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MASTER OF MILITARY STUDIES

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**Naval Aviation Culture Workshops**

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## Executive Summary

**Title:** Naval Aviation Culture Workshops

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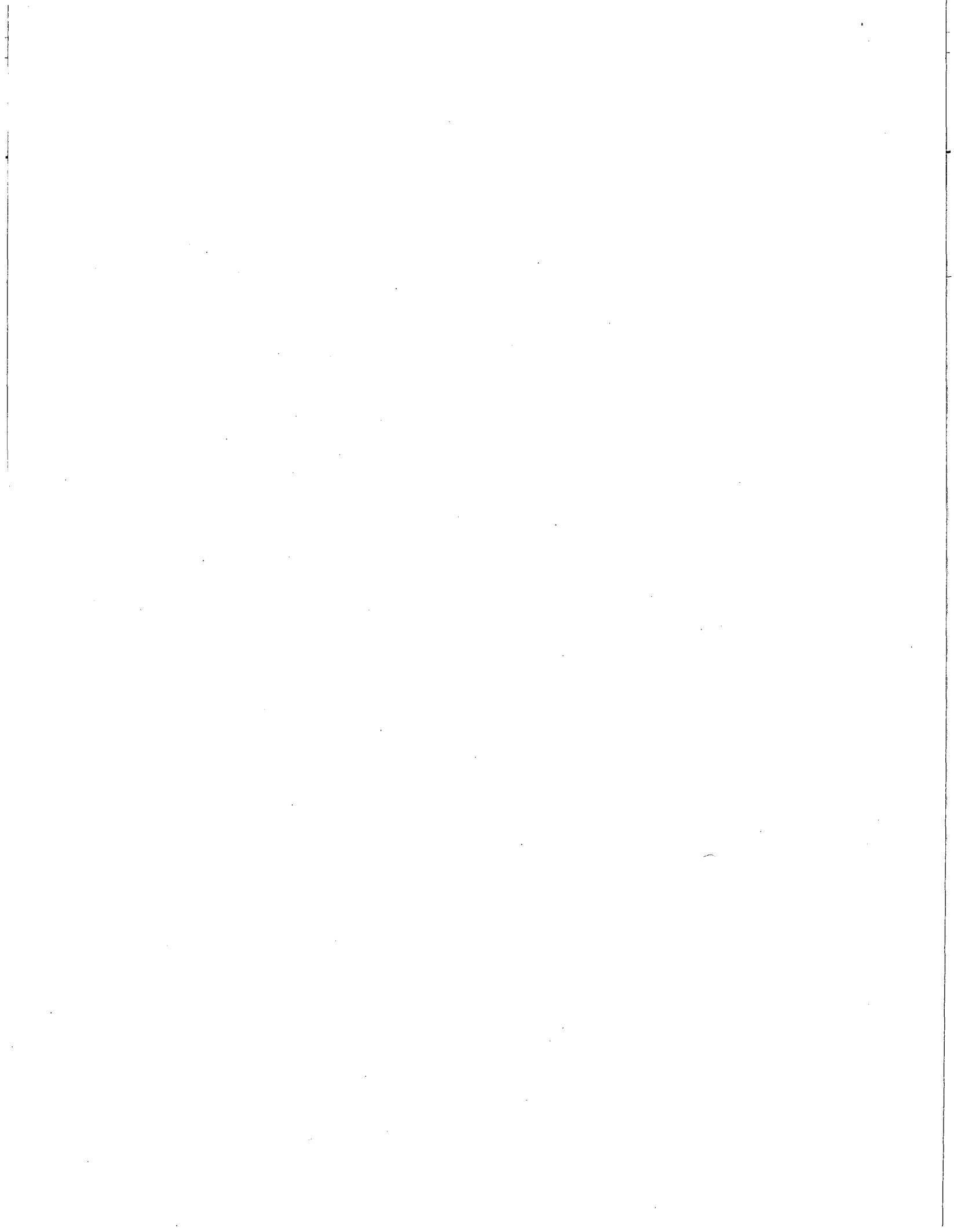
**Thesis:** Culture Workshops are beneficial in preventing and/or reducing aviation mishaps and they are worth the invested time and money.

**Discussion:** Organizational culture impacts a unit's performance- for better or for worse. This research defines organizational culture and describes the dynamic relationships between individuals, groups, and leaders. In addition, two case studies (NASA and US Airways) provide supplementary analysis to support the research. By understanding the context of organizational culture through theoretical analysis, one will gain the perspective that organizational culture is relevant in the military services-specifically in the naval aviation community.

Naval aviation is inherently a risky occupation. Each fiscal year, aviation mishaps cause loss of life, material, and investment. A strong organizational culture in aviation is necessary to prevent unnecessary mishaps. As a result, Naval Aviation Culture Workshops (CWs) were established to help commanders identify organizational issues and hazards that may cause aviation mishaps. CWs also identify command strengths and "best practices."

The Naval Safety Center (NSC) provided raw information that consisted of 288 naval aviation units over a seven year period (FY 2001-2008). Additionally, the raw data included completion of CW's and Class "A" Flight Mishaps (FMs). This research will validate the effectiveness of the Navy's CW by determining if there is a correlation between the execution of a CW and the likelihood of a mishap.

**Conclusion:** The CW Program is effective in reducing and preventing Class "A" FM when conducted every two years for non-deploying units and when made mandatory for units that are deploying. The Marine Corps should consider instituting requirements such as the Navy's, instead of the CW being an optional requirement. The Department of the Navy should provide necessary manpower and fiscal requirements to bolster Naval Safety Center (NSC) and Marine Corps efforts to provide CW's to aviation and ground units.



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## *Preface*

During my three years as the Rotary-Wing Aviation Safety Officer at Headquarters, United States Marine Corps, I observed that military policy makers relied on mishap metrics to gauge the Corps' success in reducing aviation mishaps. That is, at the end of each fiscal year, the number of mishaps is calculated into mishap rates that are then compared against other services to identify if the Corps is doing better than any of the other armed services. The less mishaps the Marine Corps had during the fiscal year- the better. The Department of the Navy invests large sums of money in technology to upgrade or build new aircraft systems in order to fix mechanical problems or aid to prevent pilot error. However, I believe investing in technological upgrades is a good short-term solution to reduce or prevent mishaps but the dysfunctional cultures that lead to mishaps need to also be reviewed and improved.

Culture workshops identify the "why" of how mishaps occur in an organization. The workshops also identify best command practices within an organization. The NSC's Culture Workshop Program is more than a decade old and is expanding outside of the aviation community to include sub-surface units, "blue water" Navy units, and Marine Corps ground combat elements. The CW program expansion is a positive testament that unit commanders are proactively identifying human factors that can improve operational excellence.

I would like to thank the NSC for providing statistical information to aid in my research and Commander John Morrison, Program Manager of the Culture Workshop Program, for his sound and helpful advice. It is also noteworthy to acknowledge all of the Navy and Marine Corps Culture Workshop Facilitators who spend tremendous amounts of effort and personal time to help commanders strive for a better and healthier organizational culture that can lead to success.

## CHAPTER 1

### INTRODUCTION

#### Prologue

Organizational culture is a compilation of values and accepted norms that is shared among the members of an organization.<sup>1</sup> Organizational culture is viewed as either negative or positive- contributing to the failure or success of an organization. The symbiotic relationship between members and leaders of an organization is thus important to realize that nurturing culture to meet mission accomplishment is critical to the survival of an organization.

The interaction of members and groups within an organization and their shared outcomes and performance are attributable to leadership. Simply put, an organization's culture is a partial reflection of the leader's personality.<sup>2</sup> This dynamic human relationship between groups and leaders form the human elements that contribute to the culture of an organization. Specifically, human factors are actions or inactions by an individual or group that affect the performance of an organization.

#### Statement of the Problem

A dysfunctional organizational culture creates a negative environment for accidents to occur. Specifically, the human factors (actions or inactions by followers and leadership of an organization) that create the culture greatly impacts organizational performance. Statistics from the Naval Safety Center (NSC) show that human factors account for 75% to 80% of all mishaps and incidents; and they continue to be a major contributing factor in aviation mishaps from year to year.<sup>3</sup> To meet this challenge, the Naval Aviation Safety Program was designed to protect personnel and assets by detecting, identifying, and implementing control measures to eliminate hazards in the naval aviation community.<sup>4</sup> A safety program like the

Culture Workshop (CW) is beneficial in preventing and/or reducing aviation mishaps and they are worth the invested time and money. Furthermore, CW's can lead to an increase in operational excellence while reducing or preventing fatal accidents.

#### Rationale

Aviation mishaps cost lives and material, thereby degrading an organization's mission readiness and capability. CW's provide the unit commander an unbiased assessment of his organization without retribution from higher headquarters. CW's allow the unit commander to identify and fix a problem before it impacts mission readiness. Identifying dysfunctional organizational culture through the use of a CW can reduce mishaps and prevent its occurrence.

#### Assumptions

The Navy and Marine aviation units researched are assumed to have completed a Command Safety Assessment (CSA) and Maintenance Climate Assessment Survey (MCAS) prior to conducting a CW. It is encouraged by the NSC for units to complete a CSA and MCAS in conjunction with a CW to "triangulate" the identification of negative cultural trends. Utilizing multiple tools by the unit commander provides additional measures of organizational effectiveness. The CSA and MCAS measure organizational safety climate in real time and provides Commanding Officers with the tools to make corrections.<sup>5</sup>

#### Objectives of the Research

First, this research defines the term "culture" and its relationship with organizational climate, leadership, and members. Second, by stating the elemental assumptions of organizational cultural relationships and providing background case studies for theoretical analysis, the impact of the CW's can be realistically determined. Third, military culture and naval aviation will be discussed to bring the research into perspective. Lastly, the research will

examine the CW program in an attempt to identify whether CW's prevented and/or reduced the occurrence of Class "A" Flight Mishaps (FMs). Additional information on the expansion of the CW program to other occupational specialties and organizations will be mentioned.

For the purpose of this paper, the terms "organization" and "unit" are interchangeable. The context of the term "culture" will be to groups or members within an organization and not to ethnic or religious groups. Culture, in this respect, refers to shared outcomes that contribute to organizational effectiveness.

### Significance of the Research

Navy and Marine Corps leadership tend to rely solely on metrics or benchmarks to identify success or failure of a program. This study provides statistical analysis on the effectiveness of the CW Program. The study also focuses on the human elements that form an organization's culture and how action or inaction by its members can contribute to mission success or errors that lead to mishaps. By understanding the dynamics of how individuals and groups affect the performance of an organization, this study provides leaders an alternative approach to assess organizational culture and how it impacts mission intent and strategic goals. Assessing organizational culture must be continuous to meet operational excellence.

### Limitations

The NSC provided raw data for this research from October 1, 2000 (FY 2001) thru November 28, 2007 (two months into FY 2008). The raw information consisted of active duty and reserve Navy and Marine aviation units, both fixed-wing and rotary-wing, that either completed a CW or did not during the seven-year period. The raw data also included dates that Class "A" FMs occurred.

### Delimitations

As described in the glossary, there are three mishap categories determined by severity. This research is delimited to correlating Class "A" FMs to units that either conducted a CW or did not. A Class "A" FM is the most severe classification that may include a combination of the following: damage greater than \$1,000,000, loss of aircraft, loss of life, and/or permanent total disability. Admittedly, by limiting the study to Class "A" FMs, the author stipulates CW programs may also have an impact in reducing Class "B" and "C" mishaps. Based on the experience of the author, Class "A" FMs typically receive greater attention and "media" coverage by leadership and policy makers.

## CHAPTER 2

### WHAT IS CULTURE?

Upgrading and revising hardware systems are short term solutions to increase mission capabilities and to prevent mishaps from occurring; however improving organizational culture should be considered as a long term solution to root out dysfunctional cultures in an organization.

Culture is a set of beliefs, norms, or shared values among a group or within an organization that is accepted and often stable. Culture identifies and defines what an organization is. It is normative, deeply entrenched, and difficult to change. Culture is passed from generation to generation and sustained by indoctrinating new members to share the organization's culture. In his classic work, *Organizational Culture and Leadership*, Edgar Schein defines culture as the following:

A pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, there, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.<sup>6</sup>

From Schein's definition, one can understand that culture is shaped by group interaction, developed over time, and influenced by leadership. Culture is embedded within an organization's rules and policies and affects how tasks are executed and completed. The culture of an organization reflects its history and the way it behaves, thus individuals play a vital role in the organization's formation and growth.<sup>7</sup> Culture exists because individuals within an organization accept and share the same values and beliefs.

The primary variable within an organization's culture is the human element. The human element is dynamic in nature because it is greatly affected when there are multiple interactions

among people's beliefs and values. Over time, individual interaction among groups create and accept shared values that lead to normalcy and stability of the organization. The human element always creates and influences the culture of a unit and ultimately affects how the organization operates, making culture difficult to change.

### Culture and Climate

To some culture and organizational scholars, the terms "culture" and "climate" can be confusing and the meanings interchangeable.<sup>8</sup> However, both culture and climate are distinct. If culture is the normative and accepted values of an organization, climate is the outwardly expression of that organization's culture. As an outsider, climate is what you see, hear, smell, and perceive. Contributing editors to *The Handbook of Organizational Culture and Climate* define climate as, "The feeling that is conveyed in a group by the physical layout in which members of the organization interact with each other, with customers, or other outsiders..."<sup>9</sup>

The climate of an organization is temporary, indicating a unit's perception at a point in time. To an outsider, organizational climate is a snapshot or initial perceptions of a unit. In contrast, culture is enduring and deeply entrenched in an organization. Nevertheless, culture and climate are very much related to each other. Culture (cause) lays the foundation to create the climate (effect). For instance, a successful culture may enable or exhibit a climate that is perceived by outsiders that groups within an organization are either happy with their workspace, their mission, or with their leadership. On the other hand, a dysfunctional culture creates a climate in which outsiders perceive one of discontent or one that creates complacency or lack of integrity among the groups of that organization.

Although the climate of an organization indicates how it functions, assessing an organization's climate can be misleading. As Schein elaborates, "If one perceives an

organization that looks informal and loose, it can be assumed that informality means playing around and not working. Alternatively, if one sees a formal organization, one may interpret that to be rigid and bureaucratic.”<sup>10</sup> Culture and climate are characteristics of an organization but it is inevitably culture that lays the foundation for an organization’s success or failure.

### Culture and Leadership

Leadership, at all levels within an organization, contributes an important part of a unit’s culture.<sup>11</sup> Leadership has the power to create, maintain, and destroy organizational culture. Although culture defines an organization and is influenced by its members, leadership is ultimately accountable for the actions or inactions of people within its charge. Leadership can either accept the unit’s culture or foster a change for the betterment of the organization.<sup>12</sup>

There are different leadership styles. Leaders can either instill fear or inspire their subordinates to complete missions. Leaders can also micromanage or enable people to accomplish their tasks in a decentralized fashion. Regardless of the leadership style, leaders have the responsibility of accomplishing missions and providing welfare for their subordinates.<sup>13</sup> It is leadership that actively sets the example for an effective organization.

Culture and leadership share a symbiotic relationship. Although they are intertwined, leaders influence others to think, act, and follow orders. Influential leaders shape an organization’s culture by getting “buy-in” from subordinates to suit an overall vision or goal. Within the military, commanders provide and issue a command philosophy to their unit. The command philosophy is the commanding officer’s cultural vision of his beliefs, values, and principles to accomplish the unit’s mission and to be understood and acted upon by his subordinates. Schein expresses that, “The leader must have certain insights, clear vision, and the skills to articulate, communicate, and implement the vision...”<sup>14</sup> Embedding this philosophy in

the organization ensures that the appropriate culture is in place to accomplish the commander's mission.

Leaders not only create and maintain the organization's culture; they are also a driving force for change management. Leaders may change the culture in an organization in response to a change in the operational mission or because the unit's culture becomes dysfunctional to the point a problem has broken out or a mishap has occurred. In his book, Schein shows that leadership and culture are conceptually intertwined.<sup>15</sup> He asserts that leadership can alter and manage an organization's culture and states the following:

...it can be argued that the only thing of real importance that leaders do is to create and manage culture; that the unique talent of leaders is their ability to understand and work with culture; and that it is an ultimate act of leadership to destroy culture when it is viewed as dysfunctional.<sup>16</sup>

#### Followers and Leaders

A leader without followers is an individual without an organization. Groups create cultures while leadership provides the influence to maintain the current norms and the skill to create the environment for change. Therefore, the strength of an organization's culture is based on the collective interaction of its members and the length and intensity of shared experiences in the organization.<sup>17</sup>

Before following any leader, groups first form a relationship based on a collective identity.<sup>18</sup> Regardless of whether it is a civilian or military organization, collective identity is based upon beliefs, values, and norms. These shared experiences become mutually reinforcing thus creating a culture that is systemic and most often difficult to change.

Individuals within groups that espouse strong beliefs and values often become leaders. These individuals are strong-minded, endorsed by the group, and act as the "voice" for the group.

A leader that has a vision for the group and is accepted by it creates the nucleus for culture to form and enables the collective identity of the organization to perform.

An organization may consist of different types of followers. In the December 2007 issue of the *Harvard Business Review*, Barbara Kellerman divides followers into five distinct sets:

1. Isolates who are detached
2. Bystanders who observe but do not participate
3. Participants who engage in some way
4. Activists who feel strongly
5. Diehards who are prepared to go down for a cause

As described, Isolates and Bystanders are bad followers and not conducive to an organization.<sup>19</sup>

Participants, Activists, and Diehards represent favorable followers for an organization but leaders must keep in mind that these followers may act upon their own interests and/or try to change the organization's culture. It is not only important for leaders to have the "right stuff" but to have the managerial ability to identify the effectiveness of the individual-group norms that contribute to organizational culture.

#### Non-Military Case Studies

The following case studies represent two non-military vignettes in which culture affected the performance outcomes of the organization. The National Aeronautical Space Agency (NASA) case study typifies a dysfunctional institution that had a culture of complacency and incompetence.<sup>20</sup> The US Airways case study shows how a significant event forced a culture change for the airline's survival.<sup>21</sup> The outlying purpose of these two examples is to reinforce that leadership is ultimately responsible for identifying negative trends that have taken root in an organization's culture. The case studies serve to show how leaders should take the initiative to create a new successful culture after a mistake or mishap occurs.

## 1. NASA

Established in 1958, NASA's space exploration program, backed with massive funding and support, was successful against the Soviet Union in putting a man on the moon.<sup>22</sup> The forming culture within NASA developed into a "can-do" attitude. Senior NASA officials, as well as the public, believed that spaceflight was safe and almost routine.<sup>23</sup> Due to political, public, and management pressure to build and launch more space shuttles, NASA's cultural mindset changed from "launch if proven safe" to "launch unless proven unsafe."<sup>24</sup>

NASA's culture was detrimental to the safety of the program because it put mission first over safety engineering concerns. NASA's dysfunctional culture resulted in two of the greatest catastrophic mishaps the public has ever seen. The 1986 Space Shuttle *Challenger* disaster was the result of a defective O-ring that connected to the solid rocket motor joint. The commission investigating the mishap discovered that the shuttle's O-ring limitations were ignored despite senior NASA official's stance of "the mission is a GO." The investigation report also revealed that the mishap was due to managerial and cultural mistakes.<sup>25</sup> Eventually, the commission tasked NASA to implement their recommendations regarding technical and procedural changes, changes to their management culture, and establishing a powerful safety office. Unfortunately, due to a systemic mindset of "launch first and ask questions later" and the lack of asserting the commission's recommendations, NASA's entrenched culture resulted in another shuttle mishap.

The second catastrophic mishap for NASA was the 2003 *Columbia* disaster, which was a result of heat tiles contacting the shuttle's fuselage. NASA engineers knew heat tile separation was a recurring problem for 10 years.<sup>26</sup> Senior management disregarded the engineers' concerns and stated that it was routine for the tiles to fall off and that the risks were acceptable. The "launch unless proven unsafe" attitude and culture was deeply entrenched at the leadership level.

Navy Rear Admiral Steve Turcotte, former Commanding Officer of the NSC, was a member of the *Columbia* Mishap Investigation Review Board and provided some insights as to the causal factor of the mishap.<sup>27</sup> Rear Admiral Turcotte deliberated that the mishap was due to a culture that was dysfunctional in regards to the communication and relationship between the engineers and senior management. He also identified that problems fixed by NASA were never followed up periodically. The “fix and forget” mentality and the “We’ve been doing it like this for years” cultural mindset enabled the *Columbia* mishap to occur.<sup>28</sup>

## 2. US Airways

In comparison to NASA’s failure to initiate a culture change after a catastrophe, the US Airways case study demonstrates how strong leaders enforce change within an organization with new cultural concepts. The US Airways case study is a prime example of leadership altering an organization’s culture to ensure operational success.

In 1994, US Airways suffered two fatal crashes that resulted in fatalities.<sup>29</sup> Following investigation and lack of public confidence, the airline’s safety record came into question. US Airways senior leadership established a new position of “Vice President, Corporate Safety and Compliance” in order to stop the declining culture which was affecting the company’s bottom line. The new position provided a new cultural mindset upon US Airways members that emphasized safety and customer service and implemented a review on aircraft procedures and standardization. After experiencing several mistakes and mishaps, US Airways survived because its leaders influenced the right culture when change was needed.

## Military Culture

The military's organizational culture is unique when compared to that of civilian organizations. The military's rich and historical culture is rooted upon tradition and impresses its espoused values and principles among its service members at the start of their careers. The military's organizational culture is also rigid, structured, and conformity-based. During the first phase of a service member's indoctrination, recruits are stripped of their identity and rebuilt to conform to the values of the military culture. Although the military is an "all volunteer" force, it selects individuals that will be culturally right for it. The wearing of a military uniform signifies both organizational uniqueness and stratification within the organization.<sup>30</sup> The military's hierarchical and authoritarian nature demands discipline and control. Orders are executed by its members via a chain of command that directs information or orders from the top to the bottom of the "totem pole." The military's culture developed over time and is widely accepted by its members and by the nation it protects. This unique military culture, unlike civilian organizations, is designed to defend the Constitution of the United States.

The military's institutional and hierarchical process of executing missions has served well over time but it is changing in the way it conducts "business" towards a more corporate-like approach.<sup>31</sup> Faced with a constrained budget and lack of resources to accomplish its mission, the military is forced to do more with less. The military changed its organizational culture from a rigid and "coercive" structure, to one of team-based values that are centered on the commander's intent. A team-based culture that decentralizes tasks enables freedom of action or thinking to complete the mission.

## CHAPTER 3

### NAVAL AVIATION

The previous chapter provided basic assumptions on culture and the dynamic human relationships of an organization that creates and maintains it. This chapter will focus on military culture, specifically the demanding and risky environment of naval aviation, to bring into perspective the importance of organizational culture.

Naval aviation is a dangerous occupation. Squadron pilots, aircrew, and maintenance personnel are constantly exposed to noise and movement of the aircraft in the environment they operate, regardless of peace or wartime conditions. From conducting night landing traps on a carrier to operating in the deserts of the Middle East, flying naval aircraft requires skill by pilots and repair knowledge by maintenance personnel. The demands of naval aviation require the utmost vigilance by its members to ensuring the force preservation of personnel and aircraft.

#### Naval Aviation Safety Program

Naval Aviation has come a long way from the culture of mass-producing aircraft to meet wartime requirements during World War II, to present day operations. Historically, loss of life and destruction of aircraft was a normal part of being in a dangerous profession. Today the importance is in force preservation to meet the nation's needs. Accordingly, to meet the challenge of a resource-restricted environment, naval aviation changed its culture and how it conducted business. Figure 1 depicts a positive trend towards efficiency and organizational effectiveness as the result of improved aircraft technology and instituting safety programs, policies, and procedures. However, the trend has leveled out since the 1990's and into the 21st century.

# Naval Aviation Mishap History

USN/USMC, FY50-05

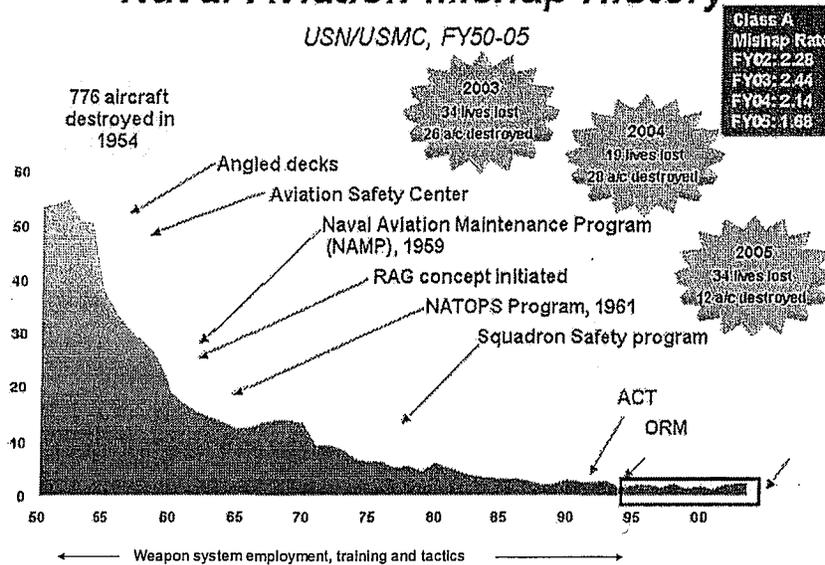


Figure 1.

The Naval Aviation Mishap History graph was produced by the NSC, NAS Norfolk, VA.

\*The historical graph shows how aviation programs reduced the amount of naval aviation mishaps from 1950 to the present day of submitting this research paper.

On October 9, 2007, the Department of the Navy (DON) released a memorandum concerning the Navy's objectives for Fiscal Year (FY) 2008 and beyond. The purpose of the DON objectives was to identify critical issues that affect Navy and Marine Corps capabilities and to provide areas of focus in order to improve work effectiveness and force preservation. One of the objectives stated that the Navy-Marine Corps Team must, "Integrate Safety and Risk Management into all on and off-duty evolution to maximize mission readiness and to establish DON as an organization with world class safety where no mishap is accepted as the cost of doing business."<sup>32</sup> The DON's safety objective required a paradigm shift of thinking from an historical and traditional organization that accepts mishaps, to an organization that mitigates risks and prevents mishaps. The DON objective reinforced the importance of a culture that is

organizationally effective and one that preserves personnel and material, while operating in a demanding and fiscally constrained environment.

Naval aviation's cornerstone to success is its safety program. The Naval Aviation Safety Program enhances operational readiness when it preserves the lives and enhances the well-being of its members by protecting the equipment and material they need to accomplish the mission.<sup>33</sup> The integrity of the safety program is the responsibility of the unit commander. The commanding officer is charged to promote the safety program's policies and procedures set forth in the unit to create an environment and culture that meets mission readiness by mitigating risks and hazards.

The goal of the Naval Aviation Safety Program is to eliminate or control potential causes of damage and injury under human control.<sup>34</sup> Program elements such as the Command Safety Assessment (CSA) and the Maintenance Climate Assessment Survey (MCAS) are utilized in conjunction with a culture workshop. Both CSA and MCAS provide commanding officers the tools to identify organizational trends that may lead to a mishap.<sup>35</sup> Prior to conducting a culture workshop, commanding officers are provided the opportunity to execute the CSA and MCAS in order to obtain quick feedback on their unit's strengths and weaknesses.

#### Operational Risk Management (ORM)

ORM is integral to creating a safe and effective environment. ORM is a decision-making process that is applied by leadership during the planning process and executed by subordinates during on and off-duty hours. The Navy and the Marine Corps apply the ORM process to all activities whether it is a low or high-risk event. Applied successfully, ORM preserves forces and assets while accomplishing the mission. The ORM process is not about preventing or eliminating "all" risks within the military.<sup>36</sup> The military profession is inherently dangerous. As

delineated in the Naval Aviation Safety Program, "ORM applied beforehand will prevent a mishap. Applied afterward, it will prevent its recurrence."<sup>37</sup>

There are five steps to the ORM decision-making process: (1) Identify Hazards, (2) Assess Hazards, (3) Make Risk Decisions, (4) Implement Controls, and (5) Supervise.<sup>38</sup> CWs are designed to assist leadership with identifying the hazards that affect organizational performance (Step (1)). Once the hazards are identified, it is the responsibility of the commanding officer to execute the four remaining steps to achieve excellence.

## CHAPTER 4

### ORIGINS OF THE CULTURE WORKSHOP (CW) PROGRAM

In 1992, Colonel Alan Groben, a Maintenance Officer in the Air National Guard, developed a unique theory that challenged the traditional philosophy on the conduct of investigating aviation mishaps.<sup>39</sup> Col Groben explained that, “many recent mishaps occurred not because an individual forgot to perform a required inspection or a pilot violated a regulation or procedure. Instead, he argued, there were dysfunctional unit cultures that allowed the errors to happen, and these cultures were the root causes of the mishaps.”<sup>40</sup> The paradigm shift from identifying causal factors and instituting measures to prevent future occurrence, to a theory of identifying the culture as the reason for a mishap, was tested in the Air National Guard units. The program was groundbreaking because it focused on the culture of an organization rather than a specific individual who committed the error causing a mishap. Thus Col Groben’s “Cultural Assessment Program” was born.<sup>41</sup>

#### CW Requirements

Four years after the Cultural Assessment Program was instituted in the Air National Guard, the Navy became interested in implementing Col Groben’s program for naval aviation. After obtaining a directive from the Secretary of Defense to reduce mishaps 50% by FY 2000, the Navy held a Human Factors Quality Management Board.<sup>42</sup> The Navy adopted Col Groben’s Cultural Assessment Program and changed the program’s name to “The Culture Workshop (CW) Program.” The Marine Corps joined the Navy’s effort in instituting a CW program and established the *Warrior Preservation Campaign 2006* to assist Marine commanders in reducing mishaps.<sup>43</sup> The Navy required all deployable aviation squadrons to complete a workshop during their inter-deployment training cycle and for non-deployable units to complete a workshop once

during each two-year period.<sup>44</sup> In contrast, the Marine Corps made the CW an optional requirement for aviation units to conduct a workshop every two years.<sup>45</sup>

### Purpose

The CW Program is an important assessment tool for the unit commander. A unit's organizational culture influences the development of practices, shared values, or habits that can either create a successful unit or ultimately contribute to a mishap. CW's assist the unit commander by identifying organizational strengths and potential hazards that are often the result of a unit's culture. During the workshop, a trained facilitator conducts multiple seminars to determine shared assumptions between seminar participants to examine cultural perceptions and trends. After the CW seminars, the facilitator compiles the data derived from the seminar discussions and conducts a confidential debrief to the unit commander. The confidentiality between the facilitator and unit commander is an important process to the CW. The CW is not an inspection program. The CW is a non-attribution process and is specifically designed for the unit commander to "self assess" his organization's performance. The commander can use the confidential information to identify hazards, mitigate risks, and instill a culture change if it is required. Aviation units have utilized this viable assessment tool since 1996. To put the CW effectiveness into perspective, during FY 2004 and FY 2005- of the 168 squadrons (64% of the total Navy/Marine Corps squadrons) that conducted a CW, only 7 squadrons had a Class "A" mishap after a workshop. Squadrons that failed to conduct a CW accounted for 85% of all Class "A" mishaps.<sup>46</sup>

### Mission Statement

The mission statement for the CW Program is, "*Operational excellence exists on a foundation of trust, integrity, and leadership, created and sustained through effective communication.*"<sup>47</sup> The purpose of the mission statement is to provide the workshop participants with a clear understanding that seminars are centered on the discussion of communication, trust, and integrity. Leadership is not directly discussed in the seminars, per se. The CW Facilitator points out that leadership roles and responsibilities within the participating organization are never challenged. The overall intent of the workshop is to identify perceptions and trends for the unit's leader to identify issues and to affect a culture change. Ultimately, the leader is responsible for the performance of his unit.

### Three Pillars of the CW

Communication, trust, and integrity are essential elements for a unit to succeed. During a CW, the pillars of Communication, Trust, and Integrity are discussed among the group in an open forum. Discussing the pillars in an open forum stimulates the group to "open up" on what they know and perceive about their respective organization. The seminars are non-attribution. Eliciting perceptions from the group, the facilitator identifies cultural trends, good or bad, that might affect the performance of the organization. Discussions of the three pillars provide the facilitator critical information that the unit commander may not be aware of. On the topic of assessing cultural dimensions, Schein concluded that, "Culture *can* be assessed by means of various individual and group interview processes, with group interviews being by far the best method in terms of both validity and efficiency..."<sup>48</sup>

## 1. Communication

Communication affects organizational performance at all stratum within a unit and is the backbone for any leader from the fire team leader/shop supervisor to the battalion/squadron commanding officer.<sup>49</sup> Communication is what binds a unit together- without it nothing will be done. In order for communication to be effective, information must be clearly sent and received by the sender and receiver respectively. In addition to the two-way flow of communication, both sender and receiver must confirm the information is correct. Communication is one of the most critical discussion topics during a CW seminar. Without an effective way to communicate between subordinates and leaders, mission tasks will not be completed or they will be executed improperly. Ineffective communication creates the environment for problems to occur. The Naval Aviation Safety Program states that, "...uncluttered communications channels running up and down the chain of command will foster a genuine sense of ownership of the safety process by all hands and produce, thereby, an effective command safety culture."<sup>50</sup>

## 2. Trust

"*Trust*" is defined as, "confidence in the ability, character, or truthfulness of a person or thing."<sup>51</sup> Furthermore, trust is reliance among members of an organization that provide the element of teamwork to exist. Without trust, an organization would lack cohesiveness. During a seminar discussion, participants are asked if they trust an individual based on knowledge and experience or if they trust someone based on rank and position. The initial tendency by participants is to not speak during a seminar for fear of retribution. However, participants are asked by the facilitator not to judge someone based on likeability; likeability should not hinder job performance. For example, a person may not be well liked-but trusted to do the job. Trust is

an important subject to discuss because job competence and group reliance are essential in carrying out leadership goals.

### 3. Integrity

“*Integrity*” is defined as “a rigid adherence to a code or standard of values.”<sup>52</sup> In other words, integrity is about “doing the right thing when no one’s watching.” Integrity also means acting in a professional manner that is commensurate with the military’s ethos of “honor, courage, and commitment.” During the seminar, the facilitator asks participants if there are integrity violations occurring within the unit or outside of normal working hours. This particular subject is sensitive because lack of integrity can lead to punishment of an individual or group and violations may result in a mishap. Identifying integrity with respect to unit programs and processes is essential to identify any trend that may hinder organizational performance.

#### Culture Workshop Trends Analysis

As discussed in chapter 2, the culture of an organization can affect its performance. To analyze the affects of culture within naval aviation, the Navy instituted a culture workshop program to identify dysfunctional cultural trends within a unit that may lead to mishaps. Before discussing the cultural trends in relation to a mishap event, one must reinforce the assumption that culture is *enduring*, *stable*, and *entrenched* within an organization. Additionally, leadership creates and maintains the appropriate cultural environment to complete the unit’s mission.

Figure 2 provides a graphic data depiction of the 288 aviation units that were examined. 55% of the units that conducted a workshop did not have a Class “A” FM during the period examined.

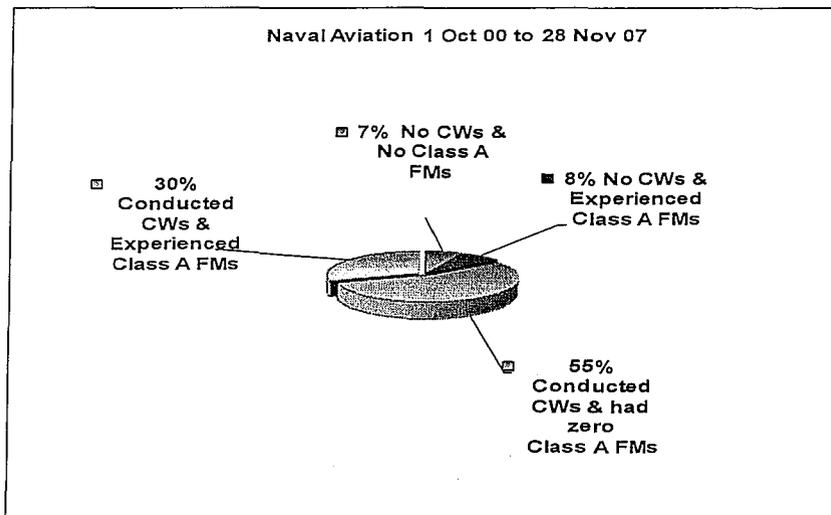


Figure 2.

Table 1

Naval Aviation (Navy and Marine Units)		
Combined Fixed/Rotary-Wing	# Units	%
Of 45 units:No CW, No Class A FMs	24	53%
Of 45 units:No CW, Class A FMs	21	47%
Of 243 units:Had CW, No Class A FMs	158	65%
Of 243 units:Had CW, Had Class A FMs	85	35%
<b>Total</b>	<b>288</b>	

Looking closely at the units that conducted a workshop and still had a mishap (30%) during the seven-year period, 65% of the 243 aviation units that conducted a workshop did not experience a Class "A" FM (Table 1). In contrast, only 35% of the 243 units still experienced a mishap (Table 1). There are two primary reasons why 85 squadrons out of the 288 squadrons accounted for, still experienced mishaps. First, the data does not account for the periodicity of whether a mishap occurred before or after a workshop. The research merely correlated the data over the seven-year period. In fact, the percentage of units that conducted a workshop and experienced a mishap dropped when calculated during FY 2006 and FY 2007 (Figure 3). Historically, the NSC presents CW data by analyzing two-year periods. Second, mishaps could

be attributable to material failures that are not the result of human error. In summary, Figure 2 and Table 1 suggest that culture workshops are effective in preventing Class “A” FMs.

A second analysis of the correlation of workshops to mishaps was conducted for FY 2006 through FY 2007. The results shown in Figure 3 depict more impressively the effectiveness of a CW. Of the 181 squadrons that conducted a CW, only 13 squadrons had Class “A” FMs after a CW. In comparison, 23 squadrons that failed to conduct a CW before a mishap occurred- each experienced a mishap. Therefore, 64% of the mishaps from FY 2006- FY 2007 were either from squadrons that did not conduct a CW or squadrons that experienced a Class “A” FM before conducting a CW. Figure 3 illustrates how the CW process attributes to improving a squadron’s organizational effectiveness and operational excellence.

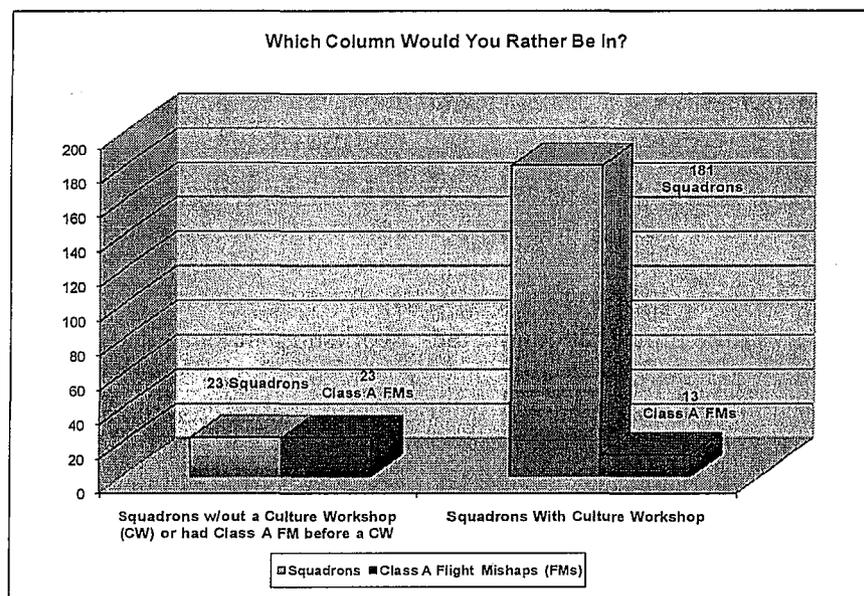


Figure 3.

Tables 2 through 7 (Appendix A) provide detailed information of Navy and Marine Corps squadrons and further compares rotary-wing to fixed wing units. After reviewing the aforementioned tables, it is clear that Navy units reap the benefits of conducting a workshop as compared to Marine aviation units (See Tables 6 and 7, Appendix A). This may be due to the

Navy requirement of conducting a CW during inter-deployment training cycles and a CW every two years for non-deployable units. In contrast, Marine units optionally conduct a workshop every two years- regardless if the units deploy or not. The data also suggests that the frequency of conducting a workshop reduces the likelihood of having a Class “A” FM in the future.

There are three reasons why the analytical data for Marine units are not as favorable as the Navy’s. First, Marine units have a different “sub-culture.” Their mission sets are very much different from the Navy’s. In other words, Marines fly riskier missions in demanding environments. This is not to imply that Navy units have easier missions.

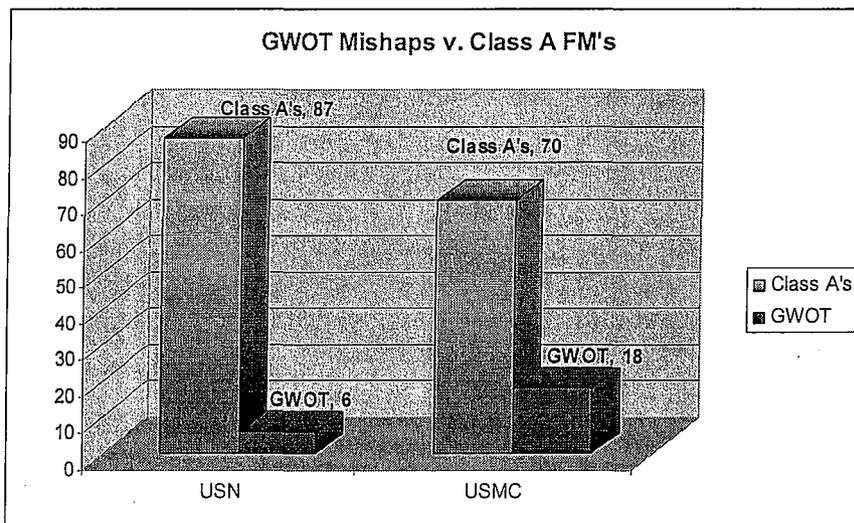


Figure 4.

Figure 4 breaks down the number of mishaps that occurred in support of the Global War on Terror (GWOT). Specifically, GWOT refers to flying in Afghanistan, Iraq, and the Horn of Africa. Of the 70 Marine Class “A” FMs during the seven-year period, 18 (26%) of the mishaps occurred in support of GWOT. In comparison, of the 87 Navy Class “A” FMs, only 6 (7%) were lost in support of GWOT. Marines had more exposure to combat and the desert environment as oppose to the Navy during this time period. Second, Marine leadership does not enforce units to have a CW every two years. Workshops are optional and considered as a voluntary tool for

Marine commanders. Third, there are not enough Navy and Marine Facilitators to fulfill a squadron's request for a culture workshop. The demands of requesting a CW exceed the supply of Facilitators.

#### Culture Workshop Expansion

Expansion of the CW Program beyond naval aviation units is a strong testament to the viability of the program in preventing or reducing mishaps and increasing operational excellence. Since the *Columbia* mishap in 2003, NASA invited naval CW facilitators to conduct workshops to identify potential hazards within their organization. Large departmental organizations such as the USS *Harry S. Truman* and the USS *Ronald Reagan* also participated in the workshop process. With assistance from the NSC, naval submarine units established their own workshop program adjusted to meet their requirements. Finally, U.S. Coast Guard stations have taken advantage of the CW process to identify trends that affect their organization.

Also noteworthy of mentioning is an initiative to identify organizational trends in Marine Corps ground combat elements. Headquarters U.S. Marine Corps Safety Division, with help from the NSC and 4<sup>th</sup> Marine Aircraft Wing Workshop Facilitators, conducted beta testing of the workshop process with great success.<sup>53</sup> Known as the *Commander's Warrior Workshop Program*, unit commanding officers that participated in the workshop supported the process and actively promoted the workshop program to other commanding officers. The CW expansion is attributed to its non-attribution of information. One commander stated that, "the workshop is a superb opportunity to get an objective view of the battalion's culture."<sup>54</sup> Moreover, another commander was quoted in a critique saying there was "great feedback from all levels within the battalion-some positive, some negative, but all worthwhile."<sup>55</sup>

## CHAPTER 5

### CONCLUSION

Organizational culture impacts a unit's performance. Climate, leadership, and the members of an organization are intertwined and they contribute to the creation, maintenance, and change to organizational culture. The human element in organizational culture is dynamic and affects the normalcy and stability of the organization. Understanding the human element will help leadership identify cultural success or failure.

The NASA and US Airways case studies provided examples on how dysfunctional cultures can lead to catastrophic events. Unfortunately, the loss of life and negative press experienced by NASA and US Airways forced leadership to change culture. They also demonstrated that identifying negative trends by pro-active leaders can change culture to ensure future success.

Naval aviation is inherently dangerous. For this reason, aviation safety programs are implemented by commanding officers to eliminate or control potential causes of damage and injury to aircraft and personnel. Programs such as the Culture Workshop provide unit commanders a tool to identify hazards that contribute to aviation mishaps.

Culture workshops are effective in reducing or preventing mishaps. The data examined show units that conducted workshops have fewer or no mishaps than those units which did not complete a workshop. A leader who understands the human dynamics within his organization will ensure cultural success and operational excellence.

## Recommendations

Marine commanders should follow a similar rule like the Navy by instituting a mandatory requirement for squadrons to conduct a culture workshop during their six-month deployment cycle or when there is a squadron change of command. Increasing the periodicity for a workshop will reduce or prevent Class "A" FMs and will identify hazards that impact organizational performance. Pro-active leadership plays a pivotal role in identifying dysfunctional cultural trends. During an interview with RADML Turcotte, he stated that, "a commanding officer's attitude and actions will ultimately decide the direction that a squadron takes."<sup>56</sup> In addition, the Department of the Navy should support the NSC's effort in establishing a Culture Workshop division that is fully funded and fully staffed to fulfill the demanding requests for a workshop by the squadrons.

## Notes

<sup>1</sup> Adrienne Colella, Michael A. Hitt, and C. Chet Miller, eds., *Organizational Behavior: A Strategic Approach* (New York, NY: Wiley, 2005), 498.

<sup>2</sup> Nanci Hannon, "A Study of the Effect of Organizational Culture on Leadership Practices within Defense Agencies" (USAWC Strategy Research Project, AY 2000), 2.

<sup>3</sup> Naval Safety Center, "Human Factors Council Presentation," January 1, 2005, 2, <http://www.safetycenter.navy.mil/presentations/aviation/hfaccouncil.htm>, (accessed February 1, 2008).

<sup>4</sup> Department of the Navy, *Naval Aviation Safety Program*, OPNAV Instruction 3750.6R (Washington, DC: Office of the Chief of Naval Operations, March 1, 2001), 1-1.

<sup>5</sup> Robert Figlock, "CSA/MCAS (Command Safety Assessment/Maintenance Climate)", *Advanced Survey Design* (January 26, 2008), [http://www.advancedsurveydesign.com/index\\_files/Page724.htm](http://www.advancedsurveydesign.com/index_files/Page724.htm) (accessed January 26, 2008).

<sup>6</sup> Edgar H. Schein, *Organizational Culture and Leadership* (San Francisco, CA: Jossey-Bass, 2004), 17.

<sup>7</sup> Paul Hersey, Kenneth Blanchard, and Dewey Johnson, eds., *Management of Organizational Behavior* (New Jersey: Prentice-Hall, Inc., 1996), 173.

<sup>8</sup> Schein, 12.

<sup>9</sup> Schein, 13.

<sup>10</sup> Schein, 27.

<sup>11</sup> Col Mark Schulte and Maj Robert Rubio, "Leadership and Culture," *Marine Corps Gazette* 91, no.5 (May 2007): 26.

<sup>12</sup> Col Schulte and Maj Rubio, 26.

<sup>13</sup> Hannon, 3.

<sup>14</sup> Schein, 409.

<sup>15</sup> Schein, 11.

<sup>16</sup> Schein, 11.

<sup>17</sup> Colella, Hitt, and Miller, eds., 498.

<sup>18</sup> Janice M. Beyer and others, *Ties That Bind*, Neil M. Ashkanasy, Celeste P.M. Wilderom, and Mark F. Peterson, eds., *Handbook of Organizational Culture and Climate* (Thousand Oaks, CA: Sage Publications, Inc., 2000), 336.

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<sup>19</sup> Barbara Kellerman, "What Every Leader Needs to Know About Followers," Harvard Business Review, December 2007, 87-91.

<sup>20</sup> Robert E. Mittelstaedt, Jr., *Will Your Next Mistake BE FATAL? Avoiding the Chain of Mistakes That Can Destroy Your Organization* (Upper Saddle River, NJ: Wharton School Publishing, 2005), 122-131.

<sup>21</sup> Mittelstaedt, Jr., 196-197.

<sup>22</sup> Mittelstaedt, Jr., 123.

<sup>23</sup> Mittelstaedt, Jr., 123.

<sup>24</sup> Mittelstaedt, Jr., 123.

<sup>25</sup> Mittelstaedt, Jr., 124.

<sup>26</sup> Mittelstaedt, Jr., 125.

<sup>27</sup> RADML Steve Turcotte, "The Columbia Mishap. An interview with RDML Steve Turcotte," by CAPT George Platz, LtCol Rick Boyer, and Derek Nelson, *Approach* (March-April 2004): 7.

<sup>28</sup> RADML Turcotte, 8.

<sup>29</sup> Mittelstaedt, Jr., 196.

<sup>30</sup> Joseph L. Soeters, *Culture in Uniformed Organizations*, Ashkanasy, Wilderom, and Peterson, eds., 465.

<sup>31</sup> Ashkanasy, Wilderom, and Peterson, eds., 471.

<sup>32</sup> Department of the Navy, *Department of the Navy Objectives for FY 2008 and Beyond*, Memorandum (Washington, DC: Secretary of the Navy, October 9, 2007), 3.

<sup>33</sup> Department of the Navy, *Naval Aviation Safety Program*, OPNAV Instruction 3750.6R (Washington, DC: Office of the Chief of Naval Operations, March 1, 2001), 1-1.

<sup>34</sup> Department of the Navy, *Naval Aviation Safety Program*, 1-2.

<sup>35</sup> Robert Figlock, "CSA/MCAS (Command Safety Assessment/Maintenance Climate)", *Advanced Survey Design* (January 26, 2008), [http://www.advancedsurveydesign.com/index\\_files/Page724.htm](http://www.advancedsurveydesign.com/index_files/Page724.htm) (accessed January 26, 2008).

<sup>36</sup> Capt. Ken Neubauer, "Managing Risk to Operate: Making ORM Part of Navy Culture", *ORM: The Essentials*, (Summer 2007), 2. [http://www.safetycenter.navy.mil/media/ORM\\_special\\_issue/default.htm](http://www.safetycenter.navy.mil/media/ORM_special_issue/default.htm) (accessed February 1, 2008).

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- <sup>37</sup> Department of the Navy, *Naval Aviation Safety Program*, 1-4.
- <sup>38</sup> Department of the Navy, *Naval Aviation Safety Program*, 1-4-1-5.
- <sup>39</sup> Lt Pat DeConcini, "Culture Shock," *The Combat Edge*, (January 1995): 28.
- <sup>40</sup> Lt DeConcini, 28.
- <sup>41</sup> Col Schulte and Maj Rubio, 26.
- <sup>42</sup> Naval Safety Center, *Culture Workshop Facilitator Selection and Training Program*, COMNAVSAFECENINST 1500.2, (NAS Norfolk, VA: Naval Safety Center, August 1, 2005) 1.
- <sup>43</sup> Headquarters U.S. Marine Corps, *Warrior Preservation Campaign 2006. Marine Take Care of Their Own*, Pamphlet (Washington, DC: Headquarters U.S. Marine Corps Safety Division, 2006), 16.
- <sup>44</sup> Naval Safety Center, *Culture Workshop*, PowerPoint Brief, accessed January 22, 2008, 6, <http://www.safetycenter.navy.mil/culture/default.htm> (accessed January 22, 2008).
- <sup>45</sup> Headquarters U.S. Marine Corps, *Operational Risk Management (ORM) and Fundamentals Campaign*, Routine Message Traffic, (Washington, DC: Headquarters U.S. Marine Corps Safety Division, DTG 121432Z May 2004), 1.
- <sup>46</sup> Col Schulte and Maj Rubio, 26.
- <sup>47</sup> Naval Safety Center, *Culture Workshop Facilitator Selection and Training Program*, 1.
- <sup>48</sup> Schein, 361.
- <sup>49</sup> Col Schulte and Maj Rubio, 28.
- <sup>50</sup> Department of the Navy, *Naval Aviation Safety Program*, 2-4.
- <sup>51</sup> Col Schulte and Maj Rubio, 28.
- <sup>52</sup> Col Schulte and Maj Rubio, 29.
- <sup>53</sup> Col Schulte and Maj Rubio, 26-29.
- <sup>54</sup> Col Schulte and Maj Rubio, 29.
- <sup>55</sup> Col Schulte and Maj Rubio, 29.
- <sup>56</sup> RADML Turcotte, 8.

## Glossary

Mishap classification was derived from the Naval Aviation Safety Program (OPNAV 3750.6R).

Naval Aviation Mishap Categories:

- a. **Flight Mishaps (FM)**- This category encompasses those mishaps which result in \$20,000 or more damage to a DOD aircraft or UAV or, the loss of DOD aircraft or UAV-when intent for flight for DOD aircraft or UAV existed at the time of the mishap. Other property damage, injury or death is irrelevant to this classification.
- b. **Flight-Related Mishaps (FRM)**- Those mishaps which result in less than \$20,000 damage to a DOD aircraft or UAV- when intent for flight existed at the time of the mishap and, additionally, \$20,000 or more total DOD and non-DOD damage or a reportable injury or death occurred.
- c. **Aviation Ground Mishap (AGM)**- Those mishaps in which the intent for flight did not exist but a DOD aircraft or UAV was lost, or more than \$20,000 damage was sustained by a DOD aircraft or UAV, or DOD or non-DOD property was damaged in the amount of \$20,000 or more, or a reportable injury occurred.

Naval Aviation Mishap Severity Classes:

- a. **Class "A" Severity**- A Class "A" mishap is one in which the total cost of damage to property or aircraft or UAVs exceeds \$1,000,000, or a naval aircraft is destroyed or missing, or any fatality or permanent total disability results from the direct involvement of naval aircraft or UAV. Loss of a UAV is not a Class "A" unless the cost is \$1,000,000 or greater.
- b. **Class "B" Severity**- A Class "B" mishap is one in which the total cost of damage to property or aircraft or UAVs is more than \$200,000 but less than \$1,000,000, or a permanent partial disability or the hospitalization of three or more personnel results.
- c. **Class "C" Severity**- A Class "C" mishap is one in which the total cost or damage to property or aircraft or UAVs is \$20,000 or more, but less than \$200,000, or an injury requiring five or more lost workdays results.

Note: Any occurrence in which the total cost of property or aircraft or UAV damage is less than \$20,000 and there are no reportable injuries is not an aviation mishap. Report these events as hazards. Refer to Chapter four of the Naval Aviation Safety Program (OPNAV 3750.6R).

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## APPENDIX A

### NAVY AND MARINE CW TABLES

Table 2

Navy Aviation (Active and Reserve Units)		
Navy Rotary Wing Units	# Units	%
Of 2 units: No CW, No Class A FMs	1	50%
Of 2 units: No CW, Class A FMs	1	50%
Of 41 units: Had CW, No Class A FMs	24	59%
Of 41 units: Had CW, Had Class A FMs	17	41%
Total	43	

Table 4

Marine Aviation (Active and Reserve Units)		
USMC Rotary Wing Units	# Units	%
Of 13 units: No CW, No Class A FMs	6	46%
Of 13 units: No CW, Class A FMs	7	54%
Of 29 units: Had CW, No Class A FMs	18	62%
Of 29 units: Had CW, Had Class A FMs	11	38%
Total	42	

Table 3

Navy Aviation (Active and Reserve Units)		
Navy Fixed Wing Units	# Units	%
Of 12 units: No CW, No Class A FMs	9	75%
Of 12 units: No CW, Class A FMs	3	25%
Of 150 units: Had CW, No Class A FMs	105	70%
Of 150 units: Had CW, Had Class A FMs	45	30%
Total	162	

Table 5

Marine Aviation (Active and Reserve Units)		
USMC Fixed Wing Units	# Units	%
Of 18 units: No CW, No Class A FMs	8	44%
Of 18 units: No CW, Class A FMs	10	56%
Of 23 units: Had CW, No Class A FMs	11	48%
Of 23 units: Had CW, Had Class A FMs	12	52%
Total	41	

Table 6

Navy Aviation (Active and Reserve Units)		
Navy Fixed/Rotary Wing Units	# Units	%
Of 14 units: No CW, No Class A FMs	10	71%
Of 14 units: No CW, Class A FMs	4	29%
Of 191 units: Had CW, No Class A FMs	129	68%
Of 191 units: Had CW, Had Class A FMs	62	32%
Total	205	

Table 7

Marine Aviation (Active and Reserve Units)		
USMC Fixed/Rotary Wing Units	# Units	%
Of 31 units: No CW, No Class A FMs	14	42%
Of 31 units: No CW, Class A FMs	17	58%
Of 52 units: Had CW, No Class A FMs	29	56%
Of 52 units: Had CW, Had Class A FMs	23	44%
Total	83	