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THE MILLENNIAL GENERATION IN HIGH RELIABILITY
ORGANIZATIONS (HRO)

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Biography

COL Stephen J. Dalal is assigned to the Air War College, Air University, Maxwell AFB, AL. Colonel Stephen J. Dalal is an Army Veterinary Corps Officer with expertise in biomedical research and medical product development. He holds a B.S. in Zoology, Doctor of Veterinary Medicine, Masters of Public Health, and is board certified in Laboratory Animal Medicine. He is an Army Acquisition Corps Member, Army Acquisition Level III certified in Science & Technology and Program Management. Career highlights include his deployment to Iraq as a member of the Army Materiel Command FAST Team 12. Program Manager for the Joint Combat Trauma and Injury Analysis Program at Fort Detrick. Product Manager at the Transformational Medical Technologies Program at the Defense Threat Reduction Agency focused on the development of medical countermeasures against biological threats such as Marburg and Ebola. Commander of the U.S. Army Medical Materiel Development Activity responsible for the development and fielding of medical products and solutions to protect, treat, and sustain the health of our service members.

Abstract

The Millennials (also known as Generation Y) were born between 1981 and 1997, and comprise 30% of the U.S. population, and 80% of the active duty military force. By the year 2025, they will lead High Reliability Organizations (HRO) throughout the DoD.^{1,2} They are the most educated, ethnically diverse, and technologically savvy generation to date, however, they use texting, and the internet to manage their relationships, they put self-interest above organizational interests, and they have a hard time making decisions that are not consensus driven, and prefer to work in either autonomous or semiautonomous teams as opposed to a vertical hierarchal management system.³ In this paper, I discussed how that tension between HRO principles and millennial characteristics can be shaped, and overcome through the establishment of trust, instilling a sense of purpose and developing a “mindfulness” culture throughout the organization. To research HROs, I conducted a retrospective analysis of case studies, lessons learned, and best practices in the medical, nuclear and aviation industries. To research millennials, I used case studies, opinion polls, and lessons learned, from media, commercial, academic, and DoD articles.

Introduction

The Millennials (also known as Generation Y) were born in the U.S. between 1981 and 1997, and comprise 30% of the U.S. population and 80% of the active duty military force.⁴ They are the most educated, ethnically diverse generation, and constitute the largest segment in the U.S. workforce followed by Generation X, who were born in the U.S. from 1965 to 1980.⁵ When compared to other generations, the Millennials value the quality of life, staying close to families, free time for recreation, and working in creative jobs higher than the value of establishing a career.⁶ Professionally, they are technologically savvy, goal oriented, and demand to know “why”.⁷ However, the Millennials have grown up as an entitled generation, who expect speedy and efficient processes, flexible work schedules, and put themselves ahead of their Organization.⁸ By 2025, the Millennials will lead High Reliability Organizations (HRO), and set their organizational values and culture. HROs require selfless leaders who put organizational interests above their personal ones, and who can make tough decisions. How should current leadership prepare the Millennials to lead HROs? This paper will explore this question, and discuss the friction between Millennials characteristics, and the principles of HROs in the DoD.

Research Hypothesis and Methodology

To research HRO subject matter, I conducted a retrospective analysis of case studies, lessons learned, and best practices in the medical, nuclear, and aviation industries. To research Millennials, I used case studies, opinion polls, and lessons learned, from media, commercial, academic, and DoD articles. The definition of “success” of the Millennials was a qualitative assessment based on literature reviews that predominantly used non-controlled polling surveys. HRO principles are well established in the DoD Aviation, and Nuclear Weapons communities,

and can be found in numerous publications. In the DoD Military Healthcare System (MHS), HRO principles and metrics are in “draft” status by the Services, and the Defense Health Agency (DHA). My research hypothesis is focused on identifying points of friction of the millennial, generation (based on observations in the literature) that senior leaders need to consider, in order, to prepare Millennials to lead in HROs. In this paper, I will argue that tension between HRO principles and millennial characteristics can be shaped, and overcome through senior leader awareness, continued mentorship and development of the workforce.

BACKGROUND

MILLENNIALS

According to the Pew Research Center, there is no standard definition that universally defines the birth year ranges for the various generations in the United States, and accordingly, establishing the boundaries takes time for popular and expert consensus to develop. The Pew Research Center is a nonpartisan think tank that conducts public opinion polling, demographic research, media content analysis, and other empirical social science research as an independent.⁹ For this reason, the Millennials will be defined using the Pew Research Center definition as those born in the U.S. between 1981 and 1997. The comparison groups are the Baby Boomers, born 1946 to 1964, and Generation X, born 1965 to 1980.¹⁰ The Pew Research Center reported that the Millennials account for 54 million workers which is the highest group in the U.S. labor force as of the first Quarter of 2015, followed by 52 Million workers of Generation X.¹¹

In the 2014, the DoD Demographic Report published that 80% of the Active Duty military are Millennials between the ages of 18-34 yrs. old (birth years 1980-1996). There are 1.1 million Enlisted Service Members, the largest number of enlisted members are 25 years of

age or younger (541,000). The birth years for this millennial group are 1989-1996.¹² The largest number of Officers in the Army (26,000 of 98,000 Army Officers) and Navy (16,000 of 54,000 Navy Officers) are Generation X, 41 yrs. of age or older. In the Marine Corps (5,300 of 21,000 Officers) and Air Force (15,500 of 62,400 Officers) are Millennials between the ages of 26 and 30.3.¹³

The Council of Economic Advisors 2014 Report,¹⁴ acknowledges authors William Strauss and Neil Howe as having coined the generational term “Millennial” in their 1991 published book “*Generations, the History of Americas Future.*”¹⁵ The report notes several unique characteristics of the millennial generation; first, they are the most educated workforce in the United States (61% attended college compared to 46% of the Baby Boomers). Second, they comprise approximately 30% of the US population, with the largest age cohort (23 year old as of 2013) compared to all the other generations; third, Millennials, as opposed to Baby boomers, valued quality of life, staying close to families, free time for recreation, and working in creative jobs higher than the value of establishing a career. An interesting finding was that Millennials actually stayed longer with their employer, age-matched, than Generation X workers, and women exceeded men in education compared to all the other generations. General summary findings in the study noted that Millennials are technologically connected, value creativity and innovation.¹⁶

According to the Boston College Center for Work and Family, the Millennials are the most diverse generation to date; they have grown up in the digital era that has provided them with near instantaneous access to information, learning, and choices. Instantaneous access and unlimited choices has produced an “expectation” by Millennials. They expect efficiencies and speed in the processes and services of their organization, and believe that they are entitled to

flexible work schedules.¹⁷ In a 2013 article, researcher, Carolyn White-For, conducted a study on the leadership styles of the Millennials, and found that Millennials leaders had a unique leadership style, when compared to Generation X and the Baby Boomers. She observed that Millennials are self-motivated, goal oriented, collaborative, prefer to delegate, and embrace networking. They value free time, time with family more than other generations, and believe that it is important to maintain balance in one's life. Establishing trust, meaningful work, and mentorship are highly regarded by the Millennials. In addition, as a group, the Millennials prefer to learn by trial and error.¹⁸

In a 2010 article by Karen K. Myers and Kamyab Sadaghiani, the authors investigated how generational differences in the workforce affect communication within an organization.¹⁹ In the article, they discuss an interactional communication process called membership negotiation, which is how well the existing Baby Boomer generation accepts the incoming Millennial members into an organization. Individual values and perceptions of each other lay at the heart of membership negotiation. An example of Millennialism in the workforce is the pursuit of flexible work schedules, extra time off, and teleworking from home. In response to Millennial work preferences, the Baby Boomer generation feel that the younger workers should pay their dues, and be willing to work sixty hour weeks, like they did, when they were starting out. The Baby Boomer's value of establishing a career is different than the Millennials. The Baby Boomers live to work and the Millennials work to live. The differences between the generations in the value of a "career" can negatively affect communication within an Organization. Myers et al. noted that the Millennials' emphasis on maintaining balance between work and personal life has a positive effect on Senior Leaders, and can cause them to re-examine their own balance in a positive way.²⁰ Another positive for Millennials is that they expect close interaction with

managers, mentorship, feedback, and open communication. If an organization adopts open communication and close interaction, it will create trust and empower their workforce, and will increase productivity and commitment. According to O'Toole and Lawler,²¹ Millennials prefer to work in either autonomous or semiautonomous teams as opposed to a vertical hierarchal management system, and teams are more conducive to innovation, creativity, productivity, and lower personnel costs. A down side to teaming among Millennials is their ability to make decisions that are not consensus driven. Many organizations expect workers to be able to independently think, analyze, and decide a course of action. Over-dependency on a team can be counterproductive in the long run for an Organization.

Author and motivational speaker Simon Sinek²² describes Millennials as the “distracted generation” who are impatient, entitled, and have become addicted instantaneous text messages, e-mails and other online activities. They value money over service and they rely on technology to manage their relationships. In the workplace, they are no longer treated special, and can have lower self-confidence than others. Millennials use social media and text messaging on the phone as coping mechanisms when they are stressed. The millennial generation has become addicted to technology, and as a result, is more isolated, feel lonely and lack human social and relationship skills. In the work environment, their feeling of isolation causes them to not trust the organization, and they are reluctant ask for help.

Regarding the Millennials in the military, a recent 2014 article, “Now Hear This – Millennials Bring a New Mentality: Does It fit?”²³ U.S. Coast Guard Officer, Commander Cunningham describes her observations and challenges supervising Millennials. The author contended that Millennials posed a supervisory challenge when it came to their work ethic, because Millennials work the minimum time necessary, and expect time off to such an extent

that the discretionary early release from work had become an entitlement. Other challenging attributes of the Millennials noted were their propensity for acknowledgement and self-interest, expectation for early promotion, challenge to authority, and wanting to know “why” when ordered to perform a particular task. Their propensity to question authority on orders was perceived by her senior Noncommissioned Officer and Officer staff as disrespectful and unprofessional. The author acknowledges that Millennials possess excellent technological fluency, and high educational achievements compared to previous generations, but she challenges leaders to take the time to teach, train, mentor, and inculcate the next generation into the military culture.

In a counter argument, by U.S. Air Force Col Hinote and Col Sundvall, “*Leading Millennials, An Approach That Works*,”²⁴ the authors proposed a different perspective on supervising Millennials. Regarding the Millennial tendency to challenging leadership, the author’s suggestion was to shape this friction from becoming a detriment to a benefit by adopting transparency in communications and inclusion of opposing or divergent thoughts throughout the organization. Because the Millennials grew up texting and navigating social media, it should be no surprise that they want to be part of the conversation, and that they are more likely to challenge hierarchical leadership versus a team environment. In regards to Millennials asking “why,” Hinote and Sundvall acknowledged that they too observed this trait in their experiences with Millennials, but instead of discouraging it, meet it head on by taking time out to answer the why. Leaders, at all levels, who take the time to answer why, will have better organizations. It produces a workforce that has buy-in, is more flexible and responsive to change. Hinote and Sundvall concede that although Millennials have some negative traits, their creativity,

enthusiasm, and propensity for teamwork far outweigh the negatives, and make them ideal for serving in the military.²⁵

Since 2010, the Pew Research Center conducted nationwide surveys and polls to research the characteristics of the Millennials. In one of their articles, “The Millennials” by Scott Keeter and Paul Taylor, they discuss three biases (lifecycle effect, cohort effect, and period effects) that may confound surveys that attribute unique characteristics to a specific generation.²⁶ A good example of the lifecycle effect occurs as you age. When you are young (Millennials), you have less responsibility, less financial wealth, usually no children, and tend to take more risks. When you are in your mid-forties (Gen. X), you have an established career, a family, and tend to be more cautious with risk. The cohort effects are significant historical, cultural or social events that a group share among themselves. These events shape a cohort and stay with them as they age through different lifecycles.²⁷ A good example of the cohort effect is the cold war for the Baby Boomers. Baby Boomers collective view on U.S.-Soviet relations regardless of their religion or ethnic background is similar to other Baby boomers than it would be to a Millennial. The Baby boomers share a unique historical perspective specific to their generation. A third confounder that may confound surveys is the period effect. The period effect is when a major environmental, political, or social event is experienced by all age group cohorts.²⁸ A good example of the period effect is the Civil Rights Movement. It had an impact on all generations, especially the younger generation who did not experience segregation. In 2008, Stafford and Griffis conducted a retrospective analysis of millennial characteristics to identify workforce challenge in order to improve recruiting the millennial generation into the military during the Iraq and Afghanistan wars.²⁹ Their conclusions from a comprehensive literature review revealed that millennial characteristics and preferences (who ranged in age from 11 years of age to 27

years of age) may be attributed to age or life stage as opposed to unique generational characteristics. Technology is frequently cited in literature as an underlying characteristic of the Millennials but Stafford et al study revealed that not all Millennials have the same access to technology and therefore, there is a variance in technology skills and abilities.³⁰

Although access to technology may not be universal, and descriptive biases may mistakenly attribute “uniqueness” to Millennials, there are significant reoccurring observations throughout the literature that characterize this generation. Unique characteristics of the Millennials are impatience with career progression, entitlement to instant gratification, over-dependency on using smart phones in lieu of personal communications, and the tendency to put self-interest above the interest of the organization. These unique millennial characteristics produce tensions to the principles of HRO. This paper will now discuss the principles and characteristics of HROs, and where the tensions with the Millennials exist.

Normal Accident Theory

An early precursor to HRO theory was the Normal Accident Theory (NAT). Sociologist and scientist Dr. Charles Perrow, in 1984, studied the Three Mile Accident from a social science and behavior point of view verse an engineering point of view. He developed the Normal Accident Theory (NAT) to explain safety in highly technical and dangerous systems, and to explain why things inevitably always go wrong. NAT describes why catastrophic system accidents in complex and highly coupled (interdependent) systems such as aviation, nuclear, weapon systems are normal and can never be eliminated.³¹ Inherent interdependencies develop in highly coupled systems that increases the risk of a small problem having a domino effect on the system. Thus, an accident is an inescapable consequence of this system and it cannot be planned for or designed against. The more complex and coupled a system is, the greater the

chance of a system accident occurring. The result is that accidents are an inevitability, and even with modern technology, administrative and human processes can no longer eliminate catastrophic accidents from occurring.

High Reliability Theory

An alternate theory to NAT is HRO theory. It originated in the aviation, nuclear power and navy aircraft carrier communities and was later adopted by the medical profession. In the early 1990s, pioneers of HRO theory defined an HRO as organizations that use highly complex, and coupled processes that operate with a high record of safety and reliability.³² Successful HROs have safety and performance as an organizational priority. They foster an attitude of reliability by allowing decisions to be made by lower management and operators, and they promote “trial-and-error” learning following incidents and near misses. They apply a strategy of redundancy to enhance safety.³³ Per Roberts and Bea, characteristics of organizations that haven’t experienced failures share three features; first, they incentivize their employees and processes to promote a good balance between reliability and efficiency; second, senior leaders and management articulate the strategic picture and message this to all employees, regardless of position; third there is an established and trained Incident Command Center in the event of an accident.³⁴ Weick and Sutcliffe further refined HRO theory with five principles: preoccupation with failure, reluctance to simplify interpretations, sensitivity to operations, cultivation of resilience, and willingness to organize around expertise.³⁵ As the science of HRO advanced in academic forums, publications and professional meetings, the subject matter expertise of HROs that resided in the air craft carrier, aviation and nuclear fields spread to other communities. One of the first civilian communities to incorporate HRO concepts were health care organizations.

Early successes of the HRO theory in the healthcare setting was demonstrated by applying Crew Resource Management (CRM) to a hospital operating room scenario. Poor communications between the surgeon and medical staff in the operating room was a significant contributor to patient accidents. As HRO safety successes in healthcare were published and discussed at profession forums, safety and reliability became adopted by the Joint Commission. The Joint Commission required leadership of all healthcare organizations that it accredits, to “create and maintain a culture of safety”.³⁶ In June 2015, the Defense Health Agency (DHA) and the Services of the military healthcare system published draft Guiding Principles for Achieving High Reliability in the Military Healthcare System (MHS) in order to achieve the Secretary of Defense goal of eliminating patient harm and becoming a preeminent health care system.³⁷ The MHS (including the purchase care component) provides health care to 9.6 million beneficiaries making it the largest HRO in the DoD and the one of the largest in the United States. The DoD HRO model strives for single mindedness of the entire staff similar to Weick and Sutcliffe “mindful culture,” in order to identify high risk situations and potential problems, before they become catastrophic events that cause patient harm. The ways to achieve high reliability in the DHA will be done by, establishing a culture of high reliability through leadership commitment, emphasizing continuous process improvement, and providing a culture of safety. This paper will now analyze several significant areas of tension for the Millennials in the DoD HRO model.

ANALYSIS

TRUST

Trust is the first significant area of tension for the Millennials in order to achieve “single-mindedness”. For the preoccupation with failure to work, there needs to be a high level of trust and communication within the organization. Leadership must encourage two-way feedback among management and staff, and it needs to be viewed as constructive. Roberts et al. noted that when an organization focuses solely on its successes, they miss awareness of near misses. Over time, near misses accumulate, and have an additive effect which may lead to a catastrophic event.³⁸ Leadership that lacks trust with the Millennials will produce apathy to report near misses, and weak signals will go unnoticed. To achieve “single mindedness” leaders must encourage face to face interactions to overcome reliance on texting for communications. Face to face interactions will build trust quicker than texting, and it will develop the interpersonal communications skills the Millennials lack. An example in the nuclear weapons arena where there was no trust of senior leadership occurred at Pantex. In 2012, the U.S. Department of Energy (DOE) conducted an independent assessment of nuclear safety culture at the Pantex Nuclear Weapons Plant in Amarillo, Texas. The findings indicated that the focus by management was the financial bottom line, and that organizational barriers had been created due to over-emphasis on short term gains verse safety and reliability. The employees felt they didn’t have a voice, and there was lack of communication and trust within the organization. Face to face communication was lacking, and it contributed to a lack of trust.

Once trust is established through face to face communications, other tools for communications can be used. For example, sharing accident data, near misses, and trend data

among teams builds trust, provided that bad news is not be a punishable offense. Creating an environment that allows for trustworthy safety reports, accounts for true documentation of near misses, and encourages healthy feedback is critical to build trust. Cultivating trust among the Millennials requires leaders to learn a new skill, the skill of listening to feedback from junior members in developing solutions when accidents happen. Finger pointing, fear of negative appraisals, and management intimidation are all trip lines that break down trust with Millennials in an organization.

PURPOSE

The second area of tension for the Millennials is for leadership to take the time to provide purpose and meaning for their jobs. Millennials have a propensity to always question leadership. Questioning authority is nothing unique to the Millennials, however, they are motivated to achieve results when the bigger picture is realized. HRO leadership must take the time to provide the “why” to the Millennials. Hinote et al emphasized that leadership, at all levels, which take the time to answer why, will have better organizations, because it produces a workforce that has buy-in, is more flexible and responsive to change. Simon Sinek also stresses the importance of providing the “Why” to the Millennials. Leaders must incorporate the “why” into their mentorship programs. Providing the why to Millennials feeds their inquisitive nature and most importantly it gives them meaning and purpose. Doing work that has meaning and purpose are two factors outweigh money for Millennials.

Providing purpose and meaning through good communication can also help Millennials learn to put the organizations interests above their own. Millennials expect to get promoted and can have unrealistic expectations on how long it takes to get promoted. Unreasonable

expectations and self-interest by Millennials occur when purpose and meaning are not explained. Senior leaders are the ones that provide purpose and meaning for an organization. An HRO can only achieve “single-mindedness” when purpose and meaning are realized by the entire staff. Incorporating realistic goal setting and career advice into mentorship programs is important for Millennials to become senior leaders in HROs.

DECISION MAKING

A third significant area of tension for the Millennials in an HRO is their preference to work in either autonomous or semiautonomous teams as opposed to a vertical hierarchical management system. This creates an over-reliance on teams to make decision through consensus. HROs expect workers to be able to independently think, analyze, and decide a course of action. Over-dependency on a team can be counterproductive in the long run for an HRO because workers need to be able to make decisions in high risk situations before they become catastrophic events.

According to Sinek, making decisions requires interpersonal skills, and Millennials lack interpersonal skills because they haven't developed social tools. They rely too much on their smart devices to manage their daily lives, and it influences their ability to make decisions in person. HROs “mindedness” is realized when everyone in the organization operates with empowerment to make decisions. Over-reliance on a team and the under-developed of interpersonal skills will undermine high reliability. To address this, senior leaders must develop individual critical thinking and problem solving skills of the Millennials.

RECOMMENDATIONS

Applying the principles of HRO promotes a “Mindful Culture”.³⁹ The mindful culture of an organization includes the values, beliefs of the organization and how they work together to shape processes and policies for a safe and reliable organization. By applying “mindfulness”⁴⁰ throughout an organizational, a HROs can manage the unexpected and achieve high reliability. An effective HRO is not an error free organization but one that avoids catastrophic disasters through empowerment of the staff, trust among the staff up and down the organization, effective communication and senior leadership commitment to continuous process improvement. I have three recommendations for senior leaders to consider for preparing Millennials to assume leadership roles in HROs.

Trust is the first significant area of tension for the Millennials in order to achieve “single-mindedness”. For the preoccupation with failure to work, there needs to be a high level of trust and communication within the organization. Leadership must encourage two-way feedback among management and staff, and it needs to be viewed as constructive. Trust must be built through face to face interactions, access to safety data sharing, transparency in communications, decision making, and inclusion of opposing or divergent thoughts. Establishing trust is essential to improving personal relationship skills. Leaders must communicate safety and performance, verse, short term gains as primary organizational priorities. Through trust, and open communication, HROs can achieve single mindedness.

Second, leaders must take the time every day to answer the why, in order to provide purpose and meaning to all members of their organization. The leader must commit time to message the purpose, and continue to commit time to reinforce this it. Millennials have the tools, are motivated to excel, and all they need just is the why. Leaders must incorporate the “why”

into their mentorship programs. Providing the why to Millennials feeds their inquisitive nature and most importantly it gives them meaning and purpose.

Third, leadership must emphasize decision making, realistic goal setting, and career advice, in their mentorship programs. HROs “mindedness” is realized only when everyone in the organization operates with empowerment to make decisions. Over-reliance on a team and the under-developed of interpersonal skills will undermine high reliability. To address this, senior leaders must develop individual critical thinking and problem solving skills of the Millennials. Millennials excel in an environment when they can give, and receive, near real time honest feedback, without the fear of reprisal. Setting career expectations, with millennials, at the beginning of a new job, will offset entitlement mentality and reinforce selfless service. Mentorship and leadership training teaches the values of putting organizational interests above personal ones.

CONCLUSION

In conclusion, the Millennials are the most educated, and ethnically diverse generation in the United States. They understand the importance of balance in life between work and family. They are goal oriented and embrace networking. They demand to know “why,” and that is a good thing, because it provides them purpose and meaning. Millennial access to technology may not be universal, and descriptive biases may mistakenly attribute “uniqueness” to Millennials, however, there are significant reoccurring observations throughout the literature that characterize this generation. These unique millennial characteristics produce tensions to the principles of HRO. I discussed three significant areas of tension between the Millennials and HROs principles; Trust, Purpose and Decision Making. These three areas of tension are important considerations in order to achieve “single-mindedness,” throughout the organization. HRO

Leadership is responsible to instill trust, provide purpose and empower individuals to make decisions.

In summation, the DoD HRO model strives for single “mindedness” of the entire staff in order to identify high risk situations, and potential problems, before they become catastrophic events that cause patient harm. The ways to achieve high reliability in the DoD will be through leadership commitment to prepare the Millennials to lead, establish trust through open communications, instilling purpose, and provide a culture of safety within the organization.



Endnotes

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