3-2000

Factors Affecting Perceptions of Ethics within Organizations: A Case Study of Organizations within Aeronautical Systems Center (ASC)

David W. Carlson

FACTORS AFFECTING PERCEPTIONS OF ETHICS WITHIN ORGANIZATIONS: A CASE STUDY OF ORGANIZATIONS WTIHIN AERONAUTICAL SYSTEMS CENTER (ASC)

THESIS

David W. Carlson, 1st Lt., USAF

AFIT/GEE/ENV/00M-01

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

DISTRIBUTION STATEMENT

AFIT/GEE/ENV/00M-01

FACTORS AFFECTING PERCEPTIONS OF ETHICS WITHIN ORGANIZATIONS: A CASE STUDY OF ORGANIZATIONS WITHIN AERONAUTICAL SYSTEMS CENTER (ASC)

THESIS

Presented to the Faculty

Department of Systems and Engineering Management

Graduate School of Engineering and Management

Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Engineering and Environmental Management

David W. Carlson, B.S.

1st Lt., USAF

March 2000

AFIT/GEE/ENV/00M-01

FACTORS AFFECTING PERCEPTIONS OF ETHICS WITHIN ORGANIZATIONS: A CASE STUDY OF ORGANIZATIONS WITHIN AERONAUTICAL SYSTEMS CENTER (ASC)

David W. Carlson, B.S.
1st Lt., USAF

Approved

Michael T. Rehg (Co-Chairman)	7 Mar 00 date
Mark A. Ward (Co-Chairman)	7 Mar '00 date
Daniel T. Holt (Member)	7 MAR 00 date

Acknowledgements

I would like to thank all of the people who helped me or supported me throughout this thesis effort. I would like to thank the members of my thesis committee who offered their continuous advise and support throughout the process of completing this report. Without the help of Maj. Ward, Maj. Rehg, and Capt. Holt, this thesis would have never been done as completely, thoroughly, and successfully as it is. I would like to thank my sponsor, Mr. Stanley Pleasant, for taking interest in my research and for supporting me throughout this thesis process. I would like to thank my parents for their continuous love and support and encouragement throughout my life. Finally, I would like to thank Jesus for dying on the cross for my sins and for being my Living Savior.

David W. Carlson

Table of Contents

List of Tables

AFIT/GEE/ENV/00M-01

Abstract

This thesis studied some of the factors that can be used to help predict perceptions of ethical climate within organizations. Specifically, five organizations within Aeronautical Systems Center (ASC) were analyzed by evaluating four years of cultural survey data. The factors that were studied were analyzed through the use of different statistical processes (to include a regression analysis) in order to determine if they could significantly predict the perceptions of the ethical climate of the five ASC organizations studied. The factors were also analyzed to determine how influential the significant factors were in predicting perceptions of the ethical climate of the organizations.

The results of this thesis indicate that leadership and friendliness are the two most influential and significant factors (of the ones studied) that can be used to help predict ethical perceptions within organizations. Friendliness was defined as how friendly employees are with each other and how much interaction they have with each other. The implications of these findings are that managers can use these results to help improve their organization's ethical climate.

FACTORS AFFECTING PERCEPTIONS OF ETHICS WITHIN ORGANIZATIONS: A CASE STUDY OF ORGANIZATIONS WITHIN AERONAUTICAL SYSTEMS CENTER (ASC)

I. Introduction

Background

In recent years ethics have become an extremely visible and important issue in our society. Scandals and corruption in the military, in the government, and in business have brought to our attention the need for ethical values and behaviors to guide our everyday lives. Ethics have become so important that people exhibiting unethical behavior typically do not succeed in today's society and are often punished severely for unethical actions. Nicholson (1994) agrees and says that questions of ethics have risen to near the top of the agenda of business issues in the 90's. Some people are even concerned that America is currently facing an ethical crisis (Morris, 1995).

Ethics are especially important in the military because the military is known for and was founded on ethical premises. If the military were to become unethical, or if it tolerated unethical behavior, people would lose respect for the military, and the mission of providing defense to this nation would be at risk. Nevertheless, there are examples of high-profile military cases in which unethical actions occurred. These cases hurt the military's image and caused the public to lose confidence in the military. A couple examples of these cases include the 1986 Iran Contra Affair and the 1991 "Tailhook Incident" (Military Scandals, 2000).

This thesis will explore ethics in the military and will discuss factors that can be used to predict the perceptions of ethics within five Air Force organizations of Aeronautical Systems Center (ASC).

> ASC is the Air Force's center of excellence for development and acquisition of aerospace systems. ASC manages more than 56 major programs, executes an annual budget of more than $8 billion dollars, and employs a work force of approximately 12,000 people at Wright-Patterson AFB and 35 locations worldwide (Biography, 1999).

The five organizations within ASC studied in this thesis were the 88th Air Base Wing, 74th Medical Group, Acquisition Group, Wright Laboratory, and ASC Command Staff.

This thesis will also add an important link to the current research and literature by studying ethics in the military. A lot of ethics research has been done in the past on many different sizes and types of civilian organizations, but not a lot of ethics research and analysis has been done on military organizations. Wimbush et al. (1997) raise the question as to whether other dimensions of ethical climate will surface (other than the ones that have already been found) if additional organizations that have not been previously sampled are used. For example, they say that not-for-profit organizations and large multi-national organizations have not been studied and may reveal additional dimensions of ethical climate. This case study of the factors that affect perceptions of ethics within ASC will help close this gap in the research and literature.

Ethics in the Air Force

Within the Air Force, the main ethical guidelines are the core values. These core values of "integrity first", "service before self", and "excellence in all we do" are the moral guides that Air Force members use when faced with making decisions (Core

Values, 1999). The Air Force core values should be known by all Air Force members, and considerable effort has been made by senior Air Force leadership to make available a written copy of the Air Force core values "Little Blue Book" to all Air Force members (Core Values, 1999). This "Little Blue Book" explains the core values in great detail and why they are important. The distribution of the "Little Blue Book" is an example of how the Air Force has attempted to stress and ensure that all Air Force members realize the importance of these core values and the ethical principles they represent.

These core values are the main ethical guidelines, but they are not the only contact that Air Force members have with ethics and ethical guidelines. A couple of the other things that people in the Air Force deal with that concern ethics include the oath of office that they take and the Uniform Code of Military Justice (UCMJ) that they live by. Personnel also receive considerable training in ethics throughout their careers. This training includes training personnel receive at their office, at classes offered on base, at their technical schools, at their basic training for enlisted, at their commissioning source for officers, and at their Professional Military Education (PME) schools. This training and effort to create an ethical environment attempts to make Air Force members behave as ethically as possible and tries to ensure members know what the standards of ethical conduct are and how they should act in order to meet these standards.

Is all of this education and training worth it (i.e., is it paying off)? Are Air Force members ethical and do they live by ethical standards? These are tough questions to answer because it is difficult to measure how ethical a person is. Easier to measure are the perceptions people have of the ethical climate of the organization in which they work.

By analyzing the perceptions people have of their organization, we might learn what is important in determining the ethical climate of organizations (Cullen et al., 1993).

Specifically, several factors are assumed to shape an individual's perception of the ethical climate of their organization. These factors include the individual's perception of their leader's behavior, their supervisor's behavior (the difference between a leader and a supervisor will be explained later in this thesis), the rewards system, the amount of constraints they work with, and the friendliness of the other workers in the organization. This thesis will also analyze if the type of organization, amount of functional differentiation, supervisory status, and senior leader status can predict the perceptions of ethical climate within the organizations studied. This makes for a total of nine factors that will be analyzed in this thesis. Learning more about the factors that may help determine the perception of the ethical climate of an organization could ultimately help managers improve their organizations.

Purpose

The purpose of this thesis is to determine and analyze some of the factors that shape the perceptions of the ethical climate of personnel within five AF organizations of ASC. Morris (1995) found that such factors, such as perceptions of a supervisor's behavior, do exist and can influence the ethical and the unethical behaviors of employees. Analyzing these factors will allow leaders and commanders to know what some of the factors are that shape the perception of the ethical climate of the organization. With this knowledge, organizational leaders can take positive steps to show employees what kind of behavior is expected of them, which should help to improve the perceptions of the

ethical climate of the organization. It is also important to know and understand these factors that can influence people's perceptions of ethics, because one's ethical perceptions may guide their behavior (Key, 1999).

Overview of Factors Shaping Ethical Climate

The factors analyzed in this thesis can be broken down into two main categories. These categories are cultural perception variables and organizational composition variables. These two categories were formed by conducting a review of past research on ethical behavior and the factors that affect perceptions of ethics within organizations. This review resulted in the formulation of three main categories of variables; the two listed above and another variable called the personal ethics variables. The personal ethics variables consisted of such factors as the person's age, tenure, education, family history, religious background, etc. With these three categories of variables created, the survey was reviewed to see how well these three types of variables were measured with the survey instrument. It was determined that the personal ethics variables would not be analyzed in this thesis because this information was not obtained in the survey data. The survey did measure the cultural perception variables and the organizational composition variables. Therefore, this thesis will analyze these two main categories of variables.

The first category of variables consists of five factors that make up the culture of the organization that may be influential in predicting the ethical perceptions of the organization. These variables are friendliness, leadership, supervisors, constraints, and rewards. These five cultural perception variables will be analyzed at an individual level (i.e., an individual respondent's viewpoint) as well as at an organizational level (i.e., an

organizational viewpoint). These five variables will be explained in more depth and development of the hypotheses that will test each variable will occur in Chapter 2. Chapter 2 will also explain why these five factors were chosen (and not others) to be analyzed in this thesis.

The second category of variables consists of four factors that can further be broken down into two more categories. These are organization position and organization structure variables. The organization position variables deal with the level (or position) at which the employee is located within the organization. Specifically, whether or not the employee is a supervisor and whether or not the employee is a senior leader in the organization will be analyzed. The organization structure variables consist of the type of organization the employee is working in and the amount of functional differentiation that exists within that employee's organization. Again these variables will be explained in depth and the hypotheses to be tested for each variable will be developed in Chapter 2.

Research Questions

There are two main research questions analyzed in this thesis. First, what factors can significantly predict perceptions of ethical climate within organizations? Second, which of these significant factors are most influential in shaping the perceptions of the ethical climate of organizations?

Importance of Research

This research will help managers in all organizations (military and civilian) understand the factors that shape the perceptions of the ethical climate of an organization.

Understanding these factors will help managers know the type of ethical climate that may exist in their organization. Knowing this will enable managers to focus their policies and training towards that type of ethical climate in order to promote and encourage ethical conduct from their employees (Wimbush et al., 1997). Managers can also ensure that the people that are in certain important organization positions, such as senior leaders and supervisors, know the importance of ethics and realize how influential they are in shaping the ethical climate of the organization.

The results of this thesis will be made available to the various commanders of organizations within ASC so they can attempt to change or improve ASC and their organizations. A better understanding of ethics and the factors that may be able to predict perceptions of ethical climate in organizations will help commanders focus their training and ethics programs on areas that are found to be needing more attention. An overall better understanding of ethics and the factors that will be analyzed in this thesis will help improve ASC and ASC's ethical culture.

Scope

The results of this thesis directly affect everyone in the Air Force because it is extremely important that all members of the Air Force are ethical and exhibit ethical behavior. Nine factors that may be used to predict perceptions of ethics will be presented and analyzed by testing nine hypotheses that will be developed in Chapter 2. The final results will show the extent that these factors really do or do not predict perceptions of ethics within the organizations studied and how influential these significant factors are.

Thesis Outline

Chapter 2 will summarize the current literature on the subjects of ethics and ethical climates within organizations. The factors that will be analyzed in this thesis will be discussed and the hypotheses that will be tested will be developed. Chapter 3 will describe the methodology that was used in testing the hypotheses that were developed in Chapter 2. Chapter 4 will present the results of analyzing each hypothesis and Chapter 5 will summarize the thesis and present the major findings and conclusions of this effort.

II. Literature Review

Overview

This chapter will provide a background on the issues involved in this thesis as described in the current literature. It will begin by discussing predictors of ethics. It will then provide a background summary and definition of ethics and ethical climate and culture within organizations. A discussion of ethics in organizations will follow. Next, the cost of being unethical will be covered followed by a discussion about the importance of organizational ethics. Some specific findings of ethics within ASC will then be summarized. The specific factors that may be used to predict perceptions of ethics will then be covered and hypotheses that will be tested later in the thesis will be developed for each of the factors. Next there will be a discussion about some of the other factors (that were not analyzed in this thesis) that may affect perceptions of ethics within organizations. Finally, a summary of this section and an overview of the rest of the thesis will be presented.

Predictors of Ethics

Past research has proposed several items that predict the perceptions of the ethical climate of an organization (Cullen et al., 1993). For example, it has been proposed that the quality of the leadership within the organization affects the perception of the ethical climate of the organization. Specifically, the higher the quality of leadership that exists in the organization, the higher the perceptions of the ethical climate are expected to be (Lindsay et al., 1996). We can then analyze the organizations to determine if the quality

of the leadership really can predict the ethical perceptions of the organization (i.e., within the organizations does high quality of leadership predict high ethical perceptions?). This is just one example of the nine factors that will be analyzed and discussed in this thesis that will attempt to predict the ethical climate of the five organizations studied. These factors will be discussed in more detail later in this chapter as well as an explanation of why these factors were chosen (and not others). This analysis should provide valuable insight to the various commanders within ASC about ethics and the ethical climate of their organizations.

Background on Ethics

Ethical issues have become so important that many organizations are now spending a lot of time and money on ethics training and education. Many organizations now even have an ethics officer or ethics division in charge of monitoring and improving the ethical culture of their organization. Morf et al., (1999) describe this trend by identifying the formation of a national Ethics Officer Association with over 150 members representing 120 organizations. They have also found a significant increase in the amount of ethics training that is now being offered in organizations. Many large corporations are instilling ethical values into their organizations a lot more in 1999 than they were five years ago in 1994. Lindsay et al. (1996) concurred. They found that 74 percent of the 171 companies they surveyed were taking steps to instill ethical values among their employees.

Organizations have taken these steps to prevent ethical problems and to avoid the bad publicity and press that results if an organization is found (or even perceived) to be

behaving unethically. This negative press can drastically affect the company and can end up costing the company reputation, valued customers, and millions of dollars in sales.

The Air Force has also realized the importance of emphasizing ethics and ethical behavior. Air Force members engage in extensive ethics training throughout their Air Force careers, and ethical behavior is demanded of all personnel. Unethical behavior is not tolerated and is often punished severely. This thesis will analyze ethics in the Air Force, and specifically, ethical perceptions of personnel within ASC. The end goal is to determine some of the factors that can be used to predict ethical perceptions within the five organizations of ASC that were studied. Knowledge of these factors will become a tool for managers to use to improve and enhance their organization's ethical climate.

Definition of Ethics and Ethical Culture

Some scholars define ethics as "the moral principles that individuals inject into their decision making process that help temper the final outcome to conform with the norms of their society." They go on to say that ethics "are concerned with moral obligation, responsibility, and social justice of all parties involved in the decision process" (Morf et al., 1999:256). Based on this definition, ethics can be summarized as the principles that people live by that help them make decisions. Ethics is a personal quality. The ethics of everyone in the organization influence the ethical climate or ethical culture of the organization.

Key (1999) defines ethical culture as being a part of the organizational culture, representing the interaction among formal and informal systems of behavior control, which are capable of promoting ethical and unethical behavior. She also says that ethical

culture represents the shared norms and beliefs about the ethics within an organization. Wimbush and Shepard (1994) define ethical climate by saying that it represents the "the stable, psychologically meaningful, shared perceptions employees hold concerning ethical procedures and policies existing in their organizations" (Wimbush & Shepard, 1994:638). Since ethical culture represents the shared beliefs about the ethics of an organization, it is logical to assume that different organizations exist on a continuum bounded at one end by ethical organizations and at the other by unethical organizations (Key, 1999). For the purpose of this thesis, ethical culture and ethical climate will be used to represent the same idea – the ethics of an organization. These two terms may not be precisely the same, but debating the difference is not the purpose here. Therefore, these two terms will be used interchangeably in the rest of this thesis.

The organization's ethical culture can have a large impact on the individual employees who are often forced to conform their personal ethics to the organization's ethical culture (Fritz et al., 1999). This is often required because every employee has their own set of personal ethical values that they bring to the organization. The process of conforming these personal values to match the values of the organization may often result in conflicts and other negative consequences when the personal values are different than the organization's values (Business Ethics Survey Report, 1997). In some cases, this pressure to adapt one's behavior to match that of the organization may actually lead to unethical behavior (Key, 1999). Even the most upright and honest people may become dishonest and behave unethically when the organizational pressures are great enough (Lindsay et al., 1996).

Ethics in Organizations

The history of the organization plays a large part in what the ethical climate of the organization is. Researchers say that organizational history, along with environment and organizational form, are the three main factors that determine ethical climate in an organization (Fritz et al., 1999; Victor & Cullen, 1987). Nicholson (1994) agrees and said that the history of previous dilemmas and challenges plays a large part in shaping the ethical character of an organization.

The ethics of an organization can often be measured by the behavior of the employees in that organization (Wimbush & Shepard, 1994). When these behaviors are ethical and are reinforced by the organizational culture, the behaviors increase. When unethical behaviors are reinforced by the organizational culture, these behaviors will also tend to increase (Key, 1999). Therefore, it is important for the organization to ensure that their employees know what is expected of them and what the expected ethical behaviors are and to reinforce or reward the behaviors that are consistent with the organization's goals and expectations. If these standards and expectations are upheld and reinforced, the organization is likely to be more ethical. Some scholars agree and say that upholding ethical standards of behavior and rewarding what is expected is the single most important factor related to increasing the commitment to the ethical standards of the organization (Fritz et al., 1999).

The Cost of Being Unethical

The bad press that may harm organizations is one of the main costs of being unethical. There are other costs that organizations must consider and must address.

These costs were not measured or tested in this thesis, but avoiding these costs should be considered as incentives for organizations to ensure their employees are as ethical as possible. For example, Morris (1995) reports that theft can cost U.S. businesses over 40 billion dollars annually. Wimbush and Shepard (1994) report that U.S. businesses lose approximately 40 billion dollars per year due to nonviolent unethical behavior.

Morris (1995) also brings up another considerable cost. This is the cost of trying to monitor employee behavior and trying to control the unethical behavior that may exist in the organization. One other cost, which may be considerably large, is the loss of the faith of the customers and clients of the organization. This loss of faith may result in the loss of the revenue that these valued customers were bringing to the organization if those customers decide to do their business with another organization that they see as being more ethical.

Importance of Organizational Ethics

Organizations have become extremely concerned about being ethical and promoting ethical practices. This is partly a result of the high costs of being unethical. It is also a result of organizations becoming concerned with ethics because it is the right thing to do. This idea can create an environment in the organization in which employees know that they are expected to do the right thing, in the right way, for the right reason (Business Ethics Survey Report, 1997). Being concerned for ethics because it is the right thing to do is just one of the many reasons organizations are concerned about ethics. Other reasons organizations are concerned about ethics include being a successful and profitable organization and surviving in their business sector.

Morf et al. (1999) report that organizations have a greater concern for ethics in 1999 than previously reported and that 80% have taken positive steps to implement an ethics program in their organization. Babcock (1996) gives an example of how organizations are indeed concerned with the ethical practices of its employees. In the example, a survey of 300 major companies revealed that 75% had written ethical codes of conduct and 61% had terminated employees over the past five years for ethical violations.

More concern should be placed on improving ethics because there is no doubt that unethical practices are occurring in organizations. In a 1992 survey of 13,000 government workers, 18% reported that they had seen direct evidence of illegal or unethical activity (Morris, 1995). In another survey conducted in 1997, 46% of respondents indicated they occasionally observed unethical conduct, and 7% of respondents indicated they often observed conduct in their organization that violated the law or the organization's ethical standards (Business Ethics Survey Report, 1997). Some examples of such unethical activities include: insider trading on Wall Street, exposing workers to hazardous working conditions, dumping of chemical waste into oceans and rivers, receiving kickbacks, theft, fraud, and discriminating in promotion or hiring practices (Morris, 1995). Morris (1995) sites another survey, in which 40% of executives reported that they were asked to behave unethically, primarily because of pressure from the top (i.e., people above them in the organization). Along these same lines, in a business ethics survey conducted in 1997, 53% of respondents said that they felt pressured by other employees or managers to compromise the organization's ethical standards (Business Ethics Survey Report, 1997).

Ethics within ASC

A study of wrongdoing within ASC conducted by Van Scotter et al. (1998) provides valuable insight into what the ethical environment may be like within ASC. This study analyzed ASC employee's experience with wrongdoing in the workplace and their reactions to these wrongdoing incidents that they observed. The results of this study indicate that about 39 percent of the survey respondents (1,280 out of 3,288) indicated that they had observed one or more activities that they perceived to be wasteful, improper, illegal, or unsafe. In general terms, wrongdoing can be thought of as being unethical. Therefore, these results indicate that 39 percent of ASC employees who responded to the survey indicated that they have observed unethical actions or incidents.

The study also found significant results regarding the estimated cost of wrongdoing. These results indicate that of the 398 cases for which cost estimates were included, approximately 170 of these were estimated to cost ASC over $100,000 each. Approximately the same number of cases were estimated to cost ASC between $1,000 and $100,000 per each. These numbers indicate that wrongdoing is costing ASC millions of dollars every year (Van Scotter et al., 1998). These results of how prevalent wrongdoing is in ASC and how much wrongdoing is costing ASC lend support to this thesis in that the thesis results may give leaders and managers the information they need to fix these problems.

Factors that May Predict Ethics

There are basically two categories of data that will be analyzed in this thesis. These include five cultural perception variables and four organizational composition

variables. Organizational composition variables can be further broken into two organization position variables and two organization structure variables. These nine variables are summarized in Table 1 and are discussed in detail in the rest of this chapter.

Table 1. The 9 factors that were analyzed for their effect on ethical perceptions

Cultural Perception Variables (5)			**Organizational Composition Variables (4)**	
Variables	**Individual Level**	**Organization Level**	**Organization Position (2)**	**Organization Structure (2)**
Perception of Leadership Behavior	X	X	Supervisory Status	Type of Organization
Perception of Supervisor Behavior	X		Senior Leader Status	Functional Differentiation
Rewards	X	X		
Constraints	X			
Friendliness	X	X		

These factors were picked for two main reasons. The first reason is that these nine variables were all supported by theory in the literature. This theory will be summarized later in this chapter. The second reason for picking these factors was the results of the factor loadings of the factor analysis indicated that these items grouped well together. The results of the factor analysis are shown in Chapter 3.

These nine variables were analyzed in this thesis, but there are also other factors found in the literature that may also be able to predict perceptions of the ethical climate of an organization. Some of these other factors will be discussed at the end of this chapter along with a discussion of why they were not included in this thesis.

Cultural Perception Variables

Friendliness

It has been found that an employee's friendliness with other employees has a direct impact on their ethical behavior and their perceptions of the ethical climate of the organization (Fritz et al., 1999). This is partly because friendliness leads to talking with other employees about the organization's ethical standards. This keeps the standards close at hand and develops one's mental model of ethical behavior so that these standards can be easily applied whenever necessary. In one research study on the subject, Fritz et al. (1999) found that the two best predictors of awareness of an organization's ethical standards were managerial adherence and compliance to the standards and employee discussions with their peers.

Past research also explains that employees will often talk with fellow workers themselves about ethics and ethical violations in order to keep the ethical standards in the organization high. Wenker (1990) found that employees will often deal with their fellow workers openly when observing breaches of integrity because they want to "maintain the standard of integrity" in the organization. By monitoring themselves and dealing with other employees directly, the ethical culture of the organization is maintained. This is more likely to occur in organizations in which the employees are friendly with each other and enjoy each other. This may also help to explain why supervisors and senior leaders do not see or know about all of the ethical violations that may occur in their organization.

The literature also indicates that employees do, to some extent, value what their peers think and say regarding ethics. For example, 23% of respondents to a 1997 business ethics survey said that their friends/co-workers had a "great influence" on their

ethical behavior (Business Ethics Survey Report, 1997). Therefore, if the ethical climate is strong enough, unethical behavior may be discouraged through peer pressure and the concern for what an employee's peers think about the issue in question. This feeling of peer pressure will be greater in organizations in which the employees are friendly with each other and enjoy each other. This feeling of peer pressure could also work the other way in that if one person is unethical they may place pressure on their peers to also be unethical. Hopefully, this negative aspect of peer pressure does not occur in the organizations analyzed in this thesis, but if it does this may help explain why the hypothesis is not supported if this turns out to be the case.

Based on this evidence in the literature, it can be hypothesized that the more friendly employees are with each other and the more employees enjoy each other the more likely they are to have high perceptions of the ethical climate of their organization. For example, an organization in which the employees enjoy and are friendly with each other would be expected to have higher perceptions of the ethical climate of the organization than an organization in which the employees do not enjoy and are not friendly with each other. This leads to the question of whether friendliness of coworkers shapes the ethical climate of an organization. As more employees in an organization perceive their coworkers to be friendly, the overall climate of the organization becomes friendlier. Thus, the effect of friendliness is being tested at both the individual and organizational level as follows:

HYPOTHESIS #1A: Friendliness will have a significant, positive effect on an employee's perception of ethics in an organization.

HYPOTHESIS #1B: Friendliness of coworkers will have a significant, positive effect on the ethical climate of the organization.

Perception of Leader Behavior

It is hypothesized that the leadership of the unit can be a viable predictor of the perceptions of the ethical climate of an organization (Lindsay et al., 1996). Subordinates often watch and follow what their leaders do, so if the leaders are unethical or behave in unethical ways it is likely that the subordinates, and thus the organization, will be unethical as well. This is because ethical perceptions can influence an individual's behavior (Key, 1999). If the leader is seen or even perceived to be unethical, perceptions of the ethical climate of the organization will be low and people in the organization are likely to be unethical themselves.

In the Air Force, leaders are expected to uphold high ethical standards and unethical behavior is not tolerated. Because leadership plays such an important role in influencing the ethical behavior of employees (Lindsay et al., 1996), it is important for leaders to know that the policies and procedures that they set and enforce will go a long way in shaping employees' ethical perceptions (Wimbush & Shepard, 1994). Leaders must assume responsibility and should be held accountable for ensuring that their conduct models the organization's ethical standards (Business Ethics Survey Report, 1997).

Based on this evidence from the literature about how important the leader's behavior is in influencing the ethical behavior of subordinates and the organization, measuring the perceptions of leadership behavior can be a viable predictor of the ethical climate of the organization. This allows for the development of hypotheses #2A and

#2B. Hypothesis #2A, which measures leadership on an individual level, tests the idea that if an employee perceives their leadership as setting a good example and striving for excellence, they will have high perceptions of the ethical climate of the organization. Hypothesis #2B, which measures leadership on an organizational level, tests the idea that if the leadership of the organization sets a good example and strives for excellence then the organization should have a high ethical climate.

HYPOTHESIS #2A: A significant positive relationship will exist between leaders perceived to be setting a good example and striving for excellence and an employee's perception of ethics in the organization.

HYPOTHESIS #2B: Leader behaviors of setting a good example and striving for excellence will have a significant positive impact on the organization's ethical climate.

Perception of Supervisor Behavior

Evidence in the literature shows that the supervisor's behavior is a significant predictor of subordinate's perceptions of the ethical climate of the organization (Wimbush & Shepard, 1994; Morris, 1995). Subordinates are likely to mimic supervisors' behavior because it is the supervisor who judges the subordinate's behavior. If the subordinate's behavior is not in line with the supervisor's behavior, they are likely to have conflicts with the supervisor and may end up leaving the organization (Wimbush & Shepard, 1994). Wimbush and Shepard (1994) report that it has been argued that even when an organizational ethics policy exists, a subordinate will be more likely to do what they see their supervisor doing rather than following the ethics policy.

If subordinates are using their supervisor's behavior as a model to follow in the organization, it would be desirable for the supervisor's behavior to be aligned with top management's ethical codes and policies. It is also important that supervisors act as links between top management and their subordinates to disseminate ethical codes and policies (Wimbush & Shepard, 1994). There are instances in which supervisors may not disseminate this information or in which they might reinterpret the information. This reinterpretation and not disseminating by supervisors may help explain why different ethical climates exist in sub-units of the same organization (Wimbush & Shepard, 1994).

Since supervisors have such a drastic impact on the ethics of their subordinates, if the perceptions of the supervisor's behavior are positive the perceptions of ethics in the organization are likely to be high. However, if the perception of the supervisor's behavior is negative, the perceptions of the ethical climate of the organization are likely to be low. Thus, we can conclude that the higher the perceptions of supervisor's behavior, the higher the ethical perceptions of the organization. This leads to the development of hypothesis #3, which tests supervisor only on an individual level. A discussion of why supervisor was not tested at the organizational level will occur in Chapter 4.

HYPOTHESIS #3: Supervisor approachableness and striving for excellence will have a significant positive effect on an individual's perception of ethics.

Constraints

Constraints can be a good predictor of the perceptions of ethics in organizations because if people do not have the time or the resources needed to complete a job properly

and on time they may feel pressure to take shortcuts or cheat (i.e., behave unethically; Nicholson, 1994). The results of one business ethics survey give three reasons why the respondents felt pressured into compromising their organization's ethical business standards. These three reasons were meeting overly aggressive financial or business objectives, meeting schedule demands, and helping the organization survive (Business Ethics Survey Report, 1997). Staw and Swajkowski (1975) found that organizations that are confronted with scarce environments (i.e., scarcity of resources) were more likely to commit illegal acts. Similarly, Judge (1994) found that for organizations in scarce environments, it appears that both financial and social goals are sacrificed because they are more focused on surviving than these other things.

Therefore, unethical behavior may be predicted in conditions in which the workers do not have enough time or the proper resources available to complete their jobs on time (i.e., scarcity of resources). This leads to the development of hypothesis #4A, which measures constraints only on an individual level. A discussion of why constraints was not tested at the organizational level will occur in Chapter 4.

HYPOTHESIS #4A: There will be a significant negative effect between constraints and an employee's perception of the ethics of the organization.

Rewards

The way employees are treated has an effect on their ethical behavior and their perception of the ethical climate of the organization (Key, 1999). It is proposed that the better people are treated and the more rewards they are given the higher ethical perceptions they will have. Research shows that employees will behave ethically if doing

so is properly rewarded. It has also been shown that ethical behavior will result when unethical behavior is clearly punished (Morris, 1995). If a good reward system does not exist in an organization, workers may believe that "anything goes" as long as the objectives are being met and unethical behavior may result (Wimbush & Shepard, 1994). Lindsay et al. (1996) have found that what gets rewarded in an organization is what typically gets done. They go on to say that if the ethical employees are the ones getting promoted then the message becomes clear - behaving ethically will be rewarded.

Unfortunately, not every organization rewards ethical behavior. The literature emphasizes rewarding ethics and how important this is. Still, many organizations are not doing this. Lindsay et al. (1996) studied ethical rewards systems within 84 companies and found that 88 percent of the 84 companies did not have an ethics focused reward system. They noted that it is unfortunate that these firms are not benefiting from the motivational benefits that positive reinforcement provides. In another study, it was found that 66% of respondents agreed with the statement that "ethics are not rewarded in business" (Business Ethics Survey Report, 1997:28).

Another reason to have an ethics based reward system is the fact that without it, there is no way to reinforce or punish what is called for in the ethical codes and policies of the organization. In fact, failure to monitor, measure and reward the performance of individuals on the ethical plane will leave codes of conduct operating in a vacuum, of little use in promoting ethical behavior in the organization (Lindsay et al., 1996).

Therefore, it is clear that companies should reward positive behavior in order to show other employees that this is the behavior that is expected. Taking advantage of the positive reinforcement that rewards provide ensures that the ethical codes and policies are

being practiced and rewarded in the organization. This leads to the development of hypotheses #5A and #5B. Hypothesis #5A, which measures rewards on an individual level, tests an employee's perception of the fairness of the reward system in an organization. Hypothesis #5B, which measures the reward system on an organizational level, tests the impact the reward system has on the ethical climate of the organization.

HYPOTHESIS #5A: The perceived fairness of the reward system in an organization will have a significant positive effect on an employee's perception of the ethics of the organization.

HYPOTHESIS #5B: A fair reward system will have a significant positive impact on the ethical climate of the organization.

Organization Composition Variables

Supervisory Status

It is hypothesized that a supervisor will have higher ethical perceptions than a non-supervisor. Typically, a supervisor has been with the organization longer and should have received more training and should have more knowledge in the area of ethics and ethical issues. A supervisor is also more likely to have positive perceptions of the ethics of the organization because they can directly influence this. A supervisor also has a personal stake in the organization. If they were to say that their perception of the ethics of the organization was poor, this would partially reflect on themselves and may indicate that they are not doing their jobs. This leads to hypothesis #6.

HYPOTHESIS #6: Supervisors will have significantly higher perceptions of the ethical climate of their organizations than non-supervisors.

Senior Leader Status

A senior leader is different than a supervisor. Within the organization a senior leader would outrank or would be higher in the organization than a supervisor. They are both levels of management (and would have a lot of similar management qualities), but senior leaders are higher. Senior leaders could be considered upper or senior management and supervisors could be considered middle management.

Past research suggests that the more senior the leader or person is, the more ethical they should be. This can be said for several reasons. Senior leaders have been in the organization longer and have become more institutionally aligned with the organization regarding their values and ethics. This increase in institutional orientation corresponds with advancement in rank and higher levels of training and Professional Military Education (PME; Smith, 1998). Wenker (1990) agrees and says that the higher the person is in the organization the higher the person's opinion of the ethical climate of the organization is expected to be. This is because a senior leader often establishes and controls the ethical climate of the organization based on the policies and training that they develop and mandate. A senior leader also has a personal stake in the organization. If they were to say that their perception of the ethical climate of the organization was poor, this would partially indicate that they might not be doing their job correctly. They may also not want to make their organization look bad by rating the ethical perceptions low since their personal name and reputation is associated with that organization.

Not only are senior leaders expected to be more ethical than other members of the organization, senior leaders are also held more responsible for ethical deviations by being punished more severely for unethical actions and behaviors (Wenker, 1990). The fact

that they are punished more severely for ethical deviations than other people in the organization makes them less likely to commit ethical violations. This makes sense that ethical deviations for senior leaders are judged more severely, because the behavior of senior leaders has been shown to have such a great influence on the way employees act and therefore the way the whole organization acts when ethical dilemmas arise (Morris, 1995). Therefore, the actions of senior leaders concerning ethical situations set the tone for the entire organization's ethical climate. This leads to hypothesis #7.

HYPOTHESIS #7: Senior leaders will have significantly higher perceptions of the ethical climate of their organization than non-senior leaders.

Type of Organization

The type of organization a person is in will have an effect on the perceptions that person has of the ethical climate of the organization (Wimbush et. al, 1997). This is because of the many different missions and activities that occur in different types of organizations. These different missions and activities will place more or less pressure on the employees. For example, employees in an extremely high pressure, high operations tempo job would be under more pressure to commit ethical violations than employees in a job that has less pressure and is less critical. Different types of organizations will also experience different kinds of ethical pressures that will make their ethical perceptions different. For example, a doctor in the Medical Group would face different types of ethical pressures than a person in the Acquisition Group. These factors, along with some of the other factors mentioned in this thesis such as organization history and organization climate, will cause some types of organizations to have a higher ethical climate than other

types of organizations. Some organizations will also have higher ethical perceptions than other types of organizations.

The five organizations that were studied within ASC include the 88th Air Base Wing, the 74th Medical Group, the Acquisition Group, the Wright Laboratory, and the ASC Command Staff. The five organizations studied in this thesis can be categorized into the following types of organizations as based on the work by Katz and Kahn (1966). Table 2 presents the different organization types for each ASC organization.

Table 2. Organization type classification for each ASC organization

ASC Organization:	Organization Type:
A) 88th Air Base Wing	Managerial/Political
B) 74th Medical Group	Maintenance
C) Acquisition Group	Productive/Economic
D) Wright Laboratory	Adaptive
E) ASC Command Staff	Managerial/Political

Managerial/Political organizations consist of the activities in the organizations that are concerned with the adjudication, coordination, and control of resources, people, and subsystems. The 88th Air Base Wing and the ASC Command Staff were both characterized as this organization type because both of these organizations are involved with managing and controlling the resources, people, and subsystems of ASC. For example, consider that the mission statement of the Air Base Wing says that they are, "dedicated to providing the highest caliber living and working environment to support and enhance the readiness and mission capabilities of our customers" (Mission, 2000).

Maintenance organizations try to maintain or improve our society. There are two types: direct maintenance deals with education and training, and restorative maintenance deals with health and welfare activities and institutions of reform and rehabilitation. The

74th Medical Group was characterized as a maintenance organization because the hospital is a large institution of reform and rehabilitation and consists of numerous health and welfare activities which are designed to keep the personnel within ASC healthy and in good physical condition.

Productive or economic organizations are concerned with the creation of wealth, the manufacture of goods, and the providing of services for the general public or for specific segments of it. The Acquisition Group was characterized as this type of organization because it regularly deals with the acquisition and development of new Air Force products. These products, such as new weapons systems, provide a service of defense to the rest of the Air Force and the public in general.

Adaptive organizations create knowledge, develop and test theories, and apply information to existing problems. The Wright Laboratory was characterized as this type of organization because the lab does a lot of developing and testing of theories and applies what they learn to try to solve different problems that the Air Force has. In fact, the mission of the organization is to "lead the discovery, development, and timely transition of affordable, integrated technologies that keep our Air Force the best in the world" (Mission Statement, 2000).

Other sources in the literature suggest some other reasons why these different organizations may be more or less ethical than others and why some organizations may have different ethical perceptions than others. Smith (1998) found that support officers and scientific or engineering officers are more institutional in their orientation and thinking than are operational officers (pilots, navigators, and space and missile officers).

Smith (1998) also found that support officers are slightly more institutional in their orientation and thinking than are scientific or engineering officers.

Assuming that the institution values ethics, being more institutional in ones orientation can be interpreted as having higher ethical perceptions of the organization than someone who is less institutional in their orientation. A person who is more institutional is more likely to agree with what the institution is teaching about ethics. If employees agree with what the organization is teaching and what everyone is doing (or at least what they should be doing) then they are more likely to have higher ethical perceptions of the organization.

This finding by Smith (1998) indicates that support officers, who would represent a large portion of the 88th Air Base Wing, should have higher ethical perceptions of their organization than scientific and engineering officers, which would be represented by the Wright Laboratory. A couple of other factors that should be noted are that many of the personnel in the Medical Group (at least the doctors) must take an oath of ethics, the Hippocratic Oath. Taking and abiding by this oath might suggest that the Medical Group should exhibit high levels of ethical behavior, which would lead to higher ethical perceptions of the organization. One might also believe that since most of the personnel working in the Wright Laboratory are engineers that a lot of them may belong to professional societies (which have codes of ethics). If this is the case, the Wright Laboratory employees should be more aware of ethical issues and should have higher perceptions of the ethical climate of their organization.

This finding by Smith (1998) and these other theories about why certain organizations may have high ethical perceptions is informative, but it does not allow for

comparisons to be made or for a rank of different levels of ethical perceptions in the different organization to be hypothesized. Because there is no way to rank or order these organizations, we must instead try to determine if the ethical perceptions are in fact different in the different types of organizations. Since they are all Air Force organizations (whose employees have received similar training) they may have similar ethical climates. This leads to the development of hypothesis #8.

HYPOTHESIS #8: There will be a significant difference in the perceptions of the ethical climate between each of the five organizations.

Functional Differentiation within the Organization

Most organizations are made of several departments or branches. For example, most Air Force squadrons are made up of several flights. Damanpour (1991) calls this breaking down of an organization into different units functional differentiation. Several authors have hypothesized that functional differentiation causes the separate operating units to have different ethical climates (Wimbush et al., 1997; Nicholson, 1994).

It can be hypothesized that the more functional differentiation that exists, the lower the organization's perceptions of the ethical climate will become. For example, an organization with five sub-units would be predicted to have better ethical perceptions than an organization with ten sub-units. This hypothesis is supported by the idea that as the policy gets passed on to more people it is more likely to be ignored or misinterpreted. For example, if a squadron commander is explaining the policy to ten flight commanders in one case and five flight commanders in the other, there are more chances of the ten flight commanders ignoring or misinterpreting the policy than the five flight

commanders. Wimbush and Shepard (1994) explain that as policies are handed down from top management (squadron commander) to the supervisor (flight commander) and then to the employee, the supervisor (flight commander) may reinterpret the policies. This process of reinterpretation would suggest that the employees are getting different information than what other employees in other sub-units (flights) are getting. This information may or may not be in line with the organization's ethical goals and policies because the supervisor may have reinterpreted it. This may help to explain how different ethical climates form in different organizational sub-units. More functional differentiation will also cause more confusion and will make communication more complicated. The organization culture will also become more fragmented which will make it even tougher for the sub-units to have similar perceptions of ethical climate in the organization. This leads to the development of hypothesis #9.

HYPOTHESIS #9: Organizations with greater functional differentiation will have significantly lower ethical climates than organizations with less functional differentiation.

Discussion of Other Factors That May Affect Perceptions of Ethics

There were five other main factors that were discussed in the literature that were not tested in this thesis. These other factors were not tested because the survey data did not measure these other concepts at all or well enough for them to be analyzed. For example, the survey data did not ask any questions about job satisfaction and job satisfaction may be a viable predictor of the perceptions of ethics in an organization (Key, 1999). Therefore, due to limitations of the survey these five other factors were not analyzed in this thesis. Future research may want to analyze these five factors as well as

some of the other factors that probably exist. These five factors are ethical codes, communication, tenure and age, training, and job satisfaction.

The first main factor included in the literature not discussed in this thesis is ethical codes. The existence of clearly defined ethical codes leads to more ethical behavior and better ethical perceptions in organizations (Wimbush & Shepard, 1994), (Morris, 1995). Part of the reason for this is that organizations that do have clearly defined ethical codes provide clear guidance for employees to use or to reference whenever necessary. In a business ethics survey conducted in 1997, 82% of respondents said that they either frequently or occasionally use these ethical codes to guide their decisions and conduct at work (Business Ethics Survey Report, 1997).

The Air Force has a clearly published and identifiable organizational ethic, the core values. The core values were designed as an ethical code for Air Force members to use when faced with ethical dilemmas. The use and application of the core values by Air Force members in their jobs and lives should result in a stronger ethical climate throughout the organization. Therefore, organizations that have clearly published ethical codes would be expected to have better ethical perceptions than organization that don't.

The next main factor is communication. The better communication channels that exist in an organization the better the ethical perceptions within that organization are expected to be. This is because policies and training regarding ethics and ethical issues will be clearly be communicated to everyone in the organization and there will be no doubt in anyone's mind what is expected of them and what the policy is. Better communication allows for more interactions to occur from the top down and from the bottom up. This allows lower level employees to express their concerns or make

suggestions for how to change the ethics policy or to make suggestions for improvement in the ethics policies or training. Better communication also allows for questions to be answered efficiently and timely. Therefore, better ethical perceptions are expected in organizations in which good communication and good communication channels exist. An organization that has good communication is expected to have better ethical perceptions than an organization that has poor communication.

The next factor is tenure and age. The literature suggests that personnel should have better perceptions of the ethical climate of the organization with increased tenure and increased age. Victor and Cullen (1987) say that the reason for this is that socialization is more extensive and attrition has weeded out those people who do not fit well in the organization. Smith and Oakley (1994) say that there is evidence that older individuals are less inclined to accept unethical behavior than younger people. Therefore, better ethical perceptions are expected in cases of increased tenure and increased age. An older person is expected to have better ethical perceptions than a younger one and a person with a longer tenure is expected to have better ethical perceptions than a person with a shorter tenure. Tenure and age may also help explain why it is hypothesized that senior leaders and supervisors are expected to have higher perceptions of the ethical climate of an organization because senior leaders and supervisors typically have more tenure and more age than people who are not senior leaders or not supervisors.

The next major factor is training. The literature suggests that training is extremely important. If you want people to act and behave ethically, you must provide them ethics training. Training is extremely important in order to translate the organization's written standards into practice. Training is also the key to creating and

maintaining an organization's ethical culture (Business Ethics Survey Report, 1997). There is evidence that training is successful when it is offered. Respondents to a 1997 business ethics survey report that 85% of them said they either frequently or occasionally use the principles taught in their ethics training to guide their decisions and conduct at work (Business Ethics Survey Report, 1997). Therefore, better ethical perceptions are expected when ethics training is offered. An organization that offers ethics training is expected to have better ethical perceptions than an organization that does not. Once again, training may help explain why senior leaders and supervisors may be expected to have higher ethical perceptions than people who are not senior leaders and supervisors because senior leaders and supervisors have typically had more ethics training.

Job Satisfaction is the next major factor. Job Satisfaction can also have an affect on ethics in an organization. The general sentiment found in the literature is that the happier employees are with the organization, the more likely they are to have good perceptions of the ethical climate of the organization. This sentiment also worked in the opposite way in that the more dissatisfied employee's were with their organization, the more likely they are to have poor perceptions of the ethical climate of the organization. Key (1999) found direct evidence of this in her research studies. She found that a number of employees who had low ethical culture scores were also known to be unhappy with their jobs and were seeking other employment (Key, 1999). Therefore, it is hypothesized that the more satisfied the employee is with their job the better perceptions they are likely to have of the ethical climate of the organization.

Summary of the Literature and Overview of the Rest of the Thesis

This chapter has reviewed nine main factors that may be used to predict ethics and ethical perceptions within organizations and nine hypotheses were developed. In the next two chapters these factors will be studied and analyzed and the hypotheses will be tested to determine their effect on ethical perceptions within these ASC organizations. Chapter 5 will summarize the findings and conclusions of this thesis. One of the major findings is expected to be the fact that certain significant factors can be used as an instrument to effectively predict ethics in organizations. Key (1999) feels that such an instrument is needed, is long overdue, and will be extremely useful once it is developed (Key, 1999).

III. Methodology

Background

Between the years of 1993 and 1996 an organization culture survey was given to five organizations within ASC. The survey consisted of fifty-eight questions, and nearly 20,000 people responded to the survey over the four years it was administered. The survey asked the respondents various questions about their organizations and their organizational culture. The survey data were collected and compiled, but no detailed data analysis had been conducted to determine the survey results. This thesis analyzed these survey data and attempted to determine what factors found within the survey predicted ethics and ethical perceptions within the five organizations of ASC.

The survey was administered over a four-year period. In this thesis, all four years of the survey were analyzed. This allowed for comparisons to be made across years and for general trends to be observed. For example, if a finding was consistent over four years this may indicate that this finding was important and may be something that may persist in the organization until it is corrected. Likewise, if a finding only occurred in one of the four years, then maybe it is not a consistent result. Maybe it was just an anomaly for that one year that it occurred. Analyzing the survey over the four-year period also allowed for observations to be made regarding whether or not the ethical perceptions of the organizations improved, declined, or remained the same over the time period.

The survey mentioned above is shown in its entirety in Appendix 1. It should be noted that the survey responses were based on a six-point Likert type scale (i.e., 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Somewhat Agree, 5 =

Agree, 6 = Strongly Agree). Note that on this scale a response of six was the most positive response and that a response of one was the most negative response. All of the survey questions were positively worded, meaning that the most positive answer was a six, so a response of six was always the most desirable response throughout the survey.

The rest of this chapter summarizes the nine factors from Chapter 2 and how they were analyzed to determine if the survey data was consistent with the literature regarding whether or not the factors could significantly predict ethical perceptions within the organizations. The nine hypotheses developed in Chapter 2 were analyzed in Chapter 4.

Dependent Variable

The dependent variable "ethics" represented the perceptions members of the organization had regarding the ethical climate of the organization. These perceptions were measured with a single item from the survey, question #12.

Q12 People in my two letter live up to high ethical standards.

Independent Variables

Friendliness

Two survey questions were chosen to represent the perception of the friendliness of the employees within the organizations. The survey questions analyzed were questions 42 and 43:

Q42 People in my immediate work unit are friendly with one another.

Q43 People in my immediate work unit enjoy their co-workers.

These two questions were found to be statistically reliable for all four years the survey was administered as shown in Table 3. As shown in the table, the Cronbach's Alpha values ranged from 0.91 to 0.93 for this two-item scale over the four years.

Table 3. Cronbach's Alpha values for "Friendliness" for each year

1993		1994		1995		1996	
α	N	α	N	α	N	α	N
0.91	5413	0.92	5955	0.93	3673	0.93	4258

Note that a Cronbach's Alpha value greater than 0.70 was a sufficient measure of reliability (Nunnally, 1978). The higher the alpha value was the more reliable the questions were shown to be. The fact that the survey questions were reliable showed that they appeared to be measuring the same thing (repeatability of measurements and internal consistency) and could be grouped together to measure that thing by taking the mean of the survey questions for that variable. For example, if four different survey questions measuring the "constraints" variable were shown to be statistically reliable (with an alpha greater than 0.70), we could assume that they all measured the concept of constraints. We could then take the mean of the four questions to have one value that could be used to represent the "constraints" variable.

Perception of Leader Behavior

Six survey questions were chosen to represent the respondent's perception of leadership behavior. The survey questions analyzed were numbers 15 through 20. Leaders(s) in my two letter:

Q15 ask people about ways to improve the work produced.

Q16 encourage people to voice their concerns.

Q17 follow up on suggestions for improvement.

Q18 set examples of quality performance in their day-to-day activities.

Q19 regularly review the two letter's progress toward meeting its goals and objectives.

Q20 attempt to find out why we may not be meeting a particular goal or objective.

These six questions were found to be statistically reliable for all four years the survey was administered as shown in Table 4. As shown in the table, the Cronbach's Alpha values ranged from 0.93 to 0.94 for this six-item scale over the four years.

Table 4. Cronbach's Alpha value for "Leadership" for each year

1993		1994		1995		1996	
α	N	α	N	α	N	α	N
0.93	5413	0.93	5955	0.93	3673	0.94	4258

Perception of Supervisor Behavior

It should be pointed out at this point in the thesis that there was not a clear distinction made in the survey between what a supervisor and a leader were. The survey questions asked the respondents about their leaders and supervisors, but no definition or distinction between the two was ever made. Therefore, respondents may have been confused about who the survey was asking about. Some respondents may have interpreted their supervisor and their leader to be the same person. Others may have interpreted their leader to be their squadron commander while others may have interpreted their leader to be their flight commander. This ambiguity in the survey may have caused confusion and could have negatively affected the survey results. These possible negative effects are unknown.

The factor analysis results shown later in this thesis determined that these were in fact two different constructs, which allows for the two to be separated into two different variables. It was assumed that a leader was someone high in the organization (top management) and that a supervisor was someone in the upper to middle portion of the organization (middle management). A leader would outrank a supervisor in the organization structure. Whether or not the respondents assumed this same thing is unknown. The two were considered to be separate constructs (i.e., you can't be both).

Six survey questions were chosen to represent the respondent's perception of supervisor behavior in the organization. These were numbers 21 through 26:

People in my immediate work unit:

Q21 turn to their supervisors for advice about how to improve their work.

Q22 know that their supervisors will help them find answers to their problems.

Q23 are challenged by their supervisors to find ways to improve the system.

Supervisors in my immediate work unit:

Q24 make continuous improvement of our work a top priority.

Q25 regularly ask the customers about the quality of the work they receive.

Q26 ask us for opinions and ideas about our work.

These six questions were found to be statistically reliable for all four years that the survey was administered as shown in Table 5. As shown in the table, the Cronbach's Alpha values ranged from 0.91 to 0.94 for this six-item scale over the four years.

Table 5. Cronbach's Alpha value for "Supervisor" for each year

1993		1994		1995		1996	
α	N	α	N	α	N	α	N
0.91	5413	0.92	5955	0.93	3673	0.94	4258

Constraints

Four survey questions were chosen to represent the respondent's perception of the amount of constraints that were present within the organizations of ASC. The survey questions analyzed were numbers 39, 44, 45, and 46:

Q39 My immediate work unit has appropriate personnel to get the job done properly.

Q44 The right tools, equipment, and materials are available in my immediate work unit to get the job done.

Q45 The distribution of work among the people in my immediate work unit is well balanced.

Q46 There is ample time for people in my immediate work unit to perform jobs in a professional manner.

These four questions were found to be statistically reliable for all four years that the survey was administered as shown in Table 6. As shown in the table, the Cronbach's Alpha values ranged from 0.77 to 0.80 for this four-item scale over the four years.

Table 6. Cronbach's Alpha value for "Constraints" for each year

1993		1994		1995		1996	
α	N	α	N	α	N	α	N
0.78	5413	0.78	5955	0.77	3673	0.80	4258

Rewards

Three survey questions were chosen to represent the respondent's perception of the rewards that were given within the organizations. The survey questions analyzed were numbers 48, 49, and 50:

Q48 Attempts are made to promote the people in my immediate work unit who do good work.

Q49 People in my immediate work unit receive promotions because they earn them.

Q50 There is quick recognition for people in my immediate work unit for outstanding performance.

These three questions were found to be statistically reliable for all four years that the survey was administered as shown in Table 7. As shown in the table, the Cronbach's Alpha values ranged from 0.85 to 0.88 for this three-item scale over the four years.

Table 7. Cronbach's Alpha value for "Rewards" for each year

1993		1994		1995		1996	
α	N	α	N	α	N	α	N
0.88	5413	0.88	5955	0.85	3673	0.85	4258

Supervisory Status

Supervisory status was determined from the survey by asking the respondent if they were a supervisor or not. This question appeared at the beginning of the survey before any of the 58 survey questions were asked. This question was asked for all four years of survey data except for the 1993 survey.

The supervisory status variable was tested by taking the average of the "ethics" variable for all four years for the two categories of supervisor and not supervisor for each organization. These mean values were then statistically tested (using a t-test) to see if there was a significant difference between the mean values of the "ethics" variable for respondents who were supervisors compared to non-supervisors. If these two mean

values were significantly different, then supervisory status may be a viable predictor of the "ethics" variable in the ASC organizations studied.

Senior Leader Status

Senior leader status was determined from the survey by asking the respondent if they were a senior leader or not. This question appeared at the beginning of the survey before any of the 58 survey questions were asked. This question was asked for the 1995 and 1996 surveys, but not for the 1993 and 1994 surveys. The question was also asked only if the respondent said that they were a supervisor. If the respondent said that they were not a supervisor, then the senior leader status question was not asked.

The senior leader status variable was tested by taking the average of the "ethics" variable for all four years for the two categories of senior leader and not senior leader for each organization. These mean values were then statistically tested (using a t-test) to see if there was a significant difference between the mean values of the "ethics" variable for respondents who were senior leaders compared to non-senior leaders. If these two mean values were significantly different, then senior leader status may be a viable predictor of the "ethics" variable in the ASC organizations studied.

Type of Organization

The type of organization was determined from the survey by asking the respondent which organization they belonged to. The five main organizations were then listed for the respondents to choose from.

The type of organization variable was tested by taking the average of the "ethics" variable for all four years for the different types of organizations that were surveyed. These mean values were then tested to see if there was a significant difference between the mean value of the "ethics" variable for respondents who are from one organization compared to the mean value of "ethics" for respondents from another organization. If these two mean values were significantly different, then type of organization may be a viable predictor of the "ethics" variable in the ASC organizations studied.

Functional Differentiation within the Organization

The total number of two letter organizations that existed in each organization represented the amount of functional differentiation that was present in that organization. Taking the average of the "ethics" variable for the different organizations then allowed for comparisons to be made. These mean values were then tested to see if there was a significant difference between the mean value of the "ethics" variable for an organization with a certain amount of functional differentiation compared to an organization that had a different amount of functional differentiation. If these two mean values were significantly different, then functional differentiation may be a viable predictor of the "ethics" variable in the ASC organizations studied.

Factor Analysis

The five cultural perception variables (friendliness, rewards, constraints, leadership, and supervisor) were tested using factor analysis to make sure that the questions making up each of the variables were measuring the same thing (construct

validity). This factor analysis was accomplished through the principle axis factoring extraction method with varimax rotation. The results of the factor analysis are shown in tables 8-15. Note that the questions all grouped together very well and that there was no major cross loading. Also note for the factor analysis for each year, there were only five eigenvalues that were above the value of 1.0. Any eigenvalue greater than 1.0 meant that the factors that made up that eigenvalue group together well and were considered as a viable factor. The percent of variance explained for each factor is also shown.

These factor analysis results showed that five factors emerged. These factors reflected the definition of the variables that were discussed earlier in this chapter. Factor 1 consisted of six items and reflected the respondent's perceptions regarding their leader's behaviors. Factor 2 consisted of six items and reflected the respondent's perceptions regarding their supervisor's behaviors. Factor 3 consisted of four items and reflected the respondent's perceptions of the constraints present in their organization. Factor 4 consisted of three items and reflected the respondent's perceptions of the rewards system in their organization. Factor 5 consisted of two items and reflected the respondent's perceptions of the friendliness of their coworkers in their organization. Note that the factor structure remained stable across all four years of data (i.e., no major changes from year to year).

Table 8. 1993 Factor Analysis Results*

Factor	Variable	Eigenvalue	% of Variance	Cumulative %
1	Leadership	10.42	19.47	19.47
2	Supervisor	1.55	17.11	36.57
3	Constraints	1.30	10.43	47.01
4	Rewards	1.13	10.24	57.25
5	Friendliness	1.02	8.77	66.02

* Factor Analysis completed using Principal Axis Factoring Extraction with Varimax Rotation.

Table 9. Rotated Factor Matrix for 1993

	Factor Loadings for the 5 Factors From Table 8				
Survey Question Number**	1*	2	3	4	5
15. Leaders ask people ways to improve the work produced	**.72**	.33	.17	.21	.11
16. Leaders encourage people to voice their concerns	**.74**	.28	.15	.23	.16
17. Leaders follow up on suggestions for improvement	**.74**	.31	.23	.24	.13
18. Leaders set good examples of quality performance	**.71**	.32	.20	.22	.15
19. Leaders review progress toward meeting goals	**.66**	.34	.22	.14	.10
20. Leaders attempt to find out why goals are not met	**.66**	.35	.24	.14	.11
21. People turn to their supervisors for advice	.28	**.63**	.16	.19	.18
22. People know that supervisors will help them	.31	**.66**	.18	.22	.21
23. People are challenged by their supervisors	.38	**.70**	.16	.21	.16
24. Supervisors make continuous improvement a top priority	.37	**.67**	.27	.15	.12
25. Supervisors ask customers about the work they receive	.32	**.59**	.25	.14	.09
26. Supervisors ask for opinions and ideas about the work	.37	**.65**	.18	.21	.20
39. Appropriate personnel	.13	.15	**.65**	.13	.08
44. Appropriate resources available	.24	.17	**.47**	.16	.16
45. Balanced distribution of work	.21	.28	**.55**	.24	.23
46. Ample time to perform jobs	.17	.14	**.73**	.11	.06
48. Promote people who do good work	.23	.22	.24	**.78**	.12
49. People are promoted because they earn it	.26	.23	.20	**.79**	.15
50. Quick recognition for outstanding work	.33	.31	.25	**.55**	.18
42. People are friendly with one another	.16	.19	.15	.14	**.86**
43. People enjoy their co-workers	.17	.22	.18	.15	**.83**

* For example, 1 in Table 9 corresponds to Factor 1 in Table 8 (Leadership)

** Questions were shortened to fit in the table. The full question appears in Appendix 1.

Table 10. 1994 Factor Analysis Results*

Factor	Variable	Eigenvalue	% of Variance	Cumulative %
1	Leadership	10.57	48.78	48.78
2	Supervisor	1.56	6.14	54.92
3	Constraints	1.30	4.62	59.54
4	Rewards	1.11	3.92	63.46
5	Friendliness	1.05	3.54	67.00

* Factor Analysis completed using Principle Axis Factoring Extraction with Varimax Rotation.

Table 11. Rotated Factor Matrix for 1994

	Factor Loadings for the 5 Factors From Table 10				
Survey Question Number	1	2	3	4	5
15. Leaders ask people ways to improve the work produced	**.71**	.34	.20	.20	.08
16. Leaders encourage people to voice their concerns	**.74**	.30	.17	.21	.13
17. Leaders follow up on suggestions for improvement	**.74**	.31	.24	.20	.10
18. Leaders set good examples of quality performance	**.70**	.31	.19	.23	.19
19. Leaders review progress toward meeting goals	**.69**	.29	.20	.14	.13
20. Leaders attempt to find out why goals are not met	**.70**	.29	.23	.14	.12
21. People turn to their supervisors for advice	.28	**.62**	.15	.20	.23
22. People know that supervisors will help them	.33	**.66**	.20	.22	.22
23. People are challenged by their supervisors	.35	**.74**	.17	.21	.16
24. Supervisors make continuous improvement a top priority	.36	**.69**	.28	.17	.11
25. Supervisors ask customers about the work they receive	.32	**.59**	.22	.14	.11
26. Supervisors ask for opinions and ideas about the work	.36	**.68**	.18	.22	.16
39. Appropriate personnel	.17	.12	**.67**	.12	.09
44. Appropriate resources available	.23	.16	**.49**	.14	.17
45. Balanced distribution of work	.20	.32	**.53**	.27	.21
46. Ample time to perform jobs	.17	.17	**.71**	.14	.09
48. Promote people who do good work	.24	.24	.22	**.78**	.14
49. People are promoted because they earn it	.24	.23	.20	**.79**	.16
50. Quick recognition for outstanding work	.31	.33	.30	**.54**	.14
42. People are friendly with one another	.16	.23	.18	.15	**.85**
43. People enjoy their co-workers	.16	.22	.20	.15	**.84**

Table 12. 1995 Factor Analysis Results*

Factor	Variable	Eigenvalue	% of Variance	Cumulative %
1	Leadership	9.93	19.98	19.98
2	Supervisor	1.78	19.42	39.39
3	Constraints	1.47	9.70	49.09
4	Rewards	1.21	9.17	58.27
5	Friendliness	1.16	8.52	66.78

* Factor Analysis completed using Principal Axis Factoring Extraction with Varimax Rotation.

Table 13. Rotated Factor Matrix for 1995

	Factor Loadings for the 5 Factors From Table 12				
Survey Question Number	1	2	3	4	5
15. Leaders ask people ways to improve the work produced	**.75**	.28	.16	.18	.08
16. Leaders encourage people to voice their concerns	**.75**	.26	.16	.21	.14
17. Leaders follow up on suggestions for improvement	**.77**	.25	.23	.19	.10
18. Leaders set good examples of quality performance	**.76**	.25	.18	.18	.13
19. Leaders review progress toward meeting goals	**.72**	.26	.18	.11	.11
20. Leaders attempt to find out why goals are not met	**.74**	.25	.18	.13	.11
21. People turn to their supervisors for advice	.22	**.71**	.16	.17	.17
22. People know that supervisors will help them	.27	**.71**	.20	.17	.20
23. People are challenged by their supervisors	.27	**.80**	.15	.15	.15
24. Supervisors make continuous improvement a top priority	.29	**.78**	.22	.16	.13
25. Supervisors ask customers about the work they receive	.28	**.63**	.20	.15	.10
26. Supervisors ask for opinions and ideas about the work	.27	**.73**	.16	.18	.18
39. Appropriate personnel	.16	.15	**.66**	.10	.10
44. Appropriate resources available	.25	.19	**.47**	.14	.17
45. Balanced distribution of work	.23	.31	**.53**	.21	.22
46. Ample time to perform jobs	.16	.16	**.71**	.12	.05
48. Promote people who do good work	.22	.21	.18	**.79**	.09
49. People are promoted because they earn it	.25	.22	.18	**.77**	.14
50. Quick recognition for outstanding work	.28	.35	.24	**.50**	.13
42. People are friendly with one another	.17	.25	.17	.12	**.85**
43. People enjoy their co-workers	.17	.26	.20	.14	**.85**

Table 14. 1996 Factor Analysis Results*

Factor	Variable	Eigenvalue	% of Variance	Cumulative %
1	Leadership	10.50	21.25	21.25
2	Supervisor	1.85	20.43	41.68
3	Constraints	1.41	10.27	51.95
4	Rewards	1.23	9.53	61.48
5	Friendliness	1.13	8.69	70.18

* Factor Analysis completed using Principal Axis Factoring Extraction with Varimax Rotation.

Table 15. Rotated Factor Matrix for 1996

	Factor Loadings for the 5 Factors From Table 14				
Survey Question Number	1	2	3	4	5
15. Leaders ask people ways to improve the work produced	**.77**	.27	.18	.18	.09
16. Leaders encourage people to voice their concerns	**.79**	.24	.16	.20	.14
17. Leaders follow up on suggestions for improvement	**.79**	.26	.21	.20	.09
18. Leaders set good examples of quality performance	**.78**	.27	.17	.18	.14
19. Leaders review progress toward meeting goals	**.75**	.24	.20	.14	.12
20. Leaders attempt to find out why goals are not met	**.75**	.26	.19	.14	.13
21. People turn to their supervisors for advice	.22	**.73**	.16	.17	.19
22. People know that supervisors will help them	.25	**.75**	.19	.16	.22
23. People are challenged by their supervisors	.29	**.79**	.18	.18	.15
24. Supervisors make continuous improvement a top priority	.29	**.78**	.23	.17	.14
25. Supervisors ask customers about the work they receive	.28	**.66**	.23	.18	.12
26. Supervisors ask for opinions and ideas about the work	.28	**.74**	.18	.18	.19
39. Appropriate personnel	.17	.19	**.70**	.14	.08
44. Appropriate resources available	.27	.23	**.45**	.13	.20
45. Balanced distribution of work	.20	.34	**.56**	.23	.22
46. Ample time to perform jobs	.21	.15	**.74**	.10	.07
48. Promote people who do good work	.23	.20	.17	**.78**	.09
49. People are promoted because they earn it	.24	.23	.16	**.79**	.13
50. Quick recognition for outstanding work	.31	.34	.22	**.51**	.14
42. People are friendly with one another	.19	.29	.16	.13	**.85**
43. People enjoy their co-workers	.19	.28	.20	.14	**.84**

Regression Analysis on an Individual Level

In order to determine how well the variables predicted the "ethics" variable on an individual level, a regression analysis was done. This analysis consisted of plugging the variables into a regression model. Chapter 4 discusses the construction of this hierarchical regression model and which variables were included and not included. Chapter 4 also presents the results of this regression analysis and discusses which of the factors entered into the model significantly predicted the perceptions of ethics within the organizations studied and how influential these significant factors were.

Regression Analysis on an Organizational Level

The variables were also analyzed using multiple regression on an organizational level. Again, Chapter 4 discusses the construction of this regression model and which variables were included. Chapter 4 also presents the results of analyzing this regression model and discusses which of the factors entered into the model significantly predicted the perceptions of ethics within the organizations studied and how influential these significant factors were.

IV. Results

Background

This chapter analyzes the variables that were described in Chapter 3. Findings and observations will be made describing the results of the data analysis. Conclusions about the data analysis will be summarized and presented in Chapter 5.

Individual Level Regression Model Development

The first step in building the individual level regression model was to enter ethics as the dependent variable and the five cultural perception variables (leadership, supervisor, friendliness, constraints, and rewards) as the independent variables. These variables were entered into SPSS for Windows, Version 10.0 for each survey year (i.e., one regression model for each year). The results of this initial regression analysis showed many items were highly correlated with each other indicating the presence of multicollinearity.

To properly deal with these high correlations and the multicollinearity, it was decided that one of the variables should be used as a control variable. Friendliness was chosen partly to try to fix the problems with the multicollinearity and partly because there was concern that the halo effect may be influencing the data. The halo effect is what happens when the perception of something affects other perceptions in other areas. For example, say that someone has high perceptions of the friendliness in their unit. These high perceptions of friendliness may have influenced them to have high perceptions of their supervisor (when in fact their supervisor 's behavior may not be very good). This

confounding effect may have disrupted the data. To try to account for the halo effect and the multicollinearity that existed between the data, the "friendliness" variable was accounted for by making it the control variable.

There were two ways that "friendliness" was made the control variable. The first way was that interaction terms were created between the "friendliness" variable and the other four cultural perception variables. Multiplying the "friendliness" variable by the other four respective cultural perception variables created these interaction terms. The four interaction terms were friendliness* leadership, friendliness* supervisor, friendliness* rewards, and friendliness* constraints. The second way the "friendliness" variable was made the control variable was by entering it into its own block of the regression model. The regression model was then run again with ethics as the dependent variable, friendliness entered into the first block, the other four cultural perceptions variables entered into the second block, and the four interaction terms entered into the third and final block.

The results of this new regression analysis once again showed high multicollinearity present in the data. Multicollinearity exists when independent variables are correlated among themselves. A process known as "centering" reduced this multicollinearity by subtracting the mean of the value from the original value for each case, to give a new value (value prime). For example, we subtracted $\overline{x}$ (mean of the value) from each x_i (original value) to obtain $x_i' = x_i - \overline{x}$, and then used the x_i''s in place of the x_i's (Devore, 1995). Note that centering was only done on the interaction terms. An example of a centered interaction term was friendliness prime* leadership prime. This new prime value was then entered back into the regression model. The new

regression model reduced the multicollinearity problems from the previous model. The results of the descriptive statistics and correlations for each year of individual level data are shown in tables 16-19. These tables reflect the techniques and methods just discussed that were used to reduce the multicollinearity.

Also, the organization position variable was added to the regression model. The organization position variable indicated whether the person is a supervisor, senior leader, both, or neither. The organization position variable was developed to allow for analysis on whether or not the respondent's position in the organization predicted perceptions of ethics within the organizations. This variable was created by assigning the variable a value of zero if the respondent was not a supervisor and not (or unknown) a senior leader. A value of one was assigned to the organization position variable if the respondent was a supervisor and not a senior leader and a value of two was assigned to the organization position variable if the respondent was a supervisor and a senior leader. These three alternatives encompassed all options. It was decided that the organization position variable would be entered into the first block of the regression model so that the effect of organization position could be seen before any of the other variables were entered into the model.

Including the organization position variable concludes the creation of the final regression model for the individual level data. To summarize, the "ethics" variable was the dependent variable. Organization position was entered into the first block. Friendliness was entered into the second block. Supervisor, leadership, rewards, and constraints were entered into the third block. The four centered interaction terms were then entered into the fourth and final block. The results are shown in table 20.

Table 16. Descriptive Statistics and Correlations for 1993 (Individual Level Data)

FACTOR	M	SD	FR	L	S	C	R	F*L	F*S	F*C	F*R
Ethics	4.44	1.17	.46***	.56***	.50***	.35***	.45***	-.20***	-.22***	-.17***	-.20***
1. Friendliness (FR)	4.65	1.03	--	.42***	.47***	.40***	.42***	-.36***	-.35***	-.31***	-.38***
2. Leadership (L)	4.01	1.10		--	.75***	.53***	.62***	-.19***	-.21***	-.14***	-.15***
3. Supervisor (S)	3.98	1.03			--	.54***	.61***	-.22***	-.21***	-.14***	-.15***
4. Constraints (C)	3.72	1.07				--	.53***	-.13***	-.12***	-.11***	-.12***
5. Rewards (R)	3.54	1.31					--	-.14***	-.14***	-.12***	-.13***
6. Friend' * Lead' (F*L)	0.47	1.48						--	.83***	.65***	-.71***
7. Friend' * Sup' (F*S)	0.51	1.44							--	.64***	.70***
8. Friend' * Con' (F*C)	0.44	1.35								--	.65***
9. Friend' * Rew' (F*R)	0.57	1.63									--

*** p<0.001, N = 5413

Table 17. Descriptive Statistics and Correlations for 1994 (Individual Level Data)

FACTOR	M	SD	FR	L	S	C	R	F*L	F*S	F*C	F*R	OP
Ethics	4.36	1.20	.47***	.58***	.50***	.37***	.43***	-.26***	-.28***	-.26***	-.25***	.09***
1. Friendliness (FR)	4.62	1.05	--	.41***	.49***	.43***	.43***	-.41***	-.41***	-.39***	-.42***	.06***
2. Leadership (L)	4.03	1.10		--	.73***	.53***	.59***	-.22***	-.24***	-.21***	-.19***	.11***
3. Supervisor (S)	4.00	1.06			--	.55***	.62***	-.25***	-.27***	-.23***	-.22***	.14***
4. Constraints (C)	3.78	1.05				--	.53***	-.20***	-.21***	-.19***	-.19***	.06***
5. Rewards (R)	3.53	1.31					--	-.17***	-.19***	-.17***	-.14***	.18***
6. Fr' * Lead' (F*L)	0.48	1.62						--	.84***	.72***	.73***	-.02*
7. Fr' * Sup' (F*S)	0.55	1.62							--	.74***	.76***	-.02*
8. Fr' * Con' (F*C)	0.48	1.51								--	.73***	-.02
9. Fr' * Rew' (F*R)	0.59	1.73									--	-.00
10.Org Pos (OP)	0.19	0.39										--

* p<0.05; *** p<0.001, N = 5955

Table 18. Descriptive Statistics and Correlations for 1995 (Individual Level Data)

FACTOR	M	SD	FR	L	S	C	R	F*L	F*S	F*C	F*R	OP
Ethics (E)	4.51	1.10	.45***	.63***	.49***	.40***	.46***	-.31***	-.20***	-.05**	-.16***	.18***
1. Friendliness (FR)	4.80	0.95	--	.40***	.50***	.44***	.39***	-.65***	-.34***	-.08***	-.35***	.12***
2. Leadership (L)	4.20	0.96		--	.62***	.51***	.55***	-.25***	-.17***	-.04**	-.12***	.18***
3. Supervisor (S)	4.29	0.98			--	.53***	.56***	-.34***	-.23***	-.01	-.17***	.18***
4. Constraints (C)	3.96	0.95				--	.49***	-.28***	-.15***	-.02	-.14***	.13***
5. Rewards (R)	3.65	1.19					--	-.24***	-.15***	-.04**	-.10***	.22***
6. Fr' * Lead' (F*L)	0.37	1.47						--	.73***	.47***	.69***	-.04**
7. Fr' * Sup' (F*S)	0.47	1.28							--	.61***	.68***	-.02
8. Fr' * Con' (F*C)	0.90	1.50								--	.55***	.01
9. Fr' * Rew' (F*R)	0.44	1.38									--	.01
10.Org Pos (OP)	0.23	0.48										--

** p<0.01; *** p<0.001, N = 3673

Table 19. Descriptive Statistics and Correlations for 1996 (Individual Level Data)

FACTOR	M	SD	FR	L	S	C	R	F*L	F*S	F*C	F*R	OP
Ethics (E)	4.45	1.14	.45***	.66***	.50***	.41***	.46***	-.18***	-.27***	-.19***	-.21***	.06***
1. Friendliness (FR)	4.76	0.99	--	.43***	.54***	.46***	.41***	-.36***	-.37***	-.32***	-.39***	.04**
2. Leadership (L)	4.15	1.02		--	.62***	.53***	.56***	-.15***	-.23***	-.17***	-.17***	.06***
3. Supervisor (S)	4.27	1.02			--	.57***	.56***	-.24***	-.26***	-.20***	-.21***	.05**
4. Constraints (C)	3.96	0.98				--	.50***	-.16***	-.18***	-.11***	-.14***	.04**
5. Rewards (R)	3.60	1.20					--	-.15***	-.19***	-.13***	-.13***	.09***
6. Fr' * Lead' (F*L)	0.43	1.40						--	.77***	.70***	.72***	.01
7. Fr' * Sup' (F*S)	0.55	1.44							--	.71***	.71***	.01
8. Fr' * Con' (F*C)	0.45	1.28								--	.65***	.02
9. Fr' * Rew' (F*R)	0.48	1.49									--	.01
10.Org Pos (OP)	0.24	0.51										--

** p<0.01; *** p<0.001, N = 4258

Table 20. Regression results for all four years of individual level data

	1993			1994			1995			1996		
	Std β	R^2	ΔR^2	Std β	R^2	ΔR^2	Std β	R^2	ΔR^2	Std β	R^2	ΔR^2
Step 1:					.01			.03			.00	
Org Pos				.02			.05***			.02		
Step 2:		.21			.22	.21		.21	.18		.21	.20
Friendliness	.23***			.23***			.16***			.17***		
Step 3:		.38	.17		.40	.18		.45	.24		.48	.27
Leadership	.35***			.41***			.45***			.51***		
Supervisor	.07***			.04*			.05**			.05**		
Rewards	.10***			.06***			.10***			.08***		
Constraints	-.02			-.01			.00			-.02		
Step 4:		.38	.00		.41	.01		.45	.00		.48	.00
Friend' * Lead'	.04			.01			-.03			.06**		
Friend' * Super'	-.05*			-.03			-.04			-.11***		
Friend' * Rew'	-.01			-.04*			.03			.01		
Friend' * Cons'	-.02			-.02			-.01			-.01		
	F = 366.12*** Adj R^2 = 0.38 N = 5413			F = 408.29*** Adj R^2 = 0.41 N = 5955			F = 300.95*** Adj R^2 = 0.45 N = 3673			F = 396.67*** Adj R^2 = 0.48 N = 4258		

* $p<0.05$; ** $p<0.01$; *** $p<0.001$

Std β = Standardized Beta Coefficient

ΔR^2 = R^2 Change

Adj R^2 = Adjusted R^2

Note: The 1993 survey did not ask respondents about their organization position.

Individual Level Regression Analysis Results

Based on the results of this individual level regression model, leadership is the best predictor of the factors analyzed of the perception of ethics within the five organizations studied. This is seen because it has the highest standardized beta coefficient for each year with the range being from 0.35 to 0.51. Friendliness is the next best predictor of the perception of ethics within the organizations (range of standardized beta coefficients of 0.16 to 0.23) followed by rewards (0.06 to 0.10) and supervisors (0.04 to 0.07). Constraints was not a significant predictor of the perceptions of ethics within the organizations for any of the four years. Organization position was a significant predictor in one of the three years (note that organization position was not tested for 1993 because the data was not available).

Let us now analyze each variable to determine if they were supported or not by the results of the final individual level regression model.

Friendliness

Recall hypothesis #1A from Chapter 2:

HYPOTHESIS #1A: Friendliness will have a significant, positive effect on an employee's perception of ethics in an organization.

Friendliness had a significant positive effect on an employee's perception of ethics in the organizations studied because evidence to support this hypothesis was found for all four years ($p<0.001$). Of the five cultural perception variables studied, it was the second most important factor in predicting perceptions of the ethical climate within the organizations for all four years.

Leadership

Recall hypothesis #2A from Chapter 2:

HYPOTHESIS #2A: A significant positive relationship will exist between leaders perceived to be setting a good example and striving for excellence and an employee's perception of ethics in the organization.

Leadership had a significant positive effect on an employee's perceptions of ethics in the organizations studied because evidence to support this hypothesis was found for all four years ($p<0.001$). Of the five cultural perception variables studied, it was the most important factor in predicting perceptions of the ethical climate within the organizations for all four years.

Supervisor

Recall hypothesis #3 from Chapter 2:

HYPOTHESIS #3: Supervisor approachableness and striving for excellence will have a significant positive effect on an individual's perception of ethics.

Supervisor behavior had a significant positive effect on an employee's perceptions of ethics in the organizations studied because evidence to support this hypothesis was found for all four years ($p<0.05$ to $p<0.001$). Of the five cultural perception variables studied, it was the fourth most important factor for two years (1993, 1995), the fifth most important factor one year (1994), and the sixth most important factor for one year (1996) in predicting perceptions of the ethical climate within the organizations.

Constraints

Recall hypothesis #4A from Chapter 2:

HYPOTHESIS #4A: There will be a significant negative effect between constraints and an employee's perception of the ethics of the organization.

Constraints did not have a significant effect on an employee's perceptions of ethics in the organizations studied for any of the four years because no evidence to support this hypothesis was found for any of the four years.

Rewards

Recall hypothesis #5A from Chapter 2:

HYPOTHESIS #5A: The perceived fairness of the reward system in an organization will have a significant positive effect on an employee's perception of the ethics of the organization.

Rewards had a significant positive effect on an employee's perceptions of ethics in the organizations studied because evidence to support this hypothesis was found for all four years ($p<0.001$). Of the five cultural perception variables studied, it was the third most important factor in predicting perceptions of the ethical climate within the organizations two years (93, 95) and the fourth most important factor two years (94, 96).

Organization Position

The organization position variable was only significant for one of the four years ($p<0.001$). The year that it was significant (95), it was the fourth most important factor.

Organizational Level Regression Model Development

Organization type, functional differentiation, friendliness, and rewards were analyzed on an organizational level with another regression model. Before this model was built, the individual cultural values were aggregated into organizational cultural values. This was done by taking the mean score for each cultural variable for each two-letter organization. A two-letter organization represents a functional group or office working together to accomplish a mission. For example, a few of the two-letter organizations that responded to the survey included HC (Chaplain), JA (Judge Advocate), and FM (Finance). This mean score then represented the organization's score for that variable. The mean score for each two-letter organization then became the data set that was analyzed using the regression model.

The organizational level analysis was done on the two-letter organization level because a one-way ANOVA Post Hoc test showed that the five main organizations did not separate into four separate organizational types as proposed in Chapter 2. Instead, they separated into four groups as shown in Table 21.

Table 21. One-Way ANOVA Post Hoc test results showing four factors (using Tukey's Procedure) for the 1996 data

Organization	N	1	2	3	4
A	94	4.16			
C	3288		4.44		
D	665		4.45		
B	140			4.61	
E	125				4.80

A = 88 Air Base Wing, B = Medical Group, C = Acquisition Group, D = Wright Laboratory, E = ASC Command Staff

Since these results do not support the typology, we must use the two-letter organization level data to represent the cultural perception variables on an organizational level.

There were a total of 73 two-letter organizations that responded to the survey over the four-year period. However, each of these organizations may not have responded for each year. Therefore, the number of values for each year was different. For example, in 1996 there were 56 two-letter organizations represented. This meant that the data set consisted of 56 mean values for each of the cultural perception variables that were analyzed. One other thing was done before entering this data set into the regression model. Several of the two letter organizations were very small. These small two-letters (<10 people) were combined within organizations so that all two-letter organizations were of decent size (>10). For example, an organization of 3 people may be combined with an organization of 8 people to create a new organization containing 11 people. Combining the small organizations in the 1996 data resulted in a total of 47 data points (47 two letters = 47 cases).

Assigning the overall mean score for the ethics variable for the particular organization to each two-letter within that organization created the organization type variable. For example, the mean score for the ethics variable for organization A (88 Air Base Wing) was 4.16. Therefore, every two-letter organization from organization A was assigned a value of 4.16 for the organization type variable. Creating this variable in this fashion allowed for it to be entered into the organizational level regression model to determine if organization type was a significant predictor of the perceptions of ethics within the organizations studied.

The functional differentiation variable was created in a similar way. The overall amount of functional differentiation that existed in an organization was assigned for each two-letter within that organization. For example, organization A had a functional differentiation of 9. Therefore, every two-letter within organization A was assigned a value of 9 for the functional differentiation variable. Creating this variable in this way allowed for it to be entered into the organizational level regression model to determine if functional differentiation was a significant predictor of the perceptions of ethics within the organizations studied.

The supervisor variable was not analyzed at the organizational level because at an organizational level it was not different than leaders. The constraints variable was not analyzed at the organizational level because it was not significant at the individual level of analysis.

The new data was analyzed by using the regression model. This regression model was created using ethical climate as the dependent variable. The organization type variable and the functional differentiation variables were then entered into the first block. Friendliness, leadership, and rewards were then entered into the second and final block.

Organizational Level Regression Analysis Results

The results of the final regression model for the organization level data are shown on the following pages in tables 22-26.

Table 22. Descriptive Statistics and Correlations for 1993 (Organizational Level Data)

	M	SD	Lead	Rew	Friend
Ethics	4.57	.37	.84***	.86***	.73***
1. Leadership	4.17	.49	--	.95***	.85***
2. Rewards	3.68	.46		--	.85***
3. Friendliness	4.77	.36			--

*** p<0.001, N = 28

Table 23. Descriptive Statistics and Correlations for 1994 (Organizational Level Data)

	M	SD	Lead	Rew	Friend
Ethics	4.47	.36	.88***	.81***	.71***
1. Leadership	4.12	.42	--	.76***	.61***
2. Rewards	3.67	.44		--	.55**
3. Friendliness	4.67	.38			--

** p<0.01; *** p<0.001, N = 30

Table 24. Descriptive Statistics and Correlations for 1995 (Organizational Level Data)

	M	SD	Org Type	Func Diff	Friend	Lead	Rew
Ethics	4.54	.41	.33*	.08	.57***	.89***	.70***
1. Org Type	4.53	.12	--	.02	.36*	.35*	.30*
2. Func Diff	26.02	15.44		--	.13	.30*	.16
3. Friend	4.77	.39			--	.48**	.74***
4. Lead	4.22	.39				--	.70***
5. Rew	3.64	.40					--

* p<0.05; ** p<0.01; *** p<0.001, N = 41

Table 25. Descriptive Statistics and Correlations for 1996 (Organizational Level Data)

	M	SD	Org Type	Func Diff	Lead	Rew	Friend
Ethics	4.50	.38	.39**	-.01	.83***	.66***	.73***
1. Org Type	4.46	.15	--	-.22	.31**	.16	.33*
2. Func Diff	24.85	15.48		--	.11	.01	.07
3. Lead	4.21	.36			--	.76***	.68***
4. Rew	3.64	.33				--	.67***
5. Friend	4.73	.37					--

*p<0.05; ** p<0.01; *** p<0.001, N = 48

Table 26. Regression results for all four years of organizational level data

	1993			1994			1995			1996		
	Std β	R^2	ΔR^2	Std β	R^2	ΔR^2	Std β	R^2	ΔR^2	Std β	R^2	ΔR^2
Step 1:								.11			.16	
Org Type							-.05			.08		
Func Diff							-.20*			-.08		
Step 2:		.75			.86			.86	.75		.75	.60
Friendliness	-.05			.24*			.21*			.30*		
Leadership	.27			.53***			.90***			.64***		
Rewards	.64			.27*			-.04			-.04		
	F = 23.76*** Adj R^2 = 0.72 N = 28			F = 51.18*** Adj R^2 = 0.84 N = 30			F = 43.60*** Adj R^2 = 0.84 N = 41			F = 25.71*** Adj R^2 = 0.72 N = 48		

* $p<0.05$; *** $p<0.001$
Std β = Standardized Beta Coefficient
ΔR^2 = R^2 Change
Adj R^2 = Adjusted R^2

Based on the results of this organizational level regression model, leadership is the best predictor of the perception of ethics within the five organizations studied. This is seen because it has the highest beta coefficients for three of the four years with a range of 0.27 to 0.90. Friendliness is the next best predictor of the perception of ethics within the organizations followed by rewards. Let us now review each organizational level variable to determine if they were supported by the results of the final regression model.

Friendliness

Recall hypothesis #1B from Chapter 2:

HYPOTHESIS #1B: Friendliness of coworkers will have a significant, positive effect on the ethical climate of the organization.

Significant evidence to support this hypothesis was found for three of the four years ($p<0.05$). In the three years that friendliness was significant, it was the second (95,

96) or third (94) most important factor in predicting the perceptions of the ethical climate of the organizations studied.

Leadership

Recall hypothesis #2B from Chapter 2:

HYPOTHESIS #2B: Leader behaviors of setting a good example and striving for excellence will have a significant positive impact on the organization's ethical climate.

Significant evidence to support this hypothesis was found for three of the four years ($p<0.001$). In the three years that leadership was significant (94, 95, 96) it was the most important factor in predicting the perceptions of the ethical climate of the organization.

Rewards

Recall hypothesis #5B from Chapter 2:

HYPOTHESIS #5B: A fair reward system will have a significant positive impact on the ethical climate of the organization

Significant evidence to support this hypothesis was found for one of the four years ($p<0.005$). In the one year (94) that rewards was significant, it was the second most important factor in predicting the perceptions of the ethical climate of the organizations.

Organization Type

Organization type was not a significant predictor of ethical perceptions for either of the two years it was tested (95, 96).

Functional Differentiation

Functional differentiation was significant for one of the two years (95, 96) that it was tested ($p<0.05$). In the one year (95) that it was significant, it was the third most important factor in predicting the perceptions of the ethical climate of the organizations.

Organization Variables Analysis Results

Supervisory Status

Recall hypothesis #6 from Chapter 2:

HYPOTHESIS #6: Supervisors will have significantly higher perceptions of the ethical climate of their organizations than non-supervisors.

The results of the analysis for this hypothesis are presented below.

Table 27. Comparison of supervisors and non-supervisors perceptions of ethical climate for 94-96 data (using t-test)

Year	Org	Supervisor			Not Supervisor			
		N	M	SD	N	M	SD	t
1994	C	887	4.53	1.12	4388	4.31	1.22	250.94***
	D	243	4.78	1.07	243	4.49	1.14	57.66***
	Total	1130	4.59	1.12	4631	4.32	1.21	376.47***
1995	C	723	4.86	1.03	1892	4.44	1.05	409.74***
1996	A	94	4.39	1.40	94	4.47	1.22	-4.36***
	B	140	4.47	1.13	140	4.26	1.19	21.83***
	C	624	4.62	1.10	3206	4.43	1.14	162.08***
	Total	858	4.57	1.14	3440	4.42	1.14	158.52***

*$p<0.05$; ** $p<0.01$; *** $p<0.001$
Note: If an organization is not represented in the table, the data was missing. The 1993 survey did not ask the respondents about their supervisory status.
A = Air Base Wing; B = Medical Group; C = Acquisition Group; D = Wright Laboratory

The results of this analysis indicate that supervisors have a significantly ($p<0.001$) higher average score for the "ethics" variable for the three years of survey data than non-

supervisors. Based on these significant results, commanders can assume that supervisors have higher ethical perceptions than non-supervisors.

Senior Leader Status

Recall hypothesis #7 from Chapter 2:

HYPOTHESIS #7: Senior leaders will have significantly higher perceptions of the ethical climate of their organization than non-senior leaders.

The results of the analysis for this hypothesis are presented below.

Table 28. Comparison of senior leaders and non-senior leaders perceptions of ethical climate for 94-96 data (using t-test)

Year	Org	Senior Leader			Not Senior Leader			
		N	M	SD	N	M	SD	t
1995	B	83	5.45	0.67	7	4.57	1.72	4.11***
	C	19	5.58	0.69	624	4.75	1.05	61.88***
	Total	102	5.47	0.67	631	4.75	1.06	232.95***
1996	A	94	4.46	1.05	94	4.35	1.39	6.81***
	B	78	5.18	1.11	140	4.49	1.18	53.61***
	Total	172	4.79	1.14	234	4.44	1.14	54.02***

*p<0.05; ** p<0.01; *** p<0.001
A = Air Base Wing; B = Medical Group; C = Acquisition Group
Note: If an organization is not represented in the table, the data was missing. The 1993 and 1994 surveys did not ask the respondents about their senior leader status.

The results of this analysis indicate that senior leaders have a significantly ($p<0.001$) higher average score for the "ethics" variable than non-senior leaders for the two years of survey data. Based on these significant results, commanders can assume that senior leaders will have higher ethical perceptions of the organization than non-senior leaders.

Type of Organization and Functional Differentiation

Recall hypotheses #8 and #9 from Chapter 2:

HYPOTHESIS #8: There will be a significant difference in the perceptions of the ethical climate between each of the five organizations.

HYPOTHESIS #9: Organizations with greater functional differentiation will have significantly lower ethical climates than organizations with less functional differentiation.

A summary of the data for these organization structure variables is shown below.

Table 29. Summary of the functional differentiation data for each year

ORG	#OF 2 LT	93 AVE	93 N	94 AVE	94 N	95 AVE	95 N	96 AVE	96 N
C	40	4.48	4316	4.39	4395	4.54	2615	4.44	3278
D	13	4.49	417	4.44	400	4.40	977	4.46	663
A	9	4.07	415	4.10	929			4.16	94
E	6	4.43	117	4.66	129	4.85	113	4.80	125
B	5	4.37	202	4.46	407	4.47	83	4.61	140

A = Air Base Wing; B = Medical Group; C = Acquisition Group; D = Wright Laboratory; E = ASC Command Staff
Note: #OF 2 LT = The total number of two letter organizations that were surveyed for that organization over the four year period.

The organization structure variables were analyzed by ranking the 19 mean "ethics" variable values (one for each year for each organization – 1995 was missing data for Organization A) with their corresponding organization and functional differentiation. Once these mean values were ranked, the value of each ranking for each variable was determined. For example, if Organization A's four means were ranked 2nd, 5th, 10th, and 12th, then Organization A would receive a value of 29 (2+5+10+12=29). The results of this analysis are shown below.

Table 30. Organization structure analysis results: ranking value for each organization

Organization	Ranking Value	Functional Differentiation
E – ASC Command Staff	19	6
B – Medical Group	37	5
C – Acquisition Group	39	40
D – Wright Laboratory	41	13
A – Air Base Wing	54	9

These results indicate that the ASC Command Staff and the Medical Group are the two organizations that have the highest perceptions of their ethical climates of the five organizations surveyed. The results of the functional differentiation variable are inconclusive.

V. Findings and Conclusions

Overview

This chapter presents the findings and conclusions of this thesis. This thesis has been a case study of ethical perceptions within five military organizations of ASC. The results are based on the responses respondents gave to a cultural survey that was administered over a four-year period. Hopefully the results of this case study can be generalized to the whole Air Force and the military in general so commanders everywhere can use these findings and conclusions to attempt to improve their organizations.

Cultural perception variables

The cultural perception variables were analyzed on an individual level as well as on an organizational level to determine the effect of factors that exist at both levels. It is important to identify the appropriate level of analysis of ethical climate in order to know where, and at what level, the changes in the organization's ethical climate need to be made (Wimbush & Shepard, 1994). In both cases, leadership came out to be the most significant predictor of the perceptions of ethics in an organization. Friendliness was determined to be the next most significant factor on both levels of analysis. The information that leadership and friendliness were the two most important factors in predicting the perception of ethical climate within the organizations studied could be useful to managers and leaders. It is not surprising that leadership was found to be so

important in setting the tone of the organization in the area of ethics. Leaders are expected to set the example for their organization.

This finding that leadership and friendliness are the two most significant predictors of the perceptions of ethical climate within the organizations studied means that people most often form their ethical perceptions based on observing and interacting with other people; their leaders and their peers. Managers and commanders who are aware of this could emphasize their ethics training and policies throughout the organization. Having commanders talk about ethics or discuss ethical stories or issues during commanders calls may have the effect of subordinates perceiving their commanders to be ethical. This might lead to higher perceptions of the ethical climate of the organization because they think their leader (commander) is ethical. If the employee has higher perceptions of the ethical climate of the organization, they are more likely to behave in an ethical manner (at least while they are at work).

Managers and commanders may be able to take advantage of the friendliness results by having more group interaction or group teamworking during the ethics training sessions. For example, if the training session was structured in such a way as to allow for people to discuss some of their personal ethical victories they have had, other employees may start thinking that these people are ethical. If a person believes that their peers are ethical, they are likely to have higher perceptions of the ethical climate of the organization, which may lead them to behave more ethically themselves. If people in the organization become more ethical, the ethical climate of the organization will improve and the organization will benefit.

It should also be noted that constraints were not significant for any of the four years the survey was administered. This may indicate that ethical behavior of individuals and organizations within ASC were not negatively affected by constraints in the workplace. With the impact of recent budget cuts on manpower and resources, it's encouraging to know that these cuts have not appeared to affect the ethical behavior of ASC employees. Given the importance of leadership to shaping ethical perceptions, these findings support the notion that high quality leadership can overcome resource constraints.

Organization Position Variables

A general trend was observed regarding the organization position variables. This trend was that the higher one is in the organization (with the highest level being a senior leader), the higher their perception of the ethics of the organization. This finding is consistent with the finding in the previous section that leadership was the most important factor in predicting the perceptions of the ethical climate of the organizations. Because leadership was found to be so important in analyzing the cultural data and the organization position data this lends even more evidence to how important leadership is in the organization. This indicates that the best way for an organization to have a highly ethical culture is to ensure that their leaders are well trained and educated in the areas of ethics and ethical behavior. If these senior leaders are ethical and do behave in ethical manners, the perceptions of the ethical climate of the organization will be high and the organization will benefit.

Organization Structure Variables

The results of the organization structure variables indicate that the ASC Command Staff and the Medical Group had the highest perceptions of the ethical climate of their organizations of the five organizations surveyed. These results are not surprising, considering that employees in the ASC Command Staff are working closely with senior leaders (thus they get an unfiltered message about ethical perceptions) and that the people in the medical profession who live by an ethical code, the Hippocratic Oath, may be more committed to upholding ethical standards.

The results of the functional differentiation variable were inconclusive.

Limitations

There are several limitations of this thesis. This researcher did not construct or administer the survey and little is known about how the survey was administered, how many were sent out, why some organizations were not surveyed in all years, and general historical trends of ASC two-letters that could influence the results. All that is known is the number of respondents to the survey for that year; therefore, a response rate can not be calculated.

The research was also limited somewhat by the survey items. The research was limited to analyzing the factors that were brought out by the survey. This helps explain why some of the other factors mentioned in Chapter 2, such as ethics training, were not analyzed in this thesis. Another limitation is that the survey only asked one question about the ethical perceptions of the respondents. Having more ethical questions to analyze would have made the dependent variable a better measure of the ethical climate

of the organization. The survey also asked a limited amount of demographic information, which limited the amount of demographic analysis that could be done.

Opportunities for Future Research

There are several opportunities for future research in this area. The first thing that could be done is to administer another survey that will allow for the analysis of more factors. This new survey could include the factors analyzed in this thesis as well as many others that could significantly predict perceptions of ethics in organizations (including some of the ones that were discussed at the end of Chapter 2). This new survey could also ask more questions about ethics so that the ethics variable will consist of more than one question. Additionally, more specific demographic data could be collected to determine if ethical perceptions varies among groups of employees. For example, such items as age, rank, tenure, religious activity, etc., could be considered. Future research could also compare the results of this thesis with the results of the 1999 Chief of Staff of the Air Force (CSAF) survey results. Comparing these results for ASC could allow for future researchers to observe any recent trends in local organizations.

Conclusion

This thesis helped to demonstrate that leadership behaviors, positive peer interactions, and organizational reward systems can be used to predict the perceptions of the ethical climate of an organization. The implication of this finding is that managers and leaders can analyze these factors when trying to diagnose the ethical climate of their

organization and can then try to improve these factors in order to improve the ethical climate of their organization.

Leadership was found to be the most significant of the factors studied in predicting the perceptions of the ethical climate of an organization and friendliness was found to be the second most significant factor. The fact that these two variables were the most significant factors in predicting the perceptions of the ethical climate of the organizations studied allows managers and leaders to focus most of their attention to these two areas. Leaders and managers can take advantage of these findings to improve their organizations.

Appendix 1: ASC Cultural Survey

1 = Strongly Disagree
2 = Disagree
3 = Somewhat Disagree
4 = Somewhat Agree
5 = Agree
6 = Strongly Agree

Q1 People in my two letter are aware of its overall mission.

Q2 People in my two letter are aware of how their jobs contribute to the organization's mission.

Q3 It's in everyone's best interests that the two letter be successful.

Q4 People in my two letter try to plan ahead for changes (such as in customer expectations) that might impact the two letter's future performance.

Q5 People in my two letter try to plan ahead for technological changes (such as new developments in computer software) that might impact the two letter's future performance.

Q6 People in my two letter regularly work together to plan for the future.

Q7 Creativity is actively encouraged in my two letter.

Q8 Innovators are the people who get ahead in ASC.

Q9 The quality of work produced is the primary focus of my two-letter organization.

Q10 People in my two letter see the continuing improvement of work produced as essential to the success of the two letter.

Q11 My two letter organization emphasizes doing things right the first time.

Q12 People in my two letter live up to high ethical standards.

Q13 People in my two letter like to do a good job.

Q14 People in my two letter help each other get the job done.

Q15 Leader(s) in my two letter ask people about ways to improve the work produced.

Q16 Leader(s) in my two letter encourage people to voice their concerns.

Q17 Leader(s) in my two letter follow up on suggestions for improvement.

Q18 Leader(s) in my two letter set examples of quality performance in their day-to-day activities.

Q19 Leader(s) in my two letter regularly review the two letter's progress toward meeting its goals and objectives.

Q20 Leader(s) in my two letter attempt to find out why the two letter may not be meeting a particular goal or objective.

Q21 People in my immediate work unit turn to their supervisors for advice about how to improve their work.

Q22 People in my immediate work unit know that their supervisors will help them find answers to problems they may be having.

Q23 People in my immediate work unit are challenged by their supervisors to find ways to improve the system.

Q24 Supervisors in my immediate work unit make continuous improvement of our work a top priority.

Q25 Supervisors in my immediate work unit regularly ask the customers about the quality of the work they receive.

Q26 Supervisors in my immediate work unit ask us for opinions and ideas about our work.

Q27 The structure of my two letter makes it easy to focus on producing quality work.

Q28 People know how the work produced in their work unit fits in with the work produced by other work units.

Q29 People in the work unit can describe the two letter's quality and/or productivity policy.

Q30 People in my immediate work unit know how to define the quality of work they produce.

Q31 People in my immediate work unit take pride in their work.

Q32 People in my immediate work unit share responsibility for the success or failure of the work produced.

Q33 People in my immediate work unit believe that their work is important to the success of the two letter.

Q34 There are good working relationships between work units in my two letter.

Q35 A spirit of cooperation and teamwork exists in my two letter.

Q36 My two letter has good working relationships with other two letters in Aeronautical Systems Center.

Q37 People in my immediate work unit look for ways to improve their work.

Q38 People in my immediate work unit often discuss ways to improve the work produced.

Q39 My immediate work unit has appropriate personnel to get the job done properly.

Q40 Work expectations for my immediate work unit are fair.

Q41 People in my immediate work unit are expected to produce high quality work.

Q42 People in my immediate work unit are friendly with one another.

Q43 People in my immediate work unit enjoy their co-workers.

Q44 The right tools, equipment, and materials are available in my immediate work unit to get the job done.

Q45 The distribution of work among the people in my immediate work unit is well balanced.

Q46 There is ample time for people in my immediate work unit to perform jobs in a professional manner.

Q47 The pay scale is fair for people in my immediate work unit.

Q48 Attempts are made to promote the people in my immediate work unit who do good work.

Q49 People in my immediate work unit receive promotions because they earn them.

Q50 There is quick recognition for people in my immediate work unit for outstanding performance.

Q51 The two letter rewards the people in my immediate work unit for working together.

Q52 People in my two letter know who their customers are.

Q53 People in my two letter care about their customers.

Q54 In general, customers know that my two letter cares about what they think.

Q55 The two letter's customers are asked for their opinions about the work (services, products) they receive from my two letter.

Q56 Effective communication channels exist between work units in the two letter.

Q57 People in my immediate work unit do not have to rely on the "grapevine" or rumors for information.

Q58 The facts and information needed to do a good job are available to people in my immediate work unit.

Bibliography

Babcock, Daniel L. Managing Engineering and Technology. Upper Saddle River, New Jersey: Prentice Hall, 1996.

"Biography - Lieutenant General Robert F. Raggio." Excerpt from USAF biography page, n. pag. http://www.af.mil/news/biographies/raggio_rf.html. 9 Dec 1999.

Business Ethics Survey Report. Society for Human Resources Management/Ethics Resource Center, 1997.

"Core Values." Excerpt from core values page, n. pag. http://www.usafa.af.mil/core-value/. 1 Nov 1999.

Cullen, John B., Bart Victor, and James W. Bronson. "The Ethical Climate Questionnaire: An Assessment of it Development and Validity," Psychological Reports, 73: 667-674 (1993).

Damanpour, Fariborz. "Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators," Academy of Management Journal, 34 (3): 555-590 (1991).

Devore, Jay L. Probability and Statistics for Engineering and the Sciences. Pacific Grove, CA: Brooks/Cole Publishing Company, 1995.

Fritz, Janie M. Harden, Ronald C. Arnett, and Michele Conkel. "Organizational Ethical Standards and Organizational Commitment," Journal of Business Ethics, 20 Issue 4: 289-299 (July 1999).

Judge, William Q. "Correlated of Organizational Effectiveness: A Multilevel Analysis of a Multidimensional Outcome," Journal of Business Ethics, 13: 1-10 (1994).

Katz, Daniel and Robert L. Kahn. The Social Psychology of Organizations. New York: John Wiley & Sons, Inc., 1966.

Key, Susan. "Organizational Ethical Culture: Real or Imagined?," Journal of Business Ethics, 20 Issue 3: 217 (1 July 1999).

Lindsay, R. Murray, Linda M. Lindsay, and V. Bruce Irvine. "Instilling Ethical Behavior in Organizations," Journal of Business Ethics, 15: 393-407 (April 1996).

"Military Scandals." Excerpt from military scandals page, n. pag. http://www.synge.com/scandals/militaryscandals.html. 10 Feb 2000.

"Mission." Excerpt from mission page, n. pag. http://www.asc.wpafb.af.mil/abw/mission.html. 16 Feb 2000.

"Mission Statement." Excerpt from mission and vision page, n. pag. http://www.afrl.af.mil/misvis.html. 3 Feb 2000.

Morf, Duffy A., Michael G Schumacher, and Scott J. Vitell. "A Survey of Ethics Officers in Large Organizations," Journal of Business Ethics, 20 Issue 3: 265 (1 July 1999).

Morris, Debra A. The Effect of Ethical Climates on Attitudes Towards Whistle-Blowing. MS Thesis. University of Georgia, Athens GA., 1995.

Nicholson, Nigel. "Ethics in Organizations: A Framework for Theory and Research," Journal of Business Ethics, 13: 581-596 (August 1994).

Nunnally, J.C. Psychometric Theory. New York: McGraw Hill, 1978.

Smith, James M. "USAF Culture and Cohesion: Building an Air and Space Force for the 21st Century," Institute for National Security Studies (INSS) Occasional Paper 19. June 1998.

Smith, Patricia L and Ellwood F. Oakley III. "A Study of the Ethical Values of Metropolitan and Nonmetropolitan Small Business Owners," Journal of Small Business Management, 32 Issue 4: 17-27 (October 1994).

Staw, B. and E. Swajkowski. "The Scarcity-munificence Component of Organizational Environments and the Commission of Illegal Acts," Administrative Science Quarterly, 20: 345-354 (1975).

Van Scotter, James R., Michael Rehg, Marcia Miceli, and Janet Near. The Observation and Reporting of Wrongdoing by the ASC Workforce at Wright-Patterson AFB, Ohio. AFIT-LA-TR98-1. Air Force Institute of Technology (AU), Wright-Patterson AFB OH, July 1998.

Victor, B., and J.B. Cullen. "The Organizational Bases of Ethical Work Climates," Administrative Science Quarterly, 33: 101-125 (1987).

Wenker, Kenneth H. Ethics in the USAF: 1988. Maxwell AFB, Alabama: Air University Press, 1990.

Wimbush, James C. and Jon M. Shepard. "Toward and Understanding of Ethical Climate: Its Relationship to Ethical Behavior and Supervisory Influence" Journal of Business Ethics, 13: 637 (August 1994).

Wimbush, James C., Jon M. Shepard, and Steven E. Markham. "An Empirical Examination of the Multi-Dimensionality of Ethical Climate in Organizations," Journal of Business Ethics, 16 Issue 1: 67 (January 1997).

REPORT DOCUMENTATION PAGE	Form Approved OMB No. 074-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	March 2000	Master's Thesis

4. TITLE AND SUBTITLE

FACTORS AFFECTING PERCEPTIONS OF ETHICS WITHIN ORGANIZATIONS: A CASE STUDY OF ORGANIZATIONS WITHIN AERONAUTICAL SYSTEMS CENTER (ASC)

5. FUNDING NUMBERS

6. AUTHOR(S)

David W. Carlson, 1st Lt, USAF

7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S)

Air Force Institute of Technology
Graduate School of Engineering and Management (AFIT/EN)
2950 P Street, Building 640
WPAFB OH 45433-7765

8. PERFORMING ORGANIZATION REPORT NUMBER

AFIT/GEE/ENV/00M-01

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Mr. Stanley A. Pleasant, GS-12
Management Analyst
ASC/HRMB
1865 Fourth St.
WPAFB OH 45433-7126 DSN: 785-0666

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

Major Michael T. Rehg, ENV (co-chair), Phone: (937)-255-3636, ext 4711, email: Michael.Rehg@afit.af.mil
Major Mark A. Ward, ENV (co-chair), Phone: (937)-255-7777, ext 3329, email: Mark.Ward@afit.af.mil

12a. DISTRIBUTION / AVAILABILITY STATEMENT

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

12b. DISTRIBUTION CODE

ABSTRACT (*Maximum 200 Words*)

This thesis studied some of the factors that can be used to help predict perceptions of ethical climate within organizations. Specifically, five organizations within Aeronautical Systems Center (ASC) were analyzed by evaluating four years of cultural survey data. The factors that were studied were analyzed through the use of different statistical processes (to include a regression analysis) in order to determine if they could significantly predict the perceptions of the ethical climate of the five ASC organizations studied. The factors were also analyzed to determine how influential the significant factors were in predicting perceptions of the ethical climate of the organizations.

The results of this thesis indicate that leadership and friendliness are the two most influential and significant factors (of the ones studied) that can be used to help predict ethical perceptions within organizations. Friendliness was defined as how friendly employees are with each other and how much interaction they have with each other. The implications of these findings are that managers can use these results to help improve their organization's ethical climate.

14. SUBJECT TERMS
Ethics, Ethical Climate, Ethical Culture, Organization Climate, Business Ethics, Ethical Perceptions

15. NUMBER OF PAGES
98

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18
298-102