULIC
METAL PROC
SURV EQUIP
ENV SYST
CHEM/CLEAN

APPENDIX F

Section Codes

SECTION	CODE
Orderly Room	1
Administrative	2
T-37 Flight	10
T-37 Flightline	11
T-37 Recovery	12
T-43 Flight	20
Inspection Section	30
T-37 Inspection	31
T-43 Inspection	32
CTK	33
Transient Maintenance	40
Aerospace Systems	50
Repair/Reclamation	51
Tire Shop	52
Fuel	53
Electric	54
Egress	55
Pneudraulics	56
Fabrication	60
NDI	61
Corrosion	62
Metal Processing	63
Chem/Clean	64
Structural Repair	65
Machine	66
Survival Equipment	67
Engine	71
[illegible]	80
[illegible] AGE	81
[illegible] Supervsion	90

APPENDIX G

Frequency Table

ITEM1

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	2	1.0	2.7	2.7
	2.	5	2.4	6.8	9.6
	3.	16	7.8	21.9	31.5
	4.	33	16.0	45.2	76.7
	5.	17	8.3	23.3	100.0
	0	133	64.6	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.795 MEDIAN 3.909 STD DEV .971

VALID CASES 73 MISSING CASES 133

ITEM2

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	13	6.3	18.1	18.1
	2.	17	8.3	23.6	41.7
	3.	10	4.9	13.9	55.6
	4.	30	14.6	41.7	97.2
	5.	2	1.0	2.8	100.0
	0	134	65.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.875 MEDIAN 3.100 STD DEV 1.221

VALID CASES 72 MISSING CASES 134

ITEM3

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	3	1.5	4.2	4.2
	2.	8	3.9	11.1	15.3
	3.	10	4.9	13.9	29.2
	4.	35	17.0	48.6	77.8
	5.	16	7.8	22.2	100.0
	0	134	65.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.736 MEDIAN 3.929 STD DEV 1.061

VALID CASES 72 MISSING CASES 134

ITEM4

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	46	22.3	22.5	22.5
	2.	66	32.0	32.4	54.9
	3.	50	24.3	24.5	79.4
	4.	39	18.9	19.1	98.5
	5.	3	1.5	1.5	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.446 MEDIAN 2.348 STD DEV 1.084

VALID CASES 204 MISSING CASES 2

ITEM5

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	14	6.8	6.8	6.8
	2.	40	19.4	19.5	26.3
	3.	14	6.8	6.8	33.2
	4.	112	54.4	54.6	87.8
	5.	25	12.1	12.2	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	3.459	MEDIAN	3.808	STD DEV	1.140
VALID CASES	205	MISSING CASES	1		

ITEM6

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	17	8.3	8.5	8.5
	2.	34	16.5	16.9	25.4
	3.	27	13.1	13.4	38.8
	4.	98	47.6	48.8	87.6
	5.	25	12.1	12.4	100.0
	0	5	2.4	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	3.398	MEDIAN	3.730	STD DEV	1.158
VALID CASES	201	MISSING CASES	5		

ITEM7

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	17	8.3	8.3	8.3
	2.	34	16.5	16.6	24.9
	3.	21	10.2	10.2	35.1
	4.	111	53.9	54.1	89.3
	5.	22	10.7	10.7	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	3.424	MEDIAN	3.775	STD DEV	1.138
VALID CASES	205	MISSING CASES	1		

ITEM8

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	43	20.9	21.0	21.0
	2.	86	41.7	42.0	62.9
	3.	12	5.8	5.9	68.8
	4.	42	20.4	20.5	89.3
	5.	22	10.7	10.7	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	2.580	MEDIAN	2.192	STD DEV	1.313
VALID CASES	205	MISSING CASES	1		

ITEM9

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	1	.5	.5	.5
	2.	2	1.0	1.0	1.5
	3.	17	8.3	8.3	9.8
	4.	74	35.9	36.1	45.9
	5.	111	53.9	54.1	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 4.424 MEDIAN 4.577 STD DEV .728

VALID CASES 205 MISSING CASES 1

ITEM10

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	4	1.9	2.0	2.0
	2.	8	3.9	3.9	5.9
	3.	23	11.2	11.2	17.1
	4.	99	48.1	48.3	65.4
	5.	71	34.5	34.6	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 4.098 MEDIAN 4.182 STD DEV .886

VALID CASES 205 MISSING CASES 1

ITEM11

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	47	22.8	23.2	23.2
	2.	86	41.7	42.4	65.5
	3.	18	8.7	8.9	74.4
	4.	34	16.5	16.7	91.1
	5.	18	8.7	8.9	100.0
	0	3	1.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.458 MEDIAN 2.134 STD DEV 1.259

VALID CASES 203 MISSING CASES 3

ITEM12

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	7	3.4	3.4	3.4
	2.	25	12.1	12.3	15.7
	3.	70	34.0	34.3	50.0
	4.	88	42.7	43.1	93.1
	5.	14	6.8	6.9	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.377 MEDIAN 3.500 STD DEV .910

VALID CASES 204 MISSING CASES 2

ITEM13

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	19	9.2	9.3	9.3
	2.	20	9.7	9.8	19.0
	3.	52	25.2	25.4	44.4
	4.	84	40.8	41.0	85.4
	5.	30	14.6	14.6	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.420 MEDIAN 3.637 STD DEV 1.137

VALID CASES 205 MISSING CASES 1

ITEM14

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	11	5.3	5.4	5.4
	2.	45	21.8	22.0	27.3
	3.	42	20.4	20.5	47.8
	4.	87	42.2	42.4	90.2
	5.	20	9.7	9.8	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.293 MEDIAN 3.552 STD DEV 1.061

VALID CASES 205 MISSING CASES 1

ITEM15

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	51	24.8	25.0	25.0
	2.	126	61.2	61.8	86.8
	3.	7	3.4	3.4	90.2
	4.	17	8.3	8.3	98.5
	5.	3	1.5	1.5	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 1.995 MEDIAN 1.905 STD DEV .868

VALID CASES 204 MISSING CASES 2

ITEM16

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	53	25.7	26.2	26.2
	2.	101	49.0	50.0	76.2
	3.	24	11.7	11.9	88.1
	4.	19	9.2	9.4	97.5
	5.	5	2.4	2.5	100.0
	0	4	1.9	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.119 MEDIAN 1.975 STD DEV .985

VALID CASES 202 MISSING CASES 4

ITEM17

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	23	11.2	11.2	11.2
	2.	71	34.5	34.6	45.9
	3.	27	13.1	13.2	59.0
	4.	66	32.0	32.2	91.2
	5.	18	8.7	8.8	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.927 MEDIAN 2.815 STD DEV 1.212

VALID CASES 205 MISSING CASES 1

ITEM18

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	35	17.0	17.2	17.2
	2.	45	21.8	22.1	39.2
	3.	23	11.2	11.3	50.5
	4.	72	35.0	35.3	85.8
	5.	29	14.1	14.2	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.074 MEDIAN 3.457 STD DEV 1.354

VALID CASES 204 MISSING CASES 2

ITEM19

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	15	7.3	7.4	7.4
	2.	39	18.9	19.2	26.6
	3.	24	11.7	11.8	38.4
	4.	82	39.8	40.4	78.8
	5.	43	20.9	21.2	100.0
	0	3	1.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.488 MEDIAN 3.787 STD DEV 1.228

VALID CASES 203 MISSING CASES 3

ITEM20

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	15	7.3	7.3	7.3
	2.	24	11.7	11.7	19.0
	3.	34	16.5	16.6	35.6
	4.	104	50.5	50.7	86.3
	5.	28	13.6	13.7	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.517 MEDIAN 3.784 STD DEV 1.096

VALID CASES 205 MISSING CASES 1

ITEM21

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	7	3.4	3.4	3.4
	2.	12	5.8	5.9	9.3
	3.	8	3.9	3.9	13.2
	4.	99	48.1	48.5	61.8
	5.	78	37.9	38.2	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 4.123 MEDIAN 4.258 STD DEV .977

VALID CASES 204 MISSING CASES 2

ITEM22

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	3	1.5	1.5	1.5
	2.	10	4.9	4.9	6.4
	3.	20	9.7	9.8	16.2
	4.	118	57.3	57.8	74.0
	5.	53	25.7	26.0	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 4.020 MEDIAN 4.085 STD DEV .830

VALID CASES 204 MISSING CASES 2

ITEM23

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	24	11.7	11.8	11.8
	2.	131	63.6	64.2	76.0
	3.	21	10.2	10.3	86.3
	4.	20	9.7	9.8	96.1
	5.	8	3.9	3.9	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.299 MEDIAN 2.095 STD DEV .938

VALID CASES 204 MISSING CASES 2

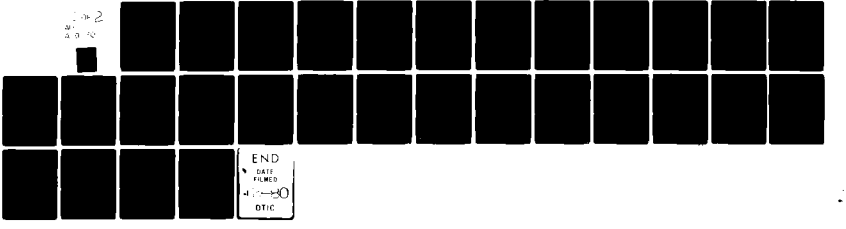
ITEM24

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	33	16.0	16.3	16.3
	2.	90	43.7	44.3	60.6
	3.	43	20.9	21.2	81.8
	4.	25	12.1	12.3	94.1
	5.	12	5.8	5.9	100.0
	0	3	1.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.473 MEDIAN 2.261 STD DEV 1.087

VALID CASES 203 MISSING CASES 3

AD-A091 308 AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OH F/G 15/7
ANALYSIS OF THE 323RD FLYING TRAINING WING USING ORGANIZATIONAL--ETC(U)
MAY 79 L W PATTERSON
UNCLASSIFIED AFIT-CI-79-176T NL



ITEM25

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	68	33.0	33.2	33.2
	2.	89	43.2	43.4	76.6
	3.	23	11.2	11.2	87.8
	4.	12	5.8	5.9	93.7
	5.	13	6.3	6.3	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.088 MEDIAN 1.888 STD DEV 1.117

VALID CASES 205 MISSING CASES 1

ITEM26

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	34	16.5	16.6	16.6
	2.	107	51.9	52.2	68.8
	3.	27	13.1	13.2	82.0
	4.	23	11.2	11.2	93.2
	5.	14	6.8	6.8	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.395 MEDIAN 2.140 STD DEV 1.100

VALID CASES 205 MISSING CASES 1

ITEM27

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	26	12.6	12.7	12.7
	2.	54	26.2	26.5	39.2
	3.	24	11.7	11.8	51.0
	4.	77	37.4	37.7	88.7
	5.	23	11.2	11.3	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.083 MEDIAN 3.417 STD DEV 1.266

VALID CASES 204 MISSING CASES 2

ITEM28

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	29	14.1	14.1	14.1
	2.	74	35.9	36.1	50.2
	3.	53	25.7	25.9	76.1
	4.	43	20.9	21.0	97.1
	5.	6	2.9	2.9	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.624 MEDIAN 2.493 STD DEV 1.057

VALID CASES 205 MISSING CASES 1

ITEM29

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	22	10.7	10.7	10.7
	2.	112	54.4	54.6	65.4
	3.	27	13.1	13.2	78.5
	4.	35	17.0	17.1	95.6
	5.	9	4.4	4.4	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.498 MEDIAN 2.219 STD DEV 1.037

VALID CASES 205 MISSING CASES 1

ITEM30

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	22	10.7	10.8	10.8
	2.	39	18.9	19.1	29.9
	3.	14	6.8	6.9	36.8
	4.	99	48.1	48.5	85.3
	5.	30	14.6	14.7	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.373 MEDIAN 3.773 STD DEV 1.251

VALID CASES 204 MISSING CASES 2

ITEM31

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	12	5.8	5.9	5.9
	2.	34	16.5	16.7	22.5
	3.	26	12.6	12.7	35.3
	4.	115	55.8	56.4	91.7
	5.	17	8.3	8.3	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.446 MEDIAN 3.761 STD DEV 1.051

VALID CASES 204 MISSING CASES 2

ITEM32

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	19	9.2	9.4	9.4
	2.	53	25.7	26.1	35.5
	3.	22	10.7	10.8	46.3
	4.	88	42.7	43.3	89.7
	5.	21	10.2	10.3	100.0
	0	3	1.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.192 MEDIAN 3.585 STD DEV 1.205

VALID CASES 203 MISSING CASES 3

ITEM33

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	19	9.2	9.4	9.4
	2.	88	42.7	43.3	52.7
	3.	34	16.5	16.7	69.5
	4.	47	22.8	23.2	92.6
	5.	15	7.3	7.4	100.0
	0	3	1.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	2.759	MEDIAN	2.438	STD DEV	1.133
VALID CASES	203	MISSING CASES	3		

ITEM34

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	13	6.3	6.3	6.3
	2.	30	14.6	14.6	21.0
	3.	30	14.6	14.6	35.6
	4.	99	48.1	48.3	83.9
	5.	33	16.0	16.1	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	3.532	MEDIAN	3.798	STD DEV	1.118
VALID CASES	205	MISSING CASES	1		

ITEM35

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	11	5.3	5.4	5.4
	2.	76	36.9	37.3	42.6
	3.	15	7.3	7.4	50.0
	4.	75	36.4	36.8	86.8
	5.	27	13.1	13.2	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	3.152	MEDIAN	3.500	STD DEV	1.212
VALID CASES	204	MISSING CASES	2		

ITEM36

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	73	35.4	36.1	36.1
	2.	93	45.1	46.0	82.2
	3.	11	5.3	5.4	87.6
	4.	18	8.7	8.9	96.5
	5.	7	3.4	3.5	100.0
	0	4	1.9	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	1.975	MEDIAN	1.801	STD DEV	1.044
VALID CASES	202	MISSING CASES	4		

ITEM37

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	8	3.9	3.9	3.9
	2.	25	12.1	12.2	16.1
	3.	16	7.8	7.8	23.9
	4.	108	52.4	52.7	76.6
	5.	48	23.3	23.4	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.795 MEDIAN 3.995 STD DEV 1.056

VALID CASES 205 MISSING CASES 1

ITEM38

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	19	9.2	9.3	9.3
	2.	42	20.4	20.5	29.8
	3.	55	26.7	26.8	56.6
	4.	81	39.3	39.5	96.1
	5.	8	3.9	3.9	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.083 MEDIAN 3.255 STD DEV 1.061

VALID CASES 205 MISSING CASES 1

ITEM39

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	15	7.3	7.4	7.4
	2.	104	50.5	51.0	58.3
	3.	31	15.0	15.2	73.5
	4.	38	18.4	18.6	92.2
	5.	16	7.8	7.8	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.686 MEDIAN 2.337 STD DEV 1.101

VALID CASES 204 MISSING CASES 2

ITEM40

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	21	10.2	10.2	10.2
	2.	50	24.3	24.4	34.6
	3.	17	8.3	8.3	42.9
	4.	105	51.0	51.2	94.1
	5.	12	5.8	5.9	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.180 MEDIAN 3.638 STD DEV 1.172

VALID CASES 205 MISSING CASES 1

ITEM41

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	14	6.8	6.8	6.8
	2.	24	11.7	11.7	18.5
	3.	23	11.2	11.2	29.8
	4.	96	46.6	46.8	76.6
	5.	48	23.3	23.4	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.683 MEDIAN 3.932 STD DEV 1.156

VALID CASES 205 MISSING CASES 1

ITEM42

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	7	3.4	3.4	3.4
	2.	14	6.8	6.9	10.3
	3.	27	13.1	13.2	23.5
	4.	122	59.2	59.8	83.3
	5.	34	16.5	16.7	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.794 MEDIAN 3.943 STD DEV .919

VALID CASES 204 MISSING CASES 2

ITEM43

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	12	5.8	5.9	5.9
	2.	18	8.7	8.8	14.7
	3.	24	11.7	11.8	26.5
	4.	127	61.7	62.3	88.7
	5.	23	11.2	11.3	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.642 MEDIAN 3.878 STD DEV .995

VALID CASES 204 MISSING CASES 2

ITEM44

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	4	1.9	2.0	2.0
	2.	15	7.3	7.4	9.3
	3.	15	7.3	7.4	16.7
	4.	114	55.3	55.9	72.5
	5.	56	27.2	27.5	100.0
	0	2	1.0	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.995 MEDIAN 4.096 STD DEV .907

VALID CASES 204 MISSING CASES 2

ITEM45

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	48	23.3	23.6	23.6
	2.	37	18.0	18.2	41.9
	3.	47	22.8	23.2	65.0
	4.	60	29.1	29.6	94.6
	5.	11	5.3	5.4	100.0
	0	3	1.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.749 MEDIAN 2.851 STD DEV 1.259

VALID CASES 203 MISSING CASES 3

ITEM46

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	18	8.7	9.0	9.0
	2.	9	4.4	4.5	13.5
	3.	42	20.4	21.0	34.5
	4.	69	33.5	34.5	69.0
	5.	62	30.1	31.0	100.0
	0	6	2.9	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.740 MEDIAN 3.949 STD DEV 1.204

VALID CASES 200 MISSING CASES 6

ITEM47

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	8	3.9	3.9	3.9
	2.	42	20.4	20.5	24.4
	3.	42	20.4	20.5	44.9
	4.	94	45.6	45.9	90.7
	5.	19	9.2	9.3	100.0
	0	1	.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.361 MEDIAN 3.612 STD DEV 1.032

VALID CASES 205 MISSING CASES 1

ITEM48

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	33	16.0	16.3	16.3
	2.	41	19.9	20.2	36.5
	3.	34	16.5	16.7	53.2
	4.	70	34.0	34.5	87.7
	5.	25	12.1	12.3	100.0
	0	3	1.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.064 MEDIAN 3.309 STD DEV 1.301

VALID CASES 203 MISSING CASES 3

ITEM49

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	13	6.3	6.5	6.5
	2.	153	74.3	76.5	83.0
	3.	34	16.5	17.0	100.0
	0	6	2.9	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 2.105 MEDIAN 2.069 STD DEV .474

VALID CASES 200 MISSING CASES 6

AGE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	45	21.8	22.4	22.4
	2.	45	21.8	22.4	44.8
	3.	27	13.1	13.4	58.2
	4.	21	10.2	10.4	68.7
	5.	63	30.6	31.3	100.0
	0	5	2.4	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.060 MEDIAN 2.889 STD DEV 1.577

VALID CASES 201 MISSING CASES 5

SEX

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	180	87.4	88.7	88.7
	2.	23	11.2	11.3	100.0
	0	3	1.5	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	1.113	MEDIAN	1.064	STD DEV	.318
VALID CASES	203	MISSING CASES	3		

MATSAT

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	124	60.2	68.1	68.1
	2.	58	28.2	31.9	100.0
	0	24	11.7	MISSING	
	TOTAL	206	100.0	100.0	

MEAN	1.319	MEDIAN	1.234	STD DEV	.467
VALID CASES	182	MISSING CASES	24		

RACE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	158	76.7	79.4	79.4
	2.	30	14.6	15.1	94.5
	3.	6	2.9	3.0	97.5
	4.	3	1.5	1.5	99.0
	5.	2	1.0	1.0	100.0
	0	7	3.4	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 1.296 MEDIAN 1.130 STD DEV .695

VALID CASES 199 MISSING CASES 7

RANK

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	100	48.5	50.5	50.5
	2.	44	21.4	22.2	72.7
	3.	2	1.0	1.0	73.7
	4.	4	1.9	2.0	75.8
	5.	4	1.9	2.0	77.8
	6.	1	.5	.5	78.3
	7.	2	1.0	1.0	79.3
	8.	1	.5	.5	79.8
	9.	29	14.1	14.6	94.4
	10.	11	5.3	5.6	100.0
	0	8	3.9	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 3.177 MEDIAN 1.490 STD DEV 3.270

VALID CASES 198 MISSING CASES 8

SHIFT

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	138	67.0	69.3	69.3
	2.	49	23.8	24.6	94.0
	3.	8	3.9	4.0	98.0
	6.	4	1.9	2.0	100.0
	0	7	3.4	MISSING	
	TOTAL	206	100.0	100.0	

MEAN 1.427 MEDIAN 1.221 STD DEV .855

VALID CASES 199 MISSING CASES 7

SECT

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	2	1.0	1.4	1.4
	2.	1	.5	.7	2.1
	10.	5	2.4	3.4	5.5
	11.	18	8.7	12.3	17.8
	12.	2	1.0	1.4	19.2
	20.	13	6.3	8.9	28.1
	30.	3	1.5	2.1	30.1
	31.	7	3.4	4.8	34.9
	32.	8	3.9	5.5	40.4
	33.	2	1.0	1.4	41.8
	40.	5	2.4	3.4	45.2

50.	1	.5	.7	45.9
51.	7	3.4	4.8	50.7
52.	1	.5	.7	51.4
53.	2	1.0	1.4	52.7
54.	7	3.4	4.8	57.5
55.	5	2.4	3.4	61.0
56.	4	1.9	2.7	63.7
60.	2	1.0	1.4	65.1
61.	5	2.4	3.4	68.5
62.	2	1.0	1.4	69.9
63.	1	.5	.7	70.5
64.	2	1.0	1.4	71.9
65.	5	2.4	3.4	75.3
66.	2	1.0	1.4	76.7
67.	2	1.0	1.4	78.1
71.	10	4.9	6.8	84.9
80.	12	5.8	8.2	93.2
81.	1	.5	.7	93.8
90.	9	4.4	6.2	100.0
0	60	29.1	MISSING	
TOTAL	206	100.0	100.0	

MEAN	45.884	MEDIAN	51.357	STD DEV	25.844
VALID CASES	146	MISSING CASES	60		

APPENDIX H

Survey Questionnaire

COMMUNICATIONS QUESTIONNAIRE

Questions 1 thru 3 are for civilians only, military begin with question 4.

1. I feel that civilian commander's call is useful.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

2. I receive adequate information about factors affecting civilian employment.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

3. I prefer to get information requarding civilian employment from my commander in addition to what I get from the civilian personnel office.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

---

4. The "grapevine" source of information is usually accurate.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

5. People in my shop receive the proper training.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

6. When a "good duty" becomes available in my shop, I have as good a chance to get it as anyone else.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

7. If I make a mistake, I will be treated the same as anyone else who makes that same mistake.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

8. I already have as much responsibility as I can hope to get in this career field.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

9. My supervisor can give me a job and go away knowing I will do it right.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

10. I know exactly what is expected of me in my job.
strongly disagree (1) disagree (2) uncertain (3) agree (4) strongly agree (5)

11. My shop is under manned.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

12. When someone takes a problem to the orderly room, they can expect the problem to be resolved.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

13. I know my supervisor sticks up for me when someone cuts me down.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

14. The people in this organization are well qualified for the jobs they hold.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

15. I <u>don't</u> have enough time to get my work done.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

16. My job could be done more efficiently by <u>decreasing</u> the size of work crews.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

17. I get most important news through formal channels (commander's call, daily bulletin, etc.) before I hear it on the "grapevine".

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

18. Rewards for exceptional performance are appropriate.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

19. My job has a lot of advantages over other jobs I could be in.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

20. My supervisor is likely to adopt my good ideas.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

21. Being on time for work is emphasised by my supervisor.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

22. If I have a problem I <u>can't</u> solve with my supervisor, I know where to go to get it solved.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

23. I have to attend too many meetings.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

24. I <u>don't</u> have any inputs into the goals of this shop.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

25. I would <u>not</u> volunteer for overtime to finish a task that is important to my supervisor.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

26. When I have to coordinate something with another shop, they usually <u>don't</u> cooperate well.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

27. Someone who works extra hard in my shop will be rewarded.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

28. Anyone who <u>doesn't</u> get along with his supervisor can be reassigned to another supervisor.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

29. Visitors in my work area hinder my job.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

30. I have all the proper tools and equipment available to do my job well.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

31. My shift "gets the word" when a policy changes.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

32. My supervisor often asks for my opinion.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

33. Our training program rushes people through too fast without proper training.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

34. New ideas are encouraged by my supervisor.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

35. Coordination with another shop often causes delays in our work.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

36. AFR 35-10 is <u>not</u> emphasised by my supervisor.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

37. My fellow workers are helpful and encouraging.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

38. When someone in my shop breaks a rule or regulation, he knows exactly what will happen to him.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

39. Support I get from other agencies on base (hospital, finance, etc.) is <u>not</u> very helpful.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

40. I have all the supplies available that I need to do my job well.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

41. My supervisor is someone I can talk to about a problem.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

42. If I try to do a good job, my fellow workers will support my efforts.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

43. My shop's location makes it easy to get the job done.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

44. My supervisor has an "open door" policy.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

45. I feel that the inputs used for promotions are fair and impartial.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

46. I would like to stay here longer than I stayed at my last assignment.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

47. When I request something from another shop, they are prompt and helpful.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

48. My opinion of the Air Force has increased since I came to this organization.

strongly disagree	disagree	uncertain	agree	strongly agree
(1)	(2)	(3)	(4)	(5)

49. I feel that commander's call

a. is <u>not</u> often enough. b. is about right. c. is too often.

APPENDIX I

Answer Sheet

ANSWER SHEET

1.___	11.___	21.___	31.___	41.___
2.___	12.___	22.___	32.___	42.___
3.___	13.___	23.___	33.___	43.___
4.___	14.___	24.___	34.___	44.___
5.___	15.___	25.___	35.___	45.___
6.___	16.___	26.___	36.___	46.___
7.___	17.___	27.___	37.___	47.___
8.___	18.___	28.___	38.___	48.___
9.___	19.___	29.___	39.___	49.___
10.___	20.___	30.___	40.___	

50. (A) What area do you feel this organization does extremely well in?

_____

_____

(B) Needs improvement in? _____

_____

_____ (continue on back)

AGE: 21 and under ___ (1) 22-25 ___ (2) 26-30 ___ (3) 31-36 ___ (4) 37 and over ___ (5)

SEX: male ___ (1) female ___ (2) MARRITAL STATUS: married ___ (1) unmarried ___ (2)

RACE: Caucasian ___ (1) Black ___ (2) Mexican American/Spanish ___ (3) Oriental/Asian ___ (4)
Other ___ (5)

RANK: E-1 thru E-4 ___ (1) E-5 thru E-7 ___ (2) E-8 thru E-9 ___ (3) officer ___ (4)
GS-1 thru GS-5 ___ (5) GS-6 thru GS-10 ___ (6) GS-11 or above ___ (7)
WG-1 thru WG-5 ___ (8) WG-6 thru WG-10 ___ (9) WG-11 or above ___ (0)

PRIMARY SHIFT: regular day ___ (1) regular swing ___ (2) regular mid ___ (3)
12 hour day ___ (4) 12 hour night ___ (5) other(specify) ___ (6)

TIME IN SQUADRON: less than 1 year ___ (1) 1 to 2 years ___ (2) 2-3 years ___ (3) over 3 ___ (4)

MONTHS OF TOTAL SERVICE: ___ SHOP OR SECTION: _____

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