Workplace Preferences of Millennials
In the Aviation Industry

Mary Niemczyk and Jon W. Ulrich
Arizona State University

Abstract
Previous research has determined that each generation has its own unique attitudes, work ethics, distinct, and preferred ways of managing and being managed. Today’s workplace represents the largest diversity of generations than any other time in history. The examination of generational differences among workers is a critical and underdeveloped area of investigation, particularly in aviation. The purpose of this study was to determine the work environment preferences of the Millennial generation in the aviation industry. The Work Environment Scale – Form I (Moos & Insel, 1974) was administered to 290 aviation personnel. Results of this study portray a complex combination of relationship, personal growth, and organizational structures of their ideal workplace preferences, dominated by desires for greater personal freedoms with less managerial interventions.
Workplace Preferences of Millennials
In the Aviation Industry

Today, like no other time in the history of the United States, the workforce is comprised of the greatest number of generational cohorts. Many organizations have employees representing four generations (Zemke, Raines, & Filipczak, 1999); all may be working concurrently, however, they may not be working collaboratively. Generational cohorts tend to view the world, and the workplace, from the standpoint of their distinct life experiences (Schuman & Scott, 1989), yet they are expected to act as a team to meet the goals of the organization. Unfortunately, their differences may often lead to miscommunication, employee conflict, work ethic debates, loyalty issues, varying wants and needs in terms of compensation, and training issues. A key to organizational success is to understand the perspectives and desires of each generation and be respectful of their differences (Gravett & Throckmorton, 2007).

The examination of generational differences among workers is a critical and underdeveloped area of investigation, particularly in aviation. Ultimately, all organizations are most strongly influenced by the values and preferences of their newest generation of employees. Failure on the part of management to understand and adjust appropriately to generational differences can result in misunderstandings and miscommunications. In time, this can affect employee productivity, performance, recruitment, retention, and safety.

The most recent group entering the workforce is referred to as the millennial generation, marked by having been born in the 20th Century while entering the workforce in the 21st Century. The purpose of this study is to determine the preferred workplace characteristics of the millennial generation in the aviation industry.

Literature Review

The distinction between where one generation ends and another begins is not rigidly defined, however, experts have found that individuals can be strongly united based on enduring shared social, economic, and political events. Members of all generations are likely to experience significant events during their developmental, adolescent years. These experiences tend to strongly impact individuals and form lifelong impressions affecting their outlook on life and work (Glass, 2007; Schuman & Scott, 1989). Individuals in each generational group seem to develop similar attitudes, ambitions, and a synergy that can provide them strength in society (Zemke, Raines & Filipczak, 1999).

Although several different terms have been used to categorize the various generations, the most common appear to be: Veterans, Baby Boomers, Generation X, and Millennials (Zemke, Raines & Filipczak, 1999). Additionally, the time frames used to define each of the generations vary throughout the literature. Generation-defined characteristics may not fit some individuals as they may adopt some of the values and attitudes of the previous or subsequent generation. Classifying generational members, therefore, is not an exact science (Johnson & Wilson, 2008). Generally speaking, and for purposes of this investigation, the generations currently in the workplace include: Veterans, born between 1922 – 1943; Baby Boomers, born between 1944 – 1960; Generation Xers, born between 1961 – 1980; and, Millen-

Generations tend to form a persona or set of characteristics by which they are defined. These characteristics may include attitudes towards work, technology, gender roles, religion, race, and family. Their value systems may also deviate from other generations. These characteristics not only provide commonality within each generational group, but also the distinction between generational groups making each group somewhat unique. These characteristics seem to permeate the generation and become influential elements in the mind-set of its members (Schuman & Scott, 1989). Interestingly, these generational characteristics tend to remain fixed as the members age and seem to be lifelong traits (Strauss & Howe, 1997).

Each generation also tends to have distinct preferences regarding organizational business structures and behaviors (Glass, 2007). In stark contrast to previous generations, the Millennial generation is unwilling to dedicate much of their daily life to their work. They instead prefer to have more of a balance between work and their other interests (Smola & Sutton, 2002), and seem to exhibit a ‘work to live’, not ‘live to work’ attitude (Ryan, 2007).

When they are at work, however, the Millennial generation has a strong preference for structure and organization. This may be the result of inordinate amounts of time spent in the highly structured and controlled media environments of their electronic games, such as Gameboys and Nintendos. They prefer orderly work environments and dislike ambiguity of any kind. This cohort tends to prefer clear expectations and has a strong desire for a well-defined career path (Epstein & Howes, 2009). For some members, the desire for structure is so unyielding that, if it is not provided, they may quit their job and search for it at another organization (Westerman & Yamamura, 2007).

This generation is accustomed to using all types of technology, and incorporates it into many aspects of their lives. Their experience with various technologies has provided them with unprecedented freedoms, as well as immediate gratification. Unlike previous generations, Millennials are accustomed to instantaneous access to money (ATM), entertainment (iPod), information (Internet), communication (computers and smart phones), and even dating (online dating services) (Teaching the Millennials, 2007; Zemke, Raines & Filipczak, 1999). They have spent countless hours on the Internet and have hundreds of friends via social-networking sites such as Facebook and MySpace. Because they have been able to explore the world via the Internet, they tend to enjoy extensive freedoms and the desire to make their own decisions (McGlynn, 2005; Zemke, Raines & Filipczak, 1999).

This generation tends to be self-confident and may appear to have an entitlement attitude. Raised by Baby-Boomer parents, they were placed at the center of their families’ existence during their formative years. Unlike previous generations who only received a trophy for finishing in either first, second, or third place in competitions, members of this generation received a trophy for simply being a member of the team. They are accustomed to receiving praise and accolades and having their parents being quite involved in their daily lives (Zemke, Raines & Filipczak, 1999).
Generational differences have been the force behind many societal shifts. As newer generations emerge and replace older generations, a “generational replacement” tends to occur. Society is likely to transform and begin to reflect the attitudes and values of the upcoming generation (Johnson & Wilson, 2008; Mitchell, 1995). The Millennial generation represents the second largest of the current generations, following the Baby Boomers. Approximately 81 million Americans are members of this cohort, which is about one-fourth of the entire population (US Census Bureau, 2009). Due to their size, it is almost certain that they are, and will continue to impact work environments.

The Millennial generation has recently entered the workforce and many aviation employers are wondering how to recruit, manage, motivate, and communicate with these individuals. In order to assist aviation managers and supervisors in becoming more adept in coordinating the efforts of this cohort, it is important to determine the interpersonal desires, goal orientations, supervisory methods, and organizational structures that may work best with them. The purpose of this study, therefore, was to determine the work environment preferences of the Millennial generation in the aviation industry.

Method

Subjects

Participants in this study held various roles within aviation, including flight student, professional pilot, air traffic controller, aviation maintenance technician, and aviation administrator. There were 290 participants, ranging in age from 18 to 27 years, with mean and median ages of 20.5 and 20.0 years, respectively. There were 219 male and 24 female respondents, with 47 respondents choosing to not indicate their gender. All participants were born and raised in the United States. Participation was voluntary and uncompensated.

Procedures

The Work Environment Scale – Form I (WES) (Moos & Insel, 1974) was administered to individuals in various aviation entities; airlines, manufacturing, flight schools, and air traffic control facilities. The survey was paper-based. Participants were provided a written description of the study, along with the survey question booklet and response sheet. Scores were manually tabulated using a scoring template provided with the assessment materials.

Materials

The WES – Form I provides individuals the opportunity to describe what they consider to be their expected or ideal work setting. It has been used extensively in a variety of clinical and research practices, as well as by managers and consultants attempting to determine employee workplace goals and value orientations. The instrument has shown validity in predicting outcomes in various occupational settings, including the military, education, government, and health care. It has been used extensively throughout the US and internationally and has been translated into seven languages. By design, the WES is descriptive rather than evaluative (Moos, 1994b).
The WES consists of three forms: the Real Form (Form R) which measures the perceptions of employees in their current work environment; the Ideal Form (Form I) which measures employees’ perceptions of their ideal workplace; and the Expectations Form (Form E) which measures prospective employees’ expectations about a future work setting (Moos, 1994a; Moos, 1994b). Since its development, the WES has been found to provide significant insight into employee workplace perceptions. Examples of uses include determining employee satisfaction in accounting and business organizations (Westerman & Cyr, 2004; Westerman & Simmons, 2007; Westerman & Yamamura, 2006), determining nurse’s perceptions of their real and ideal work environments (Baker, Carlisle, Riley, Tapper & Dewey, 1992; Kotzer, Koepping, & LeDuc, 2006; Long, Williams, & Hollin, 1995), as well as workplace satisfaction of mental health practitioners (McRae, Prior, Silverman, & Banerjee, 2007), to name a few.

The WES consists of 10 subscales that assess three underlying sets of dimensions: Relationship, Personal Growth or Goal Orientation, and System Maintenance and Change. The Form I subscale internal consistencies (Cronbach’s Alpha) and intercorrelations range from 0.55 to 0.74. Norms have been developed for each WES form and for each country of use. In total, there are 90 True/False statements, 9 items for each of the 10 subscales. Possible scores for each subscale range between 0 and 9. The WES Form- R, Form-I, and Form-E are parallel in that each has 90 items that focus on the same work setting elements but are worded appropriately to assess current, ideal, and future perspectives. The scoring keys and answer sheets are identical for each of the three forms (Moos & Insel, 1974; Moos, 1994a; Moos, 1994b).

Within each of the three dimensions are subscales assessing various aspects of the particular dimension. The Relationship dimension consists of Involvement, Coworker Cohesion, and Supervisor Support subscales. The Personal Growth and Goal Orientation dimension consists of Autonomy, Task Orientation, and Work Pressure subscales. The System Maintenance and System Change Dimension consists of Clarity, Managerial Control, Innovation, and Physical Comfort subscales (Moos & Insel, 1974; Moos, 1994a; Moos, 1994b).

Data Analysis

Adopting the method developed by the survey developers (Moos & Insel, 1974; Moos, 1994a; Moos, 1994b), a scoring template was used to determine raw scores for each individual. Descriptive statistics for centrality and relative variation were generated from these data. The data for each individual were then summed for each of the 10 subscales. Chi-square analyses were then performed to determine which factors, if any, dominated the Millennial generation’s workplace preferences.

Results

Descriptive Analysis

Subscale mean, median, modal, standard deviation and coefficient of variation (CV) values are reported in Table 1. The interpretation of the centrality measures for each subscale are explained by Moos (1989) and vary based on each subscale, e.g., considerably below average scores for the Involvement subscale

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are in the 0-3.5 range, while they are in the 0-2 range for the Innovation subscale. Interpretations for each of these statistics follows.

Table 1
Subscale Descriptive Statistics

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Relationship</th>
<th>Personal Growth / Goal Orientation</th>
<th>System Maintenance / System Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Involvement</td>
<td>Peer Cohesion</td>
<td>Supervisor Support</td>
</tr>
<tr>
<td>Mean</td>
<td>7.7</td>
<td>7.4</td>
<td>7.3</td>
</tr>
<tr>
<td>Median</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Mode</td>
<td>9</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Std Dev</td>
<td>1.6</td>
<td>1.8</td>
<td>1.5</td>
</tr>
<tr>
<td>CV</td>
<td>20%</td>
<td>24%</td>
<td>21%</td>
</tr>
</tbody>
</table>

The Relationship Dimension

The first dimension measured by the WES is Relationship. The items on its subscales address personal relationships in the workplace, focusing on employee commitment, collegiality, and support. The three subscales of this dimension are Involvement, Peer Cohesion, and Supervisor Support ((Moos & Insel, 1974; Moos, 1989; Moos, 1994a; Moos, 1994b).

**Involvement Subscale.** The mean score on this subscale is 7.7, which is considered well above average, while the median and modal scores are 8 and 9, respectively. A CV of 20% indicates low relative variation within the respondents’ scores.

This subscale measures the employee’s commitment to their job. The items on this subscale ask respondents about their desire for challenging and interesting work, the effort they exert in performing their work, and whether employees assist each other in accomplishing tasks. Based on their responses, the survey respondents indicate that they would be highly committed to their jobs.

**Peer Cohesion.** The mean score on this subscale is 7.4, which is well above average, while the median and modal scores are 8 and 9, respectively. While a CV of 24% indicates more relative variation than the Involvement subscale, it is still relatively low.
This subscale measures the amount of support employees provide each other. The items on this subscale ask respondents about the depth and loyalty of the relationships people will develop within the workplace. Based on their responses, the survey respondents indicate a preference to work in a very supportive, cohesive environment.

**Supervisor Support.** The mean score for this subscale is 7.3, which is considered to be well above average. The median and modal scores are each 8, while the CV is 21% which is more in line with the Involvement subscale for relative score variation.

This subscale measures the extent by which management facilitates a supportive work environment. Items on this subscale ask respondents about how often supervisors compliment employee performance, provide positive feedback, and provide open lines of communication. With a well above average score, the respondents indicate a desire for a substantial amount of support and recognition from management.

**Personal Growth or Goal Orientation Dimension**

This second set of WES dimensions consists of personal growth and goal-oriented subscales. This dimension includes the autonomy, task orientation, and work pressure items. Overall, this set of items focuses on the ways in which an environment encourages or prevents personal growth (Moos & Insel, 1974; Moos, 1989; Moos, 1994a; Moos, 1994b).

**Autonomy.** The mean score for this subscale is 7.3, which is considered to be well above average. The median and modal scores are each 8, while its CV is 22%, again in line with the Involvement score subscale relative variation.

This subscale measures the extent by which employees’ desire self-governance. Items on this subscale ask respondents about their preferred levels of empowerment in decision-making, initiative, innovation, and independence. The mean score for this subscale seems to indicate that these respondents would prefer to have a significant amount of freedom and ability to make their own decisions regarding their work.

**Task Orientation.** The mean score for this subscale is 7.8, which is again well above average. The median and modal scores are 8 and 9, respectively. The subscale’s CV is 19%, indicating a stronger cohesion (less relative variation) within the respondents than the previous subscales. This subscale measures the levels of emphasis placed on efficiency, focus, and task completion. The mean score for this subscale indicates that the respondents would be focused on accomplishing tasks in a timely manner.

**Work Pressure.** The mean score for this subscale is 3.6, which is below average. Of the ten subscales, this average is the lowest. In concert with this ranking, its median and modal scores are 3 and 4, representing a relative direction away from the scores of the other nine subscales. Further, its CV is the largest at 57%, indicating considerable scoring diversity within the respondent group. Scores ranged from 0 to 9.
This subscale assesses employees preferred levels of urgency and pressures that exist in the work environment. The mean score for this subscale indicates that this generation would prefer to work in a relaxed environment, free of most job pressures.

**System Maintenance and System Change Dimensions**

This third set of WES dimensions assesses the preferred clarity of expectations, enforcement of rules, opportunities for innovation, and comfort in the work environment. The four subscales in this dimension are Clarity, Control, Innovation, and Physical Comfort (Moos & Insel, 1974; Moos, 1989; Moos, 1994a; Moos, 1994b).

**Clarity.** The mean score for this subscale is 7.0, which is considerably above average. The median and modal scores are 7 and 8, respectively, with a CV of 20%. Whereas the median and modal scores for this subscale are lower than most of the previous subscales, its relative variation is commensurate with the previous values.

This subscale assesses the extent to which corporate rules, regulations, and job expectations need to be defined. The mean score for this subscale indicates that the respondents would prefer to have significant details regarding the expectations of their job and work environment.

**Control.** The mean score for this subscale is 5.4, which is at the high end of average (on this subscale, 5.5-6.0 is considered as above average). The median and modal scores are 6 and 7, respectively. While these scores are lower than the previous subscales, a CV of 39% (second highest) indicates a fair degree of score variation within the respondent group.

This subscale assesses the firmness with which management enforces rules and policies. The mean score for this subscale indicates that while this generation would prefer to work in an environment that enforces rules, but it does not want an overly restrictive management.

**Innovation.** The mean score for this subscale is 6.4, which is considered to be well above average. The median and modal scores are each 7, while its CV is 34%, similar in value and interpretation as the prior Control subscale.

This subscale measures the extent that employees are encouraged to be creative in developing new methodologies and approaches, and are allowed to test new ideas. The mean score for this subscale indicates that the respondents strongly prefer a workplace that considers personal initiative and creativity to be of value.

**Physical Comfort.** The mean score for this subscale is 7.1, which is again considerably above average. The median and modal scores are each 8, placing this subscale equivalent to the first few subscales presented above. Similarly, its CV is 23%, indicating score variation equivalency to the first subscales.
This subscale measures the characteristics of the workplace that influence feelings of contentment and positive well-being. The mean score for this subscale indicates that this generation holds a strong preference for an environment that is pleasing and comfortable.

**Chi-Square Analyses**

Several chi-square tests were performed to determine which of the subscales, if any, indicates dominance or weakness relative to the remaining subscales. First, the subscales were tested within their respective dimensions, and then overall across all dimensions.

When examining the three subscales within the Relationship dimension, none were found to score significantly differently than any other, $\chi^2 (2, N = 6505) = 4.00, p > 0.136$. This indicates that the respondents view the Involvement, Coworker Cohesion, and Supervisor Support subscales equally.

An examination of the three subscales within the Personal Growth and Goal Orientation dimension reveals a highly significant weakness for the Work Pressure subscale over the Autonomy and Task Orientation subscales, $\chi^2 (2, N = 5444) = 484.6, p << 0.0001$. The contribution for the Work Pressure subscale represents roughly two-thirds the total chi-square statistic, indicating a considerable dislike of workplace pressures by this group. Factoring out the Work Pressure subscale reveals a less significant difference between the remaining two subscales with greater preference being given to Task Orientation than Autonomy, $\chi^2 (1, N = 4390) = 5.263, p < 0.022$.

An examination of the four System Maintenance and System Change subscales reveals a significant weakness for the Managerial Control subscale, which accounts for roughly 60% of the overall chi-square statistic, $\chi^2 (3, N = 7516) = 79.533, p << 0.001$. By “weakness,” we mean that the respondents as a whole scored this factor much lower than expected, thereby contributing a large chi-square statistic value. Since the respondents seemingly do not favor Managerial Control, we removed it and reanalyzed the remaining three subscale factors. Consequently, the Innovation subscale is found to be weakly regarded while the Physical Comfort demonstrates some dominance with the Clarity subscale scores about as expected, $\chi^2 (2, N = 5938) = 14.470, p < 0.001$.

Finally, all ten of the subscales were compared against one another. As is indicated by the descriptive results above, the Work Pressure subscale is very weakly regarded (again, “weakly” is in terms as we describe above), accounting for over 63% of the total chi-square statistic, $\chi^2 (9, N = 19,464) = 644.8, p << 0.0001$. Managerial Control assumes a distant second contributing only 11% of the overall chi-square statistic. Nonetheless, these two subscales indicate a considerable dislike for these factors by this Millennial group. In contrast, the Clarity and Innovation subscales appear to be moderately regarded whereas the remaining six subscales appear to be favored on a somewhat equal footing.

**Discussion**

The purpose of this study was to determine the ideal work environment preferences of members of the Millennial generation currently in the aviation industry.
The results of this study portray a complex combination of the relationship, personal growth, and organizational structure of the ideal workplace as indicated by these respondents.

Overall, results indicate that these respondents view themselves as being highly committed to their jobs, and prefer a workplace environment that is very supportive and cohesive. It appears that this generation would work best in an inclusive environment, where managers utilize a more engaged approach incorporating coaching and mentoring strategies instead of authoritative directives. Millennials prefer being treated as partners and may work best in organizations with flattened hierarchies (Earle, 2003).

Unlike many other businesses, aviation is an extremely fast-paced industry requiring many time-sensitive decisions. While Millennials want the expectations of the workplace and of their job functions communicated in explicit detail, they do not want to be micro-managed. Respondents in this study indicated that they are focused on getting their work completed in a timely manner; however, they would also like the freedom to be creative and innovative. Though this may not be appropriate in many facets of the industry, inventive ideas could actually prove to be beneficial. Novel thinking that provides new products, methodologies, and ways of doing business could advance aviation performance worldwide. Management may wish to cultivate this ingenuity and provide Millennial workers with the opportunity to utilize their creativity in looking at old problems in new ways.

Aviation is very unique in that is operationally structured on a vast array of rules, regulations, and time schedules. Without these, the industry would not be able to function as effectively, efficiently, and safely as it does. Establishment and enforcement of these requirements comes not just from management, but also from local, state, and federal governments. Although the respondents of this study indicated they prefer a work environment in which they are informed in great detail of the rules, they also want flexibility in their decision-making. This establishes an apparent conflict that aviation managers may have to confront. Previous research has found that providing members of this generation the background of why particular rules exists tends to expand their understanding and acceptance of the particular policy (Martin & Tulgan, 2006). The aviation industry could experience dire effects if the uniformity and consistency provided by rules, regulations, and schedules are not upheld. Haphazard disregard of this structure could prove disastrous; therefore, more time should be spent explaining the rationale for the rules and regulations or, perhaps by providing employees with a company website to access resources which include readily available explanations.

The aviation industry is quite dynamic and is impacted by diverse factors ranging from politics to weather to economics, to name a few. The compounding interaction of these and other issues complicated by the continuous struggle to provide good, safe products and services, while also striving for financial success, causes aviation personnel to continually feel a sense of urgency in their work. The respondents in this study expressed a strong desire to work in an environment free from such job pressures. Again, this preference is in strong opposition to the nature of the industry.

As with any group, the Millennial generation exists across a continuum of likes and dislikes. This is supported by the relatively large variances in preferences indi-
cated on the Work Pressure and Control subscales (57% and 39%, respectively). Consequently, it is incorrect to conclude that all Millennial generation respondents in this study shy away from work environments in which continual demands exist. By contrast, some respondents indicated no particular discomfort with such pressures. Because of this, it may be prudent for management to appropriately screen candidates for various aviation positions.

Respondents in this investigation stated that they preferred a physical workspace that was pleasing and comfortable. Because of their concurrent desire to work in partnership with others, it may be beneficial to redesign corporate workspaces to encourage collaboration. For many employees, an organization that provides them with a workplace environment that makes them feel energized and valued can encourage them to be more productive and perhaps work longer (Earle, 2003). In a previous study focusing on workplace design, employees indicated they would work an extra hour a day and felt their companies would be more competitive if they developed a better environment in which to work (Pfeffer, 2007). For members of the millennial generation, not only would a comfortable workspace be more conducive to their preferences, but it may be advantageous for management to also provide them with mobile technologies that would allow them to work anytime, anywhere.

Results of this study tend to agree with previous investigations focusing on the characteristics of the Millennial generation. Based on these findings, it is apparent that this generation has very distinct preferences for their ideal workplace and strong expectations of their employers. They are a generation that knows what they want and are used to getting it (Epstein & Howes, 2006; Martin & Tulgan, 2002). The arrival of this generation into the aviation workplace may present some challenges, but it also provides many opportunities. Success will be achieved by those organizations that are aware of the Millennial generation’s workplace preferences.

Limitations

Potential limitations of this study may be the relatively small sample size; therefore, generalizability of the results may be restricted. This study also relied upon self-report surveys to assess the participants’ work environment preferences. Consideration should be given to utilization of other data collection measures, such as interviewing respondents, as well as collecting data from managers and supervisors of this cohort.

This study is the first in a series focusing on the implications of the Millennial generation working in the aviation industry, and was meant to be exploratory in nature. Future studies will include analyses of differences between generations currently at work in the aviation industry, as well as investigating generational preferences of individuals within functional areas.

Conclusion

The primary contribution of this investigation was the determination of the ideal workplace preferences of the Millennial generation currently in the aviation industry. Overall, results indicate that these respondents have very strong and distinct preferences for their ideal workplace. For aviation managers, it is important to un-
derstand the uniqueness of this generation so as to allow for a smooth assimilation of these workers into the workplace.

References


