**AGE-GENERATIONS IN THE WORKPLACE:
AN ORGANIZATION SYSTEM TYPE AND
SPACE USE PREFERENCE SYSTEMS ANALYSIS**

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the Faculty of the Graduate School
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In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

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by
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The undersigned, appointed by the Dean of the Graduate School, have examined the thesis
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**AGE-GENERATIONS IN THE WORKPLACE:
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Presented by Beverly A. Coberly

A candidate for the degree of Doctor of Philosophy

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DEDICATION

Doran, thank you for your unwavering support, encouragement and love. It's been a journey to get to this point with this dreamed about degree. You have been supportive every step of the way and I thank you. I will always appreciate your love, friendship and for being the wonderful husband and father that you are.

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ABSTRACT

Age-Generations in the Workplace: An Organization System Type and Space Use Preferences Systems Analysis

The 21st Century workforce includes four generations for the first time in US history yielding unparalleled workplace diversity. With family and organizational theories as its conceptual foundation, a systems approach was used to assess University of Missouri Extension employees' world view and space use characteristic preference perceptions between Baby Boomers and Millennials.

Study results suggest a preference for an *OPEN* organization system type with *COMFORTABLE SPACES* emerging as the dominant space use characteristic preference for Millennials and *QUALITY SPACES* and *COMFORTABLE SPACES* emerging as the dominant space use characteristic preferences for Baby Boomers. The *OPEN* system type prefers informal, consensus-based decision-making to the more formal hierarchical model of the University of Missouri System. These system pattern similarities are strongly shaped by Extension's clan culture wherein employees are assimilated into the 'Extension way', thereby decreasing generational preference differences. The most recently hired employees (i.e., Millennials) are more likely to assume attitudes towards the organization that are more congruent with those found among longer-term employees than they are in retaining their individual generational differences. Assimilation, for now, may be a function of the small number of Millennials compared with Baby Boomers in the organization. As the proportion of Millennials to Baby Boomers increases over time, age generational differences are projected to become more pronounced.

The dominant preference for *COMFORTABLE SPACES* (i.e., access to light and fresh air, with acceptable temperatures and control of unwanted noise) reported by Millennials is also echoed by Baby Boomers who report *COMFORTABLE SPACES* as second to *QUALITY SPACES* (i.e., well maintained and purposeful workspaces). Workspace quality throughout University Extension should be investigated in detail to determine the underlying nature of this finding.

CHAPTER ONE

Introduction

Generational differences have become a social force in the workplace and are no longer solely rooted in demographic characteristic distinctions. The early 21st century workforce contains four generations for the first time in history, bringing unparalleled diversity to the workplace. As employers juggle differing multi-generational work philosophies and work patterns, they must meet the challenge to develop effective leadership strategies and create appropriate workspaces. Employers, in their daily efforts to balance budgets and improve employee retention, overlook the impact generational differences create on the workforce. Examples of the range of generational differences in the workplace include: work values and attitudes, personalities, career expectations and outcomes, leadership preference and behaviors (Lyons, & Kuron, 2014).

Additionally, two factors of the work environment remain ill-defined: the interaction of employees within their environment, and, how generational differences impact work and behavior in the workspace. Generational differences' research, primarily descriptive to date, fails to address how generational differences drive motivation, work outcomes, communication efficacy and worker retention (Westerman & Yamamura, 2007). More detailed inquiries will provide a better understanding of generational differences' effect on organizational structure, social capital and physical facilities. With a more informed understanding of generational differences and their influence in the workplace employers could improve the work transition from one generation to another.

Workplace generational difference investigations seldom involve empirical procedures (Sullivan & Sherry, 2009). The study of organizations and how their employees perceive their workspace requires a systems approach. The assumption that a generational cohort will be similar across all organizations is not substantiated by existing research focusing on generational differences that is anecdotal or based on weak data, which makes a guessing game of policy and practice development.

Background and Problem Statement

A pivot point for an organization may be its ability to increase employee satisfaction by creating a workspace environment that is responsive to the needs of an intergenerational workforce. A research tool is required to better understand employees' preferred world views and how they perceive and interact with their environment. The proposed research method focuses on gaining a greater understanding of employees' perceptions of their *ideal* work environment; the results should overcome the limits of existing research, which does not employ a systemic approach, and therefore fails to acknowledge potential interactions among components of the system it attempts to analyze.

Study Purpose

The proposed dissertation, via a systems approach, provides a unique opportunity for investigating generational differences in the workplace between Baby Boomers and Millennials. The study includes a survey and analysis method that is easily replicable. Knowledge gained from this research will create a baseline of information with which to test generational similarities and differences in the workplace and workspace. The results

will create a model and methodology for assessing organizational system characteristic preferences of Baby Boomers and Millennials regarding workspace and workplace. The information gleaned can result in developing a menu of options that organizations can employ to address workplace generational differences.

Organizations armed with more complete knowledge about the perceptions of their own employees will make better informed decisions regarding employee practices, policies, recruiting and onboarding strategies.

Specifically, the information this research generates can serve as the foundation for strategy development that leads to a more effective, more productive workforce, regardless of age-generation, type of work, or the organizational culture in which they operate.

Theoretical Framework

A Systems Perspective

Traditional systems' theorists have defined systems as closed, wherein social systems are 'contrived,' with social systems connected through psychological bonds. Social systems allow for variability in the patterns for organizational functioning, environmental pressures, shared values and expectations and rules. Organizational development is based on the common organizational elements of process specialization of tasks, uniformity of practice and avoidance of duplication of functions (Katz & Kahn, 1978). These theories position the discipline to more comprehensively study organizations as systems. Rather than examining each system component as it functions in isolation of other system components, a systems approach acknowledges each

component's contribution to the system as it simultaneously interacts with all of the other system components. The outcome of systems analyses, therefore, yields a more accurate and authentic description of the system because it is rooted in an understanding of its inherent complexity.

Current empirical research in the area of environment and behavior as it relates to employees' interactions in their workspace is essentially non-existent or at best underdeveloped. There are a few articles appearing in the popular press, but fewer appear in peer-reviewed research journals.

The use of a systems theory approach in organizational investigations is possible because of the work of Constantine and Kantor & Lehr, who utilized the family as the organizational unit of analysis (Constantine, 1986, Kantor & Lehr, 1975). A more useful tool to identify and understand systems, family systems and organizational systems was needed. The ORAS, Organizational Regime Assessment Scale was developed by Phillips, and was based on the earlier work of Imig & Phillips (1992) in which they developed the Family Regime Assessment Scale (FRAS). The ORAS (Organizational Regime Assessment Scale) was a direct outgrowth of the FRAS, expanding the unit of analysis beyond the family to organizations of any size. The survey items contained in both the FRAS and the ORAS were identical in their underlying construct foundations and only slightly differed in their rewording to accommodate an organization rather than a family context.

The use of the Organization System Assessment Scale, to better understand current employee generational world views, benefits an organization by allowing the organization to create operational strategies specifically designed for current employees

that lead to improved employee workspace and environments, provide better support for worker training and development, and reduce worker turnover and aid organizational productivity improvement. Testing a research model with real world preferences builds on the current best practices. A more comprehensive understanding of the organizational systems preferences of Baby Boomers and Millennials moves away from generalized available research findings and allows organizations to learn from their own organizations and develop more meaningful, employee-relevant strategies.

A systems research approach applied to the world view of a Millennial or a Baby Boomer, helps an organization better understand how Millennials or Baby Boomers perceive what is *actually* and *ideally* occurring in their organizations. This systemic approach also allows greater research specificity when addressing organization perception variations.

Within the studies of Baby Boomer and Millennial generations and their interaction with their workspace environment, it is argued that an investigation strategy rooted in a systems perspective yields a holistic understanding. Psychologists Katz and Kahn (1978) examined patterned and individual behaviors within organizations. These early social psychological studies were exclusively limited to the individual and excluded open organizational inquiry, but suggested that employing a more holistic and inclusive research paradigm, (i.e., a systems approach) in exploring age generational workforce similarities and differences contributes to a previously unachievable information baseline.

Understanding Baby Boomers' and Millennials' world views is useful for organizations as they evaluate and modify workspaces to accommodate the newest generation in the workforce. As Baby Boomers retire and Millennials flood the workplace, generalized data will be insufficient for understanding employee preferences—preferences that might lead to organizational changes that support the needs of specific organizations and their cultures.

Age Generations in the Workplace

A person's age/generation influences, in part, how they see work roles and how they expect work to be conducted.

Generational differences in specific age cohorts are founded in shared events and experiences; events such as wars, cultural, technological and social shifts, and economic variances tend to mold individuals into a unified set of work values—their world view—and the ways they want to connect with the world.

Current categories of age/generations include:

- Silent Generation (those born between 1925-1945);
- Baby Boomers (1946-1964);
- Generation X (1965-1981); and,
- Millennials (1982-1999)

(Campbell, Campbell, Siedor & Twenge 2015).

It is expected that Millennial numbers have not yet peaked in the workforce. In 2015, the following percentages of workers in each age generation were:

- Millennials -- 52.7 million, or (34%) of the U.S. workforce
- Generation Xers -- 53.5 million, or (34%) of the U.S. workforce, and
- Baby Boomers -- 44.6 million (29%),(Fry, 2016).

In general, the Silent Generation is almost entirely out of the workforce (Westerman & Yamamura, 2007).

Employee management that ignores age/generation differences may simplify decision-making that yields a one-size-fits-all approach, but workplaces and workspaces evolve over time and so do employees. Just a few years ago, one generation of workers filled most jobs, most workers had similar experiences and similar levels of training, and most worked to do a good job.

Multiple age generation differences in the workplace add complexity for all organizations.

OSAS Index Constructs

The Organization System Assessment Survey (OSAS) serves as a critical tool in the research design strategy. The previous theoretical work of Kantor and Lehr, as well as Imig and Phillips (1992), indicate that the OSAS and its analysis capacity are suitable for this study.

The OSAS is the most recent iteration of the original FRAS and ORAS indices. The scale measures individual world view perceptions of *ideal* and *actual* organizational

situations based on four-index system types: *CLOSED*, *OPEN*, *RANDOM*, and *SYNCHRONOUS*. In addition, it adds a respondent-weighted component to the computation, acknowledging that the index component's importance is not always equal. This scale provides a systematic and quantifiable approach to understanding an organization and how its members relate to their environment. Further, the scale quantifies the dissonance between *actual* and *ideal* situations based on members' world view perceptions.

The research presented here describes and tests how employees in the work environment view their 'world.' The preferred world view will be some combination of four potential orientations: *CLOSED*, *OPEN*, *RANDOM* and/or *SYNCHRONOUS*. The respondent's world view perspectives are investigated across preferred space use characteristics.

Space Use Characteristics Inventory Constructs

Little research exists on employees' age-generational differences and the relationship between work and preferred space use characteristics; much of the research examines workspace dimensions and ambiance, while few recent research efforts focus on individual workspace preferences. Even cursory research regarding the underpinnings of worker retention and organizational culture appears to be absent.

To better understand fundamental constructs and how they may be interrelated, improved investigation strategies are required (Sullivan, Forret, Carraher, Shawn & Mainiero, 2009). Employing a more sophisticated research strategy linking known information and other database information permits a more robust examination of

generational differences and how they manifest in the organization. Pugh, Dietz, Wiley & Brooks, (2002) identified a research methodology that describes the relationship between work environments and how employees describe their work. They coined the term 'linkage research', as it allowed for data to be collected from employees and to be linked with other key organizational databases. The purpose of linkage research was to identify those elements of the work environment, as described by employees, related or linked to critically important organizational outcomes (Pugh, Dietz, Wiley & Brooks, 2002). The linkage research methodology assumes that properly designed employee-based work environment and organizational climate measures are key tools for determining overall organizational success. Linkage research recommends that employees be used as informants. When developing research criteria, the focus should be on what is most important for business performance, while being aware that the industry and other characteristics of an organization may make a difference in how employees understand their value (Ashkanasy, 2000).

The space use characteristics included in this study are as follows:

- accessible spaces,
- safe and secure space,
- socializing and collaborating spaces,
- adaptable and flexible spaces,
- private spaces,
- controllable spaces.
- quality spaces,
- comfortable spaces,

- aesthetic spaces, and
- efficient spaces.

Each space use characteristic's operational definition appears in the glossary of terms at the conclusion of this chapter.

Research Problem

It is hypothesized that Baby Boomers and Millennials have different organizational system characteristic preferences that impact their perceived *ideal* space use needs. The OSAS, which describes employees' world views and employee-specific perceptions of their *ideal* and *actual* work environments with demographic data, provides robust contextual information. The research defines the organization system characteristics of Baby Boomers and Millennials and explicates how the differences operate between them and their perceived workspace needs.

A secondary dataset (Phillips, 2015) was used in the dissertation analyses, which investigated organization system type characteristics and generational preferences across University of Missouri Extension personnel. This study seized the opportunity to test an organizational typology assessment scale and compared those results against space use characteristics to discover Millennials' and Baby Boomers' workplace perception insights.

The context that demographic information presents in an organization allows the role of generational differences to be understood and addressed to see if employees' responses to their environment play a significant role.

The research question is:

What are the organizational system type preferences of Baby Boomers and Millennials and what is the relationship between those preferences and their ideal space use preferences?

Study Importance and Scope

Previous workspace research was driven by the space, size, dimensions and tasks of the products being manufactured. Today's organizations host a broader array of purposes and functions, specialized skill sets, and age-generation differences that require workspace reconfiguration; much of the work in many organizations is intellectual rather than physical or production line. Organizational work frequently involves processes, such as planning, budgeting, designing and team efforts to achieve the organizational mission. Many changes are being driven by technologically-savvy work, or more importantly, by an organization's clients.

As the nature of work changes due to a different mix of age generations among personnel, current and germane research will help organizations cope with and proactively explore meaningful policy and procedural issues.

Within University of Missouri Extension, Baby Boomers are leaving the organization and retiring while Millennials are working in a Baby Boomer created work world. It may be anticipated that some organizations will try to hold on to organizational culture that molds new workers to fit into a paradigm designed for an older age generation, which may result in those organizations experiencing excessive turnover as Millennials enter their employment following Baby Boomer retirements.

How do Millennials prefer to work, how do they perceive their world, and how do they react to their workspace environment? Finding and using such information may be critical for an organization. Clues without facts can be costly, especially if it leads to employee turnover and retraining costs.

Organizations need to understand their employees, create new training within the organization to help cultural understanding shifts, and find ways for both senior employees and younger employees to thrive in the same organizational culture and same workspace through greater understanding. In some organizations, it may be acceptable for a Millennial to come into the office at 10 am wearing jeans, having already worked for three hours at home or in a local coffee shop; other organizations will not find it acceptable to Millennial's Baby Boomer colleagues, for whom the workday began at 6:30 a.m.

Further definition of employee world views provides additional insight into effective behaviors for communication support and change in organizational environments. The number of Baby Boomers and Millennials in organizations is changing rapidly. Positions and power are shifting as a result.

This dissertation research explores theoretical constructs and their linkages, such as organizational system typologies and how they define the organization and influence worker productivity, retention, and satisfaction, as well as preferred workspace characteristic comparisons between Baby Boomers and Millennials.

Definition of Terms

This dissertation describes selected unique terms as well as some common terms.

The following definitions are utilized throughout the study:

Employee Retention: the overall strategy or ability of an organization to retain its best employees and hence maintain a lower turnover. An organization is able to achieve this by adopting various employee retention programs. Employee retention is and should be one of the primary focus areas of the human resources department in any organization. Organizations expend many resources to attract the most talented employees. These employees contribute to the company's success, directly influence the financial bottom line. Employee retention is more likely to result in efficiency, effectiveness and loyalty.

Environment and Behavior studies: People adapt both behaviorally and physically to physical environments; environmental psychologists study how that occurs. Numerous studies have been conducted examining how the environment influences human behavior with little attention to how human behavior impacts the environment (Heimstra & McFarling, 1974).

University of Missouri Extension Organizational Learning Survey: a sample drawn from the University of Missouri Extension statewide-population. The report's theme rested on the assumption that organizational systems may be created and operated in more than one way, therefore there is more than one way for them to succeed. The research from this survey focused on *actual* and *ideal* perceptions of the organization, *actual* and *ideal* "Great Place to Work" characteristics, *actual* and *ideal* environmental preferences, *ideal* space use characteristics, and the organization's demographics.

(MAUT) The Multivariate Attribute Utility Technology: a method for examining variables as they appear as an attribute set, an essential methodological characteristic required in OSAS pattern development. The MAUT assumes the participant is capable and rational, meaning the participant can read and respond to reasonable questions, has sufficient knowledge to judge their experience, and that they can consistently rank orders of preference or perceptions. The goal is to provide easy to understand expressions of more complex sets of attributes. (Edwards & Newman, 1982).

Organizational Culture: a defined pattern of shared, basic organizational assumptions, learned by a group within the organization as it solved problems of external adaptation and internal integration. These patterns and ways of doing things are considered sufficiently valid to be taught to new members as the correct way to perceive, think and feel in relationship to problems and issues (Schein, 2004).

Organizational Systems: a system perspective embraces the inherent complexity of a system rather than diluting its complexity so that it can more easily be observed. The outcome of systems analyses, therefore, yields a more accurate and authentic description of the system because it is rooted in an understanding of its inherent complexity.

(OSAS) Organization System Assessment Survey: developed by Dr. Ronald Phillips, is based on family regime and organizational systems theory. The Organization Systems Typology is a written assessment tool that identifies proportionate preferences for each of four organizational system types, indicating an individual's world view and the collective organizations world view. Rarely does an individual exhibit the radical characteristics of the descriptions—in their purest form, they are stereotypical. Respondents' results are usually a combination of preferences among the four organizational types with one or

two dominant or subordinate types. The premise for use of an organization's OSAS results is that a functioning organizational system will lean toward structures and patterns of behavior that take less energy to sustain than an organization that is misaligned.

Space Use Characteristics Typology: a series of space use characteristics that includes the following constructs:

- **Accessible spaces:** the absence of physical barriers such as stairs; the presence of accessibility aids such as ramps and handrails; door and corridor widths, and elevators that allow easy movement;
- **Safe and secure space:** spaces that are safe from fire and environmental hazards and those modified for accident prevention;
- **Socializing and collaborating spaces:** spaces that permit furniture arrangements that encourage socialization and collaboration;
- **Adaptable and flexible spaces:** multiple purpose spaces that can accommodate different types of activities;
- **Private spaces:** spaces that accommodate varying degrees of privacy, including secure doors and windows, and spaces visually and acoustically secure from unwanted violation;
- **Controllable spaces:** manageable spaces that can be personalized and individualized; spaces where personal territorial claims are permitted and are recognized;
- **Quality spaces:** well-maintained spaces; building systems that function well; a well-constructed facility furnished with quality equipment; the building and equipment are updated, appropriate, and function well;

- **Comfortable spaces:** access to natural light and appropriate task lighting; access to fresh air and daylight; acceptable temperature, lighting, and amount of space; appropriate control of unwanted noise; spaces that relieve exposure to unwanted stimulation.
- **Aesthetic spaces:** the visual character of a facility's interior and exterior spaces, portraying the desired organizational image or brand; facility appears clean; a beautiful place to work—aesthetically pleasing; and,
- **Efficient spaces:** adequate amounts of space for all occupants.

University of Missouri Extension

University of Missouri Extension is a partnership among the University of Missouri campuses, Lincoln University, the people of Missouri through county University of Missouri Extension councils, and the National Institute for Food and Agriculture of the U.S. Department of Agriculture. MU is a land-grant university, meaning it has a federally mandated mission to carry the benefits of university research beyond the campus. Federal legislation in the 1800s provided for the donation of public land to individual states. Missourians chose to apply their land grants to the existing Columbia campus. This created two universities in one, a land-grant institution leading in research for all citizens of the State, across the nation and around the world, and an intellectual center to advance liberal arts scholarship. Today, through statewide offices, publications and web-based services, University of Missouri Extension faculty in every county of Missouri continue to carry the benefits of MU research throughout the entire state (University of Missouri Extension webpage, 2017).

CHAPTER TWO

Literature Review

Historical Background

The world of work has changed with multiple generations engaged at the workplace. Most workplace practices, policies, procedures, and workspaces have not been studied in today's organizations or for how today's workers actually work. Today's organizational work is different from industrial work or the agrarian work of the past. Organizational work requires different employee skill sets and different types of workspaces to accomplish the expected work. Technology has modified much of the when and how of organizational work. This review of literature will present the major theoretical building blocks regarding environment and behavior, organizational culture, employee retention, age generational differences and organizational systems. These theoretical foundations provide a comprehensive understanding of how humans and environments interact, how organizational culture and generational differences relate one to the other, and the underlying values regarding employee retention. The literature review also describes systems' research as a method to study organizational complexity. Early social psychological studies were limited exclusively to the individual and excluded open organizational inquiry.

It is argued that employing a more holistic and inclusive research paradigm, (i.e., a systems approach) in generational workforce comparison analysis investigations will provide an information baseline heretofore unachievable.

Environment and Behavior

Kurt Lewin, a German-American psychologist known as a pioneer of applied, social, and organizational psychology, performed some of the first studies on humans and their environments. Lewin described psychological typologies in the form of mathematical equations. His equations are among the most well-known and accepted formulas in social psychology. In his book, *Principles of Topological Psychology*, published in 1936, he contradicted many popular theories by giving importance to a person's momentary situation rather than relying on their past for understanding behavior. His first formula stated that a mental behavior " B " could be treated as a function of the situation " S " (which could mean the whole situation, including the person) resulting in $B = f(S)$, meaning that Behavior is a result of the function of the Situation. Lewin's equation, $B = f(P, E)$ is psychological equation, which states that behavior is a function of the person in their environment.

Building on a landmark concept, Lewin expanded the formula to include a (PxE) component—the interaction of the person with the environment—referred to as the Ecological Equation: $B = P + E + (Px E)$. The person influences the physical environment and in turn, the physical environment influences the individual. Since 1936, this concept has served as the foundation for environment and behavior studies.

The application of the ecological equation is particularly relevant and timely in workplace behavior inquiries. The ecological conceptual framework parallels a systems theory perspective, in which the identity and nature of system components are investigated as well as the interactions among the component parts (i.e., the Px E is an essential component in the analysis).

It is hypothesized that inherent differences exist in the different ways age-specific generations interact within the workplace environment. The investigation of the 'P' component, *Person*, of the workplace system involves identifying employee demographic differences and similarities among age generation cohorts. Further, an examination of perceived organization system type and physical space use characteristic differences between age-generations complete the 'P' conceptual framework investigation. For this study, the physical setting, *Environment* 'E,' is the workplace. In this context, analyses between age-generation cohorts is 'Px E'. A systems approach focuses primary attention on the 'Px E' component and how the 'P' and 'E' component interactions manifest themselves (Lewin, 1936).

The role people play in the environment and the role that the environment exerts on people presents the basic components of understanding the workplace and the people who work in it. The bigger question is how each influences the other. To study age generation differences in the workplace without investigating the person as a central participant in the discussion, or to dismiss the environment's influence on the person, jeopardizes arriving at an ecological (i.e., holistic) understanding of the basic theories and tenets at play in this important relationship.

The theoretical perspectives presented by ecological psychology and environmental psychology relate to peoples' interaction with the world in which they live. Both are interdisciplinary, and both provide a theoretical base for exploring the interactions of age generation differences and workspaces.

Ecological Psychology

In his classic study of human behavior and the environment, Roger Barker determined that human behavior is ‘situated’ (i.e., influenced by the physical environment). His study revealed that children behave one way at home, another way at school, and differently at church, which led him to theorize that people use different coping mechanisms based on the type of environmental setting they inhabit. Barker observed that a variety of individuals were seen to react to the environment with surprising homogeneity, which provides additional stability to the environment; thus people tend to respond to environments similarly, even if they enter the setting for different reasons with differing perceived levels of responsibility and at differing time periods. The theory of space specificity led to the belief that a place could dictate people’s specific behavior when they are in that place, and that people who participate in the setting accept setting-conditions, suggesting that an unexpected change in the setting can lead to behavioral changes to the inhabitant’s psychological systems (Barker, 1987). “Behavior settings are bounded, self-regulated entities involving forces which form and maintain the component inhabitants and the objects of settings in functioning patterns with stable attributes” (Barker, 1963). The ecological psychology framework developed in the 1940s was preparatory for the environmental psychology theories that emerged in the 1990s, particularly in that Barker found human behavior was influenced by the environment.

Environmental Psychology

Environmental psychology acknowledges that humans adapt to their physical environment. Environmental psychologists study how adaptation occurs. Humans adapt

both behaviorally and physically. Numerous studies have been conducted examining how the environment influences human behavior with little attention to how human behavior influences the environment (Heimstra & McFarling, 1974).

Harold M. Proshansky, the father of environmental psychology, was the first to hypothesize that the environment could directly influence behavior in a predictable manner. Proshansky described the relationship between people and the environment as, “If human behavior in relation to the physical setting can only be understood by analyzing it at all levels of social organization, then from a theoretical point of view, there is no physical environment apart from human experience and social organization” (Proshansky, Ittelson, & Rivlin, 1970). Proshansky argues that the constructed physical environment is as important as the social environment, and that human response to the physical environment is never solely determined by the structures or events that describe the physical space. Human comprehension of the environment is an additional view of the human and environment interaction.

Human ability to create interaction patterns with the physical environment leads to broader discussions of human psychological adaptability.

Taking the environmental psychology viewpoint and looking further into the environment and behaviors of more specific situations, one can now examine workspaces and explore the connections between environment and behavior.

Much of the research in environmental psychology has focused on measuring people’s attitudes toward various features of the environment, (e.g., the number of people

in the room can sometimes create behavioral changes and general interactions with the environment) (Heimstra,& McFarling, 1974).

Research that elicits and records preferred responses is an accepted investigative approach for learning about the environment. The researcher presents a paired response (i.e., ideal versus actual), allows respondents to note their preferences, and ranks those preferences, which permits researchers to investigate the array of variables that constitute the environment (Heimstra, & McFarling, 1974). Thus, empirical research can be undertaken that studies human and environmental interactions and influences.

A basic understanding of behavior is central to this discussion. A paper presented by Nahemow and Lawton in the 1970's provides four significant behavior descriptors:

1. The homeostatic principle is illustrated in that the same behavior can be maintained in the face of a change, in either the individual or the environment;
2. Behavior change may be instigated at either the personal or environmental level;
3. Even in the 'best' environments, some individuals will be unable to behave in an adaptive manner;
4. Even the most capable individuals may not behave in an adaptive manner in misaligned environments" (Wolfgang, 1973).

These descriptors lead to the additional need to better understand how humans perceive their environment. The alignment or dissonance between the ideal or actual perceptions of workspace environments and human behavior are central to understanding how workplace behaviors and interactions operate between Baby Boomers and Millennials.

Workspaces and Their Importance

In previous research, workplace/workspace understanding was ordered around hierarchical organizational structure and not small group ecology/participation in the workplace. Organizations conduct much of their business through meetings. In those meetings, planning is conducted, personnel actions take place, with many of those meetings characterized by tension and anxiety. In meetings where organizational work occurs, there is a strict ‘rule’ that defines where the president sits and where the hierarchy is positioned. These patterns are supported by the physical structure of offices and by the culture and social expectations of how such meetings are conducted (Becker, 1981).

Not all meetings occur to stimulate ideas. Some meetings take place to pass along organizational decisions. Individuals’ interaction patterns in these settings are determined by spatial factors—the person “next to the last speaker is the next to speak” behavior. The ability of the worker to fit into the work environment and understand how to communicate within that environment creates a “baseline” for how effective the organization functions.

Becker outlines a list of behaviors and attitudes that can be influenced by the physical setting: “expectations about how one should work and with whom one should work, motivation and commitment, group cohesion, active participation/involvement, performance feedback/sharing of ideas, job autonomy, task significance, job satisfaction, distractions/interruptions, perceived efficiency, friendship formation, cooperation/competition, conflict, social withdrawal, leadership, task persistence/attention, interpersonal evaluations/attraction, time on task, supervisory patterns/rule making” (Becker, 1981).

Operating processes and workflow are critical to understanding functional aspects of work, but equally important are the social and psychological aspects of work. Organizations and individuals naturally seek opportunities to maximize their self-interest. Becker encourages the use of employee engagement as a management strategy to assist in organizational change (Becker, 2004). The physical and social environment of the organization should support an employee's ability to change and morph with organizational needs. Purposeful organizational change that endures over time requires alignment of the organization's social and environmental fabric.

The physical setting's purpose holds the greatest influence on one's behavior. Frequently, a larger system determines the purpose of the setting, which by function restrains the behavior in that setting (i.e., church sanctuary). Other settings are less explicit in their purpose, such as a residential family room where a wider variety of behaviors is acceptable. Some aspects of the built environment should be incorporated into room design for the room to fulfill its intended purpose and yet, conversely, some room characteristics are not required to be in place for the room to function (Heimstra, & McFarling, 1974). In ideal office environments, the physical characteristics of the office must be addressed, but also, how different organizational units communicate with each other, how work is conducted among various groups of employees, how the supervisor/subordinate relationship is managed in the environment and how the work flows (Heimstra & McFarling 1974).

Brookes and Kaplan investigated open office plans and closed office plans impact on employees. They found, using pre- and post-comparative evaluation methods on what they considered an ideal office environment, the 'landscape design' of the open office

was not considered any more functional than the closed environment. Employees cited the open office as being more conducive to social relationships and aesthetics, but the increased sociability did not lead to increased efficiency (Brookes & Kaplan, 1972).

In 2007, Hughes surveyed 2000 employees and determined that 90 percent of them believed the workspace quality influenced their attitudes and their productivity (Hughes, 2007). In contrast, a more recent study determined that office behaviors were not necessarily affected by design changes. Rashid noted that visible co-presence and face-to-face interaction were more affected by organizational culture and functions than by physical movement within the office design. Rashid concluded that success depended on achieving optimal conditions regarding space when behavior and perceptions were fulfilled (Rashid, 2009).

Office and workspace quality is in the eye of the beholder, with several types of office designs and cultures differing based on expectations of what office spaces do and do not accomplish. Recommendations for space planning and design features that support organizations include:

1. Ability for centralization and decentralization;
2. Localized environmental controls;
3. Automated building/environmental systems;
4. Office size and variances to support work flow;
5. Shared work areas...smaller offices require more shared work spaces;
6. Amenities such as vending machines, cafeterias, proximity to daycare, banking, etc.; and,
7. More natural environment (Becker, 1990).

The central tenet of workplace element strategy in organizational ecology is that no single strategy outweighs another. “Increased interaction and collaboration is rarely the only reason a company chooses to co-locate employees. Even when this is a major factor for co-location, the building can never force interaction by itself” (Becker, 2002).

Communication in the workplace is influenced by three factors: environment, people and behavior. “Behavior is not simply the result of the environment and the person, just as the environment is not simply the result of the person and behavior” (Glanz et al., 2002). The environment provides the models for behavior. The human is highly susceptible to triggers in the environment with language being one of the strongest triggers. The social and physical environment sets the stage for human behavior, as staying safe is a major part of the subconscious mind, which makes the environment a powerful influencer for the human in the workplace (Tyrell, 2016).

Businesses and organizations are becoming increasingly aware of how workplace culture creates and maintains norms in an organization. In simple terms, happy employees are better workers in that they produce more, are more creative and are more satisfied with their employment. Workplace satisfaction is an important factor for organizations as it can encourage communication, socialization and productivity (Smith, 2015).

Work expectations are more cognitively complex in this century, requiring more team-based and collaborative environments. Additional dependency on social skills, technological competence, more time pressures and more mobility make today’s workplace much different than those in the past. Organizations are now defined by the value the customer places on the organization, and primary processes improve customer

relationships and connections. Anything in the organization that does not relate to the client or the bottom line is considered wasteful. Organizations attuned to Millennials have reduced their hierarchical structure (hierarchies cannot respond quickly), have blurred the boundaries between departments as they must work together in new ways, support team culture, are ready for continuous change, and understand that employee commitment must be to the goals and mission, not the procedures and policies, of an organization. This means the physical workplace must change and support the new organizational culture if the organization is to endure.

Heerwagen (2016) defines change drivers, the workplace and technological solutions and outlines issues and concerns. The drivers are increased use of team and cross unit work and more pressure for communication and information flow. This means more meeting space of all sizes is needed, smaller individual workspaces, more open individual workspaces, unassigned workspaces, greater interior visibility to support awareness across units, mobile supports for phones, laptops, wireless infrastructure, opportunity for instant messaging, desktop team software, project rooms, displayed information and work progress, small rooms when individual focus is needed and lockers for personal belongings.

Another driver is greater use of dispersed work groups, which calls for increased use of video conferencing and more reliance on conference calls, a greater need for technological support in meeting rooms, and the use of buildings and facilities beyond normal working hours.

Continual reorganization and restructuring means mobile furnishings and a flexible infrastructure are key. Because organizational cost reduction and efficiency

reign, shared and unassigned workspaces are required. A centralized filing system (most likely digital) will accommodate the dispersed workforce.

Heerwagen (2016) notes that the last driver: improved quality of work life and attracting new workers, will mean more equitable access to daylight, views and amenities, more equitable spatial allocation and workspace features and amenities for stress reduction.

All of these change drivers bring issues of noise, distractions, interruptions, expanded workdays due to globally or nationally dispersed teams, loss of face-to-face interactions, a high dependence on technology, the expectation that workers are always available, the potential for over communicating, and overall, more difficulty managing and coordinating (Heerwagen, 2016). Knoll Workplace Research (2013) aligns with Heerwagen by noting effective communication is no longer between two people, but between many people and groups of people for organizational success. Knoll studied 38 organizations across nine industries and learned that collaboration and collaborative workplaces skewed toward informal communication exchanges, but led to important outcomes. Knoll research also suggests that adaptable furnishings and accessibility to technology make collaboration easier.

Twenty-first century organizational management must consider the impact of an increasing number of Millennials in the workforce and their corresponding workplace needs. Millennials strive for more work balance and involvement in decision-making. They can ask challenging questions and need meaningful social interactions. Millennials see mentoring as a two-way connection and expect to participate in reverse mentoring, not someone showing them what to do. Career development for Millennials is also

different in that they pursue riskier career paths, participate more fully in lifelong learning, and prefer E-learning and multimedia training. Millennials expect significant professional development support from their organization. The physical work environment is important to Millennials and they expect to be comfortable at work. The workplace is where Millennials collaborate, socialize and learn (Aruna, 2015). Baby Boomers and Millennials work has changed how they accomplish their work, where they do their work, and the types of interactions required to complete work.

Virtual and Mobile Work

Virtual work is characterized by a work pattern that is episodic and voluntarily complements but is not a substitute for a social home base. “Nearly 18 million workers spent a portion of their workweek in some form of mobile work pattern; this figure grew 100 percent over a two-year period. Almost two-thirds of Fortune 1000 companies now offer employees an opportunity to work virtually” (Becker, 2002). Even in 2002, virtual work, accomplished with digital and electronic communication, required higher skill levels, demanded a stronger commitment to the project and the project team, and increased the complexity of communication, more than that of a conventional work team. Organizational work and customer satisfaction can accommodate equally well via mobility/digital communications and virtual workers (Becker, 2002).

New technologies have changed office work. The physical environment that once defined the hierarchy of the organization may change. Current philosophies and practices include new technologies, but as organizations embrace new technologies, the old patterns of environmental knowing, the old methods of social interaction, and the old

methods of how work gets done come into question. With technology, conducting work from remote locations is both feasible and possible.

The need for office appearance noting position or rank is shifting to productivity. The need for private space and confidential, ceremonial meetings is changing. Now the need for privacy may be greater for middle management than for top-level supervisors. The change from an individual office to more open spaces is contrary to many individuals' understanding of space. The absence of a door or any degree of privacy can be unsettling to workers (Becker, 1990). As the work flow changes and as older workspaces become obsolete, the need to understand peer relationships and interaction patterns must increase to improve work efficiency.

Workspace and Employee Interaction Research

Employee-workspace congruence may facilitate employee retention. Future economic prosperity for the United States will have a bearing on an organization's ability to adjust work environments based on generational differences (Westerman, 2007).

A number of useful criteria establish common ground for employee-workspace fit (Becker, 1990), providing information about the interaction of individuals in their workspace. However, the research fails to explain how to examine the relationship between employees and their workspaces as it attempts to define the underlying nature of good employee workspace fit for specific organizations (Becker, 1990). Employees' workplace behavior and work environment characteristics affect the quality of the 'fit' between the employee and workspace.

“The work environments that companies have provided for the past half-century are increasingly unsuited to emerging work patterns and are inhibiting workers from performing at their full potential. An effective workplace solution allows a natural and efficient sharing of knowledge. Increased knowledge sharing leads to enhanced productivity, improved quality, and accelerated innovation” (Savage, 2005). When organizations examine the intersection of collaboration and workspace in the future, they will need to look at shared workspace technology and information sharing among employees via a common technological workspace. A centralized workspace that can be accessed from anywhere, and work that can be collaborated on at any time, thus not requiring face-to-face interactions, is the physical workspace of the future. The presence of shared online workspaces will allow increased communication, collaboration and information review. There is a growing organizational preference for using shared workspace (Klass & van der Veen, 2002).

Companies such as Cisco now embrace the ‘connected workplace’. They are creating workspaces tailored to the next generation of workers and to the future needs of organizations. Their workplace designs include the use of flexible spaces, innovative technologies, leveraged intelligent building systems to create spaces for collaboration, transparency, communication; and, openness (Cisco, 2013).

In this regard, a review of environment and behavior literature indicates a need to further investigate the nature of people’s interactions with their physical workspace, but the workspace is more than the physical surroundings. A variety of cultural interactions between employees and their workflow exist within an organization.

Organizational Culture

An organization is a group of people defined by their function, whose culture determines what and how the organization operates. Organizational culture is the pattern of shared basic assumptions within an organization, assumptions learned as problems of external adaptation and internal integration solved. Based on prior successes, these patterns and ways of doing are sufficiently valid to be taught to new members as the correct way to perceive, think and feel in relationship to problems and issues (Schein, 2004). Schein goes on to note that a group culture is a shared set of basic assumptions, and as such, will manifest itself at the level of observable artifacts, values and beliefs.

Key organizational cultural characteristics

Organizational cultural theory is relatively new. Seminal works on the topic date to the late 1970's and early 1980's. The basic concepts of organizational culture originate from two distinct disciplines, anthropology and sociology. Anthropology's *interpretivist* view uses the word culture as a metaphor for the organization, defining an organization as a culture. Sociology's *functionalist* view defines culture as something an organization possesses. The most accepted and most used culture framework is that of Edgar Schein (1988), who adopts the functionalist view and sees organizational culture as having three components: artifacts, values, and underlying assumptions. Schein describes artifacts as those visible organizational structures and processes within an organization. Artifacts are easier to see and understand than beliefs and values, which is an important distinction when seeking to understand how an organization works and which of the organization's key characteristics represent its defining culture. Values are described as strategies, goals, ideals, standards, norms, and moral principles. Basic underlying assumptions are those

unconscious, taken-for-granted beliefs, perceptions, thoughts and feelings that are the ultimate source of values and action. Schein argues that the essence of organizational culture exists in underlying assumptions.

Schein collaborated with Pettigrew (1979), to study the components of organizational culture from the view of symbols, language, ideology, beliefs, rituals and myths. Language is a key tool used by leaders to explain and create collective experiences that provide identity and order for the organization. Pettigrew believed this was a key process to provide organizational identity and to provide a 'place' for individuals to commit energy and emotion. When looking at cultural approaches, Pettigrew also addressed the need for commitment—the willingness to offer loyalty and energy to an organization, and connect with its goals and values. The organization is fashioned into a collective whole when individuals disengage from previous patterns and re-emerge with new individual patterns and social relationships that fulfill the organization's needs and purposes. This process requires individual sacrifice and investment into the organization. Building commitment is key to the foundation of organizational culture. Commitment is accomplished in various ways by different organizations, some by location, some by specific dress codes and some by experiences. Pettigrew is careful to state that these concepts may not be universally applicable across all organizations (Pettigrew, 1979).

In 1990, Denison described three cultural organizational characteristic traits as follows:

1. The engagement level of employees in the organization and how that engagement is connected to organizational goals and decision making processes;
2. The consistency and strength of the organizational culture determined by the level of integration of members with organizational beliefs, values and expectations; and,
3. The adaptability of the organization and its members, allowing survival in a continuously changing environment while holding firm to the organization's values, a mission that provides a clear sense of direction outlining the organizations' strategic purpose and goals.

Corporate employee culture elements that lead to both qualitative and quantitative firm performance include: a focus on customer service; standardized human resource practices; employee identification with the company; attention to employee performance and behavior standards; corporate citizenship; and, communication (Flamholtz & Kannan-Narasimhan, 2005).

Further study by Cameron and Quinn (2011) found that organizations develop a leading cultural style, with organizations rarely having just one cultural style. They describe organizations as having a clan culture, an adhocracy culture, a market culture or a hierarchy culture. They place the four types into a matrix used to determine an organization's profile.

Clan culture is social. People have much in common and the culture resembles one big family. Executives are viewed as mentors or possibly as father figures. Tradition and commitment hold the organization together with much involvement by the

individuals in the organization. Workers are connected by morals, and human resource development is emphasized. Addressing the needs of the client and caring for the people define clan organization success. Teamwork is encouraged in the clan culture (Cameron & Quinn, 2011).

Adhocracy culture displays an energetic and creative working environment. Employees are known for taking risks and leaders are both risk takers and innovators. Innovation and experimentation are the glue within the organization. Prominence is prioritized and the long-term goal is to create and grow new resources. New products and services are seen as achievements.

Market culture organization is defined as a results-driven organization that focuses on getting work done and products moving. Competition and goal orientation are the drivers of the organization. Leaders are tough and have high expectations. The importance of winning keeps the organization together. Success and reputation with long-term focus on reaching goals is key. Market penetration, stock, competitive prices and market leadership define this organization.

Hierarchy culture displays a formalized, structured working environment. Processes and policies determine what people do. Efficiency based coordination and keeping the organization functioning effortlessly is most critical. Formal rules and policies are the glue for this type of organization. Trust, delivery, planning and low costs are characteristics of this culture's success.

University of Missouri Extension Organizational Culture

University of Missouri Extension was the organization chosen for this study. The organizational culture of Cooperative Extension was described in a 2003 study conducted at The Ohio State University, and supported studies conducted by Smart and Hamm in 1993, and Smart and St. John in 1996, which stated that almost two-thirds of colleges and Universities in a nationwide study have a clan culture type (Smart & Hamm, 1993; Smart & St. John, 1996). In the Ohio State study, the clan culture was identified as an organization that supports internal maintenance with flexibility, concern for people and sensitivity for customers. Study results indicated that clan culture was currently present, and that there was a desire for clan culture to continue. This result confirmed the Cameron and Quinn findings regarding strong clan cultures with homogeneity of effort, clear focus and high performance where unity and common vision are required (Berrio, 2003). University of Missouri Extension, where employee positions are focused on education, with expectations for high performance to support its common vision and educational mission, exemplifies this description.

In an investigation of Ohio State University's Extension Organization, Bowen examined how various generations responded to elements of the Competing Values Framework developed by Cameron and Quinn. She determined that Cooperative Extension could be defined as a clan culture in its organizational structure (Bowen, 2015).

Organizational Culture Research

“Organizational culture, which refers to the culture of a firm and of the employees within the firm, is based on the organization's value, beliefs, and artifacts, which stem

from a variety of sources” (Marshall, 2016). Cultures do change, yet, most research treats organizational culture as static, fixed and immutable. Research is needed that examines underlying mechanisms that consider the organization members’ values, the practices that occur and the cultural components’ interactions. Additional research is needed that examines more specific organizational systems and individual and/or environmental issues. Investigating employee characteristics will provide a different view of the organization than one would obtain from managers (Marshall, 2016).

The environment and behavior theories and the organizational cultural theories are baselines for the employee retention companies are seeking. Organizations’ profit lines are influenced by employees’ interaction with the workspace, by the culture of the organization and by how long an employee remains in the organization making meaningful contributions.

Employee Retention

An organization may face a number of challenges in the wake of social, environmental and economic changes. Major challenges include talent management, and how the organization recruits, trains and retains employees.

Employee Motivation Theories

Employee motivation studies are based on seminal research conducted over the past 90 years. Each theory takes a different path to investigate employee motivation.

The Hawthorne Studies

The Hawthorne Studies, 1927 and 1932, involved a series of experiments conducted in the Western Electric Hawthorne Works Company in Illinois. It studied how

physical and environmental factors, such as lighting and break times, could affect motivation. Work output improved no matter which experiments were performed, leading to Hawthorne's conclusion: workers were happy to receive attention; attention made the employee feel valued; and, attention led to great output (Mayo, 2007).

Maslow's Theory

Maslow, 1943, developed a theory of human motivation. His hierarchy of needs consisted of self-actualization needs, esteem needs, social needs, safety needs and psychological needs. Research results suggest that as long as an employee's physiological needs are met, some incentives might not be a motivator. Work-related needs are defined as fair pay, esteem-raising compliments, socialization opportunities, and professional development training opportunities (Maslow, 1999).

The Herzberg Two-Factor Theory

In 1959, Herzberg published *The Motivation to Work*, wherein he described work environment aspects that caused satisfaction or dissatisfaction. His research showed the six top motivation factors as:

1. Achievement
2. Recognition
3. The work itself
4. Responsibility
5. Advancement
6. Growth

The top six “de-motivators” include:

1. Company policies
2. Supervision
3. Relationship with manager
4. Work conditions
5. Salary
6. Relationships with peers

Interestingly, fair pay is a motivator, but fails to actually motivate employees to do a better job (Herzberg, 1993).

The McGregor X-Y Theory

McGregor proposed the X-Y theory in his 1960 book, *The Human Side of Enterprise*. He found two basic approaches to managing people. Theory X managers, who have an authoritarian management style, have the following basic management beliefs:

- The average person dislikes work and will avoid it;
- Most people need to be threatened with punishment to work toward company goals;
- The average person needs to be directed; and
- Most workers will avoid responsibility.

Theory Y managers believe:

- Most people want to make an effort at work;
- People will apply self-control and self-direction in pursuit of company objectives;
- Commitment to objectives is a function of expected reward received;
- People usually accept and actually welcome responsibility; and,
- Most workers will use imagination and ingenuity in solving company problems.

McGregor's results revealed that Theory X-style managers may have a more difficult time retaining workers and may see higher turnover rates (McGregor, 2006).

Effective Work Systems

Effective work systems criteria are based on theories of job dissatisfaction. Job withdrawal is one of the initially developed job dissatisfaction theories. This theory suggests that people develop a set of behaviors to avoid their work situation. The behaviors include behavior change, physical withdrawal and psychological withdrawal. These behaviors manifest in leaving the job, asking for a transfer or increased absenteeism and tardiness. If employees cannot leave the job, they will experience psychological withdrawal, which creates increased costs to the organization, leading to dissatisfied customers (Farrell, 1984).

Effective work systems focus on high performance and improved job satisfaction. To improve employee retention, most successful systems provide an environment that

gives an employee responsibility for and involvement in the success of the organization.

The 'high performance work system' (HPWS) includes the following elements.

- 1) Teamwork and team rewards
- 2) Rewarding work
- 3) Empowerment
- 4) Encourages information sharing
- 5) Fair and transparent pay systems
- 6) Training
- 7) Formal performance feedback
- 8) Work processes that encourage interaction amongst employees
- 9) Employee involvement in planned change

These elements in various ranked orders are noted by most employee motivational work studies.

Therefore, a foundational assumption in work systems theory is that a trained employee involved in meaningful work and socialized within a team will likely produce more. Those employees will likely have greater satisfaction and engagement with the company for a number of years—the intended outcome for creating effective work systems.

Understanding University of Missouri Extension Employees and Motivation

Linder (1998) conducted a study among 25 employees at the Piketon Research and Extension Center in which he identified their ranked order of motivating factors:

- 1) Interesting work
- 2) Good wages
- 3) Full appreciation of work done
- 4) Job security
- 5) Good working conditions
- 6) Promotions and growth in the organization
- 7) Feeling of being in on things
- 8) Personal loyalty to employees
- 9) Tactful discipline
- 10) Sympathetic help with personal problems

Linder proposes that both employees and managers work together to determine their motivations.

Human resource policies in Cooperative Extension need to willingly restructure staffing patterns, enhance salaries and benefits, increase training and technical support and implement a more family-oriented work place to be prepared for the future (Chesney, 1992). Leaders of the future need to embrace organizational fluidity, encourage a climate of entrepreneurship, support more employee mobility, and increase freedom and encouragement of employees (Smith, K., 1990).

Lastly, the Cooperative Extension workforce contains both professionals and paraprofessionals who must be managed and led. In general, human behavior is similar in what motivates them and what develops a path to employee retention. All employees want role clarification, adequate information and support for them to do their job well. They want their environment structured for their potential success and want support for

their roles. A direct connection with their supervisor is desirable. Employees want to understand how to accomplish their work where they are located. Direct and regular communication is key. Employees desire assistance with conflict resolution in work teams (Austin, 2014).

Turnover and Retention

Retaining good employees is critical with the widening gap between talent demand and supply. The results of a 2015 study strongly suggest that an effective working environment leads to higher employee retention (Mandhanya, 2015). Effective strategic workforce planning initiatives start with a forecast of the talent needed to carry out the organization's business objectives. The search for talent now unfolds in a global market, where operations and people move seamlessly across borders. Managers face a multitude of challenges, which includes ensuring employee security in an increasingly turbulent world, and developing fluency in cross-cultural communications.

Employee performance frames how managers think about productivity as managers ask themselves the same questions: "what can be done to ensure that every employee achieves maximum performance?" and "what can be done so that employee performance leads to competitiveness?" The foundation for the answers should rely primarily on respect for people, the most important asset of an organization—the human resource—a fact that most managers acknowledge. People respond to recognition, the freedom to contribute, the opportunity to grow, and to fair compensation (Boldea, 2011).

Average turnover rates vary by profession, industry, region, and discipline, and are influenced by politics, economics and geography; average turnover rates are around 10 percent, with estimates between 30-400 percent as the cost to replace employees.

Employee replacement involves recruiting, training, workload balancing and cultural shifting, so turnover must be well managed. When turnover rates rise, the organization and remaining staff have to deal with redistribution of workloads, loss of legacy skills or knowledge, instability and lack of constancy for clients and stakeholders, change in work productivity levels and changing relationships. In 2012, the Allied Workforce Mobility Survey said 30 percent of companies reported that it takes a year or longer for a new employee to reach full productivity. Reasons for departure usually include, interpersonal relationships, opportunities for growth and advancement are lacking, and working conditions and benefits are not at an acceptable level (Gallant, 2013). Some companies use a counter-offer approach, but approximately 70-80 percent of those accepting counter-offers leave within nine months.

The key factors that drive retention management include: organizational structure and culture; recruitment strategy; pay and benefits philosophy; employee support programs; and, training and career development programs. Employees bring their beliefs, dreams and efforts to their jobs, and if the organization does not respect or support the employee, they risk increased turnover. While money is important, the organizational culture characterized by satisfaction of other employees, integrity, trust, authority, communication, coordination, job security, fair performance appraisals, employee engagement and recognition is equally if not more important (Mhandara, 2015).

The percent distributions in TABLE 1 illustrate the total turnover rate in 2013.

TABLE 1: 2013 Total Employee Turnover Rate Percentage by Industry (U.S.)

INDUSTRIES	PERCENT
All Industries	15.1
Banking and Finance	17.2
Healthcare	16.8
Hospitality	29.3
Insurance	10.4
Manufacturing and Distribution	13.3
Not-for-Profit	15.3
Services	15.2
Utilities	7.2

Source: <http://www.compensationforce.com/2014/02/2013-turnover-rates-by-industry.html>

Data analytics employed in some companies determine what or how to recruit and retain employees. One company learned that the top talent coming through highly recognized academic programs were less effective employees, compared to those who came from a wider variety of institutions. In their analytics, they found a correlation between top performers and those who had worked in previous roles. One set of company analytics developed an algorithm that took into account recruiting history, past applicant resumes, those to whom offers were extended, and those who accepted offers. They linked this algorithm to company goals and developed a model to identify candidates most likely to advance to the next stage of the hiring process, which led to hiring for better fit. Another company created profiles of at-risk workers, which included performance rankings, compensation, demographic profile and professional and educational backgrounds. Once the high-risk employees were identified, the company

had the capacity to make more informed efforts to retain employees (de Romree, 2016).

These are great examples of using data and analytics to better understand the organization and make decisions that can reduce employee turnover.

Top recognition for employees were found to be:

- 1) Learning and choice of assignment
- 2) Flexible working hours and time off
- 3) Personal leave
- 4) Increased autonomy and authority in their jobs
- 5) Time with the manager.

Cash reward ranked 15th in importance (Nelson, 2002).

In Society for Human Resource Management report in 2014, 55 percent of respondents ranked ‘management recognition’ of their performance as very high to their job satisfaction. Employees like regular communication, prefer recognition for their individual work, prefer to have opportunities for meaningful input—not necessarily public input—and desire authenticity (Miller, 2014).

Employee Retention Strategies

Employees develop connections and relationships both on and off their jobs that embed them in their jobs and in their communities. Employees with many connections are more entrenched and have more reasons to stay in the organization. Three words describe embedding facets in which employees engage: *links* (connections with other people, groups or organizations); *fit* (the extent of compatibility with their job,

community and organization); and *sacrifice* (forms of value the person would have to give up if they left their job, (e.g., financial, social, status) (Allen, 2008).

An employee retention plan begins before people are hired and includes workforce hiring, development, and onboarding. Organizations must build and strengthen links. Organizations need to be more deliberate in providing mentors, work design teams, and teamwork. Encouraging and supporting community involvement can accomplish helping employees to embed in the community and organization.

Managers talk about employee fit. Employee fit can be built and strengthened by providing realistic information about the job and company during recruitment, considering fit during employee selection, and by providing clear socialization and communication about the enterprise's values and culture. Companies that build ties between themselves and the local community can also support employee fit.

Organizations need to recognize their employees' sacrifices and seek ways to build in this area. Some ways to build employee loyalty include: tie financial incentives to tenure; provide unique incentives that might be hard to find elsewhere (such as sabbaticals); encourage home ownership (for instance, by providing home-buying assistance); and, develop career paths that do not require relocation (Allen, 2008).

The best retention strategies include: market adjustments in salary; creating a work environment that supports flexible schedules; casual dress and creation of a tele-community; promotion and career development opportunities; employee engagement and various outcome incentives. Human resource policies can be powerful in helping an organization achieve retention goals (Allen, 2008).

Employee Turnover

Turnover matters because it is costly, it influences the business' performance and it may become increasingly difficult to manage. The most important type of turnover for an organization is voluntary versus involuntary turnover, where voluntary turnover is employee initiated. A better understanding of voluntary turnover is needed as organizations strive to be more effective managers of their employee talent. An organization can influence 'avoidable turnover', though keeping all high-performers is not a realistic goal.

Another important distinction is turnover that is functional or dysfunctional. Dysfunctional turnover can include the exit of high performers and employees with hard to replace skills, and departures of minority groups.

Most observers in the talent market note that finding and keeping the right people with the right skills is an increasing challenge. Many business leaders worry that the wave of retirements among aging workers (Baby Boomers leaving the workplace), inadequate educational systems to train incoming talent, increasingly mobile employees and age generation differences will further aggravate employee retention.

The voluntary turnover model lists the turnover drivers as:

- 1) Job characteristics
- 2) Leadership
- 3) Relationships
- 4) Work environment
- 5) Individual characteristics

Some of the highest ranked turnover predictors included both positive and negative components:

- 1) Lack of organizational commitment
- 2) Poor relationship with supervisor
- 3) Lack of role clarity
- 4) Lack of tenure
- 5) Lack of job satisfaction
- 6) Role conflict
- 7) Comparison of alternatives to peers in present company
- 8) Satisfaction with expectations of the job
- 9) Poor job performance
- 10) Stress
- 11) Lack of promotion opportunities
- 12) Lack of quality communication
- 13) Poor promotion opportunities
- 14) Lack of policies to support families
- 15) Lack of communication in the organization
- 16) Lack of work group cohesion
- 17) Lack of co-worker cohesion

- 18) Lack of participation in decision making
- 19) Dissatisfaction with supervisor
- 20) Lack of pay satisfaction.

This lengthy list of possibilities for organizations to consider remains inconclusive (Allen, 2008).

University of Missouri Extension Employee Retention

The recent literature review indicates that workers' needs are less determined by their educational level, but more by their basic human characteristics and how they relate to their environment. The organizational environment that provides the least turnover and the greatest job satisfaction among employees has several components:

- 1) The organization has a plan for recruiting, training and retaining employees;
- 2) Employee linkages in their work and their community are understood by the organization;
- 3) Each new employee is in a 'right fit' job, in that their skills match their work and work expectations;
- 4) The organization ensures the work has a right fit within the community;
- 5) A plan for dealing with change and challenges exists in the organization;
- 6) A description of how to deal with generations of workers is explicated in the plan;
- 7) Appropriate technology is provided;
- 8) Employees receive a competitive salary, relative to market rate;

- 9) Flexible work schedules may be accommodated and an employee network has been developed;
- 10) There are transparent processes for career development and promotion; and,
- 11) Employees are engaged in the organizational mission and goals.

Employee Engagement

Strengthening employee engagement in the organization can also help retain talent. Engaged employees are more likely to be satisfied with their jobs, enjoy their work and the organization, believe that their job is important, take pride in the company, and believe their employer values their contributions. One report that measures engagement at Intuit, found that highly engaged employees were five times less likely to quit than employees who were not engaged, (Allen, 2008).

A Gallup 2013 State of the American Workplace poll showed that only 30 percent of U.S. employees would describe themselves as engaged. Disengaged workers are greater than two-and-a-half times more likely to leave their job, and usually prompted by a ‘trigger’ event. “Employees are more likely to feel engaged when they have solid relationships with managers and a belief in leaders” (Fox, 2014).

Top and critical performers want to know they have a future place in the company. While promotions are one way to send this message, they are not always possible in times of a restricted or restricting economy. Special assignments, attachment to high-visibility projects, skill-building opportunities, and formal or informal recognition can be equally powerful engagement and retention tools. Employees must remain informed about evolving business strategies, as too often top performers join competitors (Boldea & Ipnut, 2011).

Age Generation Differences

As an increasing number of Millennials enter the workforce, their needs and how they interact with the large Baby Boomer population requires a closer look at the age generation differences between Baby Boomers and Millennials.

To illustrate the importance of the intergenerational work force, for example, 10,000 Baby Boomers reach the age of 65 daily; a trend that is expected to continue until 2021. This means that in 2015, the number of Millennials matched the number of Generation Xers in the workforce population, with more than one in three workers being Millennials. Baby Boomers accounted for the largest percentage of the workforce in 2002, and believed their needs will always be met. Now, Baby Boomers are working with an almost equal number of Generation X and Millennial employees (Smola & Sutton, 2002). Until 2011, Baby Boomers comprised the majority of the workforce, when Generation Xers surpassed their numbers. Now, Baby Boomers are working with an almost equal number of Generation X and Millennial employees (Smola & Sutton 2002). Baby Boomers are sometimes supervised by Generation Xers and possibly Generation Yers (i.e., Millennials) (Murphy-AARP, 2007).

A generation is defined as an identifiable group in society that shares birth years and significant life events at critical developmental stages, have matured in a given time frame and experienced unique situations and events that impacted the development of their values, attitudes and behaviors (Kupperschmidt, 2000; Mujtabu, Manyak, Murphy & Sungkhawan, 2010). Age generation values are derived from interactions with parents, siblings, historical events, media and influential people in one's life. One's age/generation influences, in part, how one sees work roles and how one can expect work

to be conducted. Generational cohorts tend to develop personalities that influence their individual feelings toward authority, organizations, what they desire from work, and how they plan to satisfy those needs and desires. Although, generational studies point to specific timeframes, there is no absolute regarding the beginning and end of each time span (Stanley, 2010).

A generational grouping will share values and significant life events, which can influence understandings and organizational culture compatibility in the workplace. In general, two of the largest generational categories in the current workplace, Baby Boomers and Millennials, are targeted for this study:

- 1) **Baby Boomers:** people born between 1946 and 1964, grew up with an attitude of entitlement and expected the best from life. At their current ages, from 70-years to 52-years, many have entered positions of corporate power. They exhibit positive attitudes, possess multiple abilities, and prefer consensus building, mentoring and affecting change. Baby Boomers view work as a meaningful part of life that leads to self-fulfillment (Zabel, 2016).
- 2) **Millennials:** born between 1982 --1999 (Twenge, 2010), have dealt with rapid change, diversity, and a lack of solid traditions. They value individualism over collectivism. They like immediate feedback and are cynical and untrusting from seeing their parents laid off (Kupperschmidt, 2000). For Millennials, cell phones and social network connectivity surface as influential characteristics in their generation (Hersatter & Epstein, 2010).

The workplace is now hosting multiple-generations, and Baby Boomers may find themselves taking orders from younger workers, possibly young enough to be their grandchildren.

Current age/generation categories include: Silent Generation, born between 1925 and 1945; Baby Boomers, born between 1946 and 1964; Generation X, born between 1965 and 1981; and, Millennials, born between 1982 and 1999 (Campbell, Campbell, Siedor & Twenge, 2015). Generational differences in specific age cohorts are rooted in shared events and experiences—events such as wars, cultural, technological and social shifts, and economic variance—that tend to mold individuals into a unified set of work values (their world view) and the different ways in which they prefer to connect with the world. There is little empirical research regarding generational differences in the workplace (Sullivan, 2009). Most intergenerational relationship research makes cross-sectional comparisons (e.g., Baby Boomers to Gen X or Gen Y) or comparisons across time (Baby Boomers in 1965 and Gen X in 1988). To date, generational-differences research has been mostly descriptive. More robust research is needed to better understand how those differences impact organizational structure, social capital and physical facilities. Much of the research suffers from weak external validity or is based on anecdotal information (Campbell, Campbell, Siedor, & Twenge, 2015).

Generational differences are a social force in the workplace, not just a demographic characteristic. Providing effective leadership and appropriate workspace for multiple sets of generations is challenging. The twenty-first century workforce contains four generations for the first time in history, bringing unparalleled diversity to the workplace. Employers may easily overlook how generational differences impact the

workforce in their daily attempts to balance budgets and improve employee retention. Examples of the range of generational differences present in the workplace include: work values and attitudes, personalities, career expectations and outcomes, leadership preference and behaviors (Lyons & Kuran, 2014). Each generation possesses a set of values, attitudes, preferred communication styles, work environment expectations and a preferred relationship to authority.

The effect on the workforce is dramatic, and because Generation X is a small portion of the workforce, most of the replacement workforce will come from Generation Y (Millennials). Many organizations attempt to integrate the Millennial workforce into the status quo to maintain stability and organizational success by initiating ‘no change’ to the current structures. They are finding an increased need to focus on the transition more than on the organization (Danner, 2013). The numbers of Millennials working for and leading organizations will continue to increase. More clearly understanding and considering employee views and needs is paramount for this generational cohort. Millennial retention will need more attention as Millennials may change jobs four times in their first 10 years of work (Putre, 2016).

Millennials

Millennials are the last generation born in the Twentieth Century. Millennials tend toward individualism and share traits including multi-tasking, comfort with change, and accepting diversity. They are technically competent (Westerman & Yamamura, 2007). They accept as fact the existence and benefits of technology, a global economy and a focus on the individual, or a world that ‘revolves around them.’ Millennials are typically

group oriented, work hard, and are good at multi-tasking. They expect a strong organizational structure and individual attention from employers and supervisors.

Millennials began to enter the workforce around 2010. Baby Boomers now hold senior positions in both private and public sectors. Millennials are the children of Baby Boomers, so it is not surprising that they hold conflicting views with Baby Boomers (Shragay, 2011; Moore, Grunberg, & Krause, 2015).

Millennials derive their name because of their connection to the new millennium. They integrate technology into everyday life. They are not only connected 24/7, use technology 24/7, and are competent and comfortable with multitasking (Haynes, 2011). Millennials use text messaging to send and receive information to tie their goals to team goals. They have helped to develop web tools for social networking and work in linked data. Millennials prefer face-to-face interactions but are high individual performers who prefer office environments that offer choice. For the Millennial, the office is viewed as a place to connect to technology (Hermanmiller.com, 2008).

When Millennials were growing up, their parents were accused of sheltering their children, yet Millennials have grown up to be highly optimistic, socially conventional, rule bound and desirous of meaningful work. Frequent feedback from their supervisors is preferred because of their parental inclusion in discussions and decision-making. They prefer a significant degree of feedback from superiors and think their superiors can learn from them. Easy promotions and frequent awards are expected (Moore, Grunberg, & Krause, 2015). Working with creative people motivates Millennials. They are collaborative and achievement oriented while approaching work and life positively (Murphy, 2007). Physical labor is not necessarily tied to the description of Millennials,

who are seen as hard working and comfortable with new technology (Zabel, Biermier-Hanson, Baltes, Early & Shephard, 2016). Millennials like a participatory approach, but prefer a balance between life and work; they want flexible work schedules with more personal time; they are referred to as the ‘no-collar’ workforce.

By the year 2025, Millennials will comprise 75 percent of the workforce.

Millennials tend to be impatient due to their tech savvy, highly connected and entrepreneurial work styles. They like to collaborate on projects. Millennials like fast paced work, do not favor hierarchies and expect quick promotions. Because of their instant connections, they expect instant feedback, with some 75 percent wanting mentors. Because Millennials’ parents talked to them about everything, communication transparency is very important to them. They are unhappy unless they are in the decision-making loop.

Millennials view organizations as flat and are unimpressed by titles and positions in a traditional structure; after all, Millennials grew up receiving trophies whether they earned them or not (Schawbel, 2012). Millennials have also been described as “socially inept, optimistic, lacking sophistication, multi-tasking geniuses, ambitious and curious” (Danner, 2013). They believe any information is accessible with the touch of a button (Hershatter & Epstein, 2010). Millennials are the first generation that needs no permission or authority figure to collect information and use it in decision-making (Espinoza, Ukelja, & Rusch, 2010).

Murphy asserts that by 2014, only one-third of the US workforce will be 50 years and older. Millennials are the fastest growing segment of the labor market. If businesses pay attention to intergenerational issues, their organizational culture practices must

expand to meet the needs of all generations; employee recruitment will seek to round out the skill set needed in the organization, the company will utilize employee engagement methods, and improved retention and customer service will result (Murphy, 2007).

Millennials strive for more work balance and involvement in decision-making. They can ask challenging questions, need meaningful social interactions and have their own context for older terminology, potentially causing misunderstanding. Mentoring Millennials is more than merely someone showing them what to do and help them. The methodology with which Baby Boomers have on-boarded previous employees may not be effective with Millennials. Millennials see mentoring as a two-way connection and expect to participate in reverse mentoring. Millennials' career development is perceived differently than that for Baby Boomers in that Millennials typically pursue riskier career paths, participate more fully in lifelong learning, use E-learning and multimedia training. Millennials expect significant support from their organization in the area of professional development. Work environment is important to Millennials and they expect to be comfortable at work (after all, their parents kept them comfortable). Work is the preferred setting where Millennials collaborate, socialize and learn (Aruna, 2015).

A recent study conducted at the University of Southern California and the London Business School with a survey sample of 44,000 found that organizations and companies cannot simply fit the upcoming generation into yesterday's mold. Some of their findings regarding Millennials' preferences could illuminate how organizations can appeal to younger generations. They found that Millennials are willing to give up some pay and pace for promotion in exchange for working fewer hours, which does not necessarily mean a reduction of quality or production. They also found that Millennials prefer a more

informal dress code in the workplace. Because Millennials are adept at technology, companies should seek to fully leverage technology to increase efficiencies. In addition, Millennials:

- 1) Seek recognition that will benefit their careers;
- 2) Prefer face to face feedback on their efforts;
- 3) Want a sense of community, built around strong teamwork;
- 4) Like to work with employees whose values match their own;
- 5) Prefer more flexibility in their work schedules and career progression;
- 6) Are not likely to work in one place for a number of years;
- 7) Like to be asked for their input on issues and are quick to react negatively to organizational disconnects of words and actions;
- 8) Are not dependent on supervisors for information to do their work—they can find it on-line and get the job done;
- 9) Are moving away from hierarchical systems and desire a more collaborative and collective community of work, (PwC's Next Gen, 2013).

Baby Boomers

Baby Boomers, born into a time of economic growth, grew up in two-parent households, described as loyal and competitive putting in extra hours as sacrifice to their work. They are team oriented, want favorable relationships with their superiors, and believe that 'paying dues' helps achieve promotion within the organization. The values

Baby Boomers associate with work satisfaction are teamwork and personal gratification (Westerman & Yamamura, 2007).

Baby Boomers, so named because of the dramatic increases in the number of births after World War II, emerged with a strong belief in themselves, and their ability to set and achieve goals. They experienced increased educational opportunities and lived through a time of a growing economy (Hermanmiller.com, 2008). As the industrial workplace transitioned to a more office-based workplace, Baby Boomers saw dramatic changes in work styles. Baby boomers have had to adapt to new technologies and office behavior protocols (Hermanmiller.com, 2008).

Baby Boomers generally possess a good work ethic and prefer teamwork, a personal touch and involvement in decision-making. Baby Boomers believe their needs will always be met, and, as a member of the largest employee cohort, until very recently, their needs have been met in the marketplace (Haynes, 2011). Baby Boomers are likely to build social relationships and working relationships because of their preference for and enjoyment of social interaction (Westermann & Yamamaura, 2007). The office is a place to connect with people (Hermanmiller.com, 2008). If employees take another employee to lunch or coffee, they are most likely to be Baby Boomers. Baby Boomers are service oriented and want to know that their opinions are valued (Murphy, 2007).

Baby Boomer's expect work to be a fulfilling and part of a meaningful life. They believe working hard will create a better life (Zabel, Biermier-Hanson, Baltes, Early, & Shephard, 2016). Baby Boomers are accustomed to working long work hours if necessary to get the job done (Hermanmiller.com, 2008). A recent Gallup poll indicated that Baby Boomers have a live-to-work reputation (Gallup.com poll, 2014). Because Baby Boomers

are motivated by positions, perks, and prestige, they are work-centric and define themselves by their lifetime of accomplishments. Baby Boomers' strong work ethic and desire to work long hours to get the job done contributes to a pervasive feeling that younger generations lack commitment and have a poor work ethic. Independence, confidence and self-reliance define Baby Boomers. They are generally unafraid of confrontation and ready to change a poorly operating practice or policy without hesitation. They have established many of the authority systems in their places of work, and therefore have a strong belief in their hierarchical structure and rankism. The standard performance review is an example of how the systems they have created support the hierarchy and authority at their work. Baby Boomers are competitive and strive to win, but sometimes have difficulty adjusting to flexible work environments and fault working remotely (Kane, 2016). Boomers prefer a 'give me objectives and get out of the way' approach to work (Schawbel, 2012).

Workspace Realities

Millennials and Baby Boomers comprise the two largest segments of today's workforce, making intergenerational workforce a current and timely topic. Employees no longer come to perform the work of the organization, regardless of how they like to work; they expect a workplace to cater to their preferences. They expect the environment to support their work efforts. An organization's response to those expectations may determine employers' ability to be successful, to improve employee retention, and to meet the demands of their customers, hence preserving the bottom line for the organization.

Both employers and employees can profit from a discussion of the relationship between Millennials' and Baby Boomers' workplace characteristics. Studies have shown that people who work in environments that 'fit' (i.e., environments that respond to how employees work) are more likely to be productive and enjoy their work. If work preferences are ignored or marginalized in the workplace, increased employee turnover is likely to result (Westermann & Yamamurs, 2007). Organizations that pay attention to intergenerational issues will see an impact on their bottom line, employee engagement, recruitment, corporate culture and customer service (Murphy S., 2007). Organizations and employers can no longer expect to successfully mold incoming generations into the current work force and workplace settings. A recent, international study of over 44,000 respondents conducted by PricewaterhouseCoopers (PwC), the University of Southern California, and the London Business School, sought to determine the type of talent strategies needed to match new workforce realities. The study results argued that organizations must understand generational differences to promote retention and to have a more engaged workforce (PwC's Next Gen, 2013).

Baby Boomers are quite different from Millennials in that they live to work, not work to live (gallup.com poll, 2014). Baby Boomers like teamwork, but they like working in teams face to face. They feel they have a very strong work ethic and the personal touch is the hallmark of how Baby Boomers do business (Haynes, 2011).

The title, the benefit from work, the position and prestige are how Baby Boomers define their successful work careers. They work long hours and sacrifice time from family to insure they do a good job. Baby Boomers exhibit independence, confidence and self-reliance in the work place, making them unafraid to confront issues and problems or

change bureaucracy without hesitation. Baby Boomers developed performance systems to document the efforts of work. Competition is welcomed and winning is an important end-result for Baby Boomer hard work. Baby Boomers do not adjust well to flexible schedules and work environments and fault working remotely (Kane, 2016).

Many organizations try to integrate younger workers into the status quo to ensure organizational stability and success, which assumes an organization should remain unchanged. Baby Boomers developed and created many of the workspace and workplace practices currently in place.

Organizational Culture Relationship to Baby Boomers and Millennials

When developing an understanding of organizational culture for any age generation group, it is important that the organization find evidence of employee preferences in the workplace. Additionally, stakeholders' voices need to be heard and accommodated. While recognizing values is an important criterion, values can be infrequently reflected in work attitudes. Results of some studies suggest there are few differences in work values among Gen X, Millennials and Baby Boomers (Hansen, 2011).

Much of the research to date has failed to employ an empirical approach when drawing conclusions, frequently confounding age, career stage and generation differences in their work. Because of this, some managers may attempt various techniques to support younger workers. Use of the same methodologies to recruit, train and supervise younger workers may produce different outcomes than previously obtained. Leading companies now offer several amenities and new policies to attract younger workers. They focus on

life-balance, relaxation and leisure activities. Some have on-site gyms, laundry services and massage services. Twenge asserts that understanding the work values of young individuals helps organizations know how to structure jobs, develop compensation packages, create human resource policies, and improve working conditions (Twenge, et al. 2010).

Few studies empirically support generational differences in work values. Twenge conducted a longitudinal study that isolated age and generational differences. The study included Baby Boomers, Gen X and Gen Y (Millennial) groups with (n)=16,507. She found that leisure values increased steadily and work centrality declined. Status and money values were higher for Millennials than Baby Boomers. Millennials were not more altruistic and rated social values (making friends) and intrinsic values (having an interesting, results-oriented job) lower than Baby Boomers. Organization-provided leisure time is also a younger worker preference, though not necessarily by reducing work hours, but by the ability to reconfigure leisure time around work time. Compressed work weeks, or alternative work schedules can have a positive impact on an employee's satisfaction, organizational commitment, and motivation (Angle & Perry, 1983). Technology is integral to the Millennials and the line between work and life is blurry. Millennials do not need authority approvals to access information (Danner, 2013).

Twenge, et al. (2010) found that workers across all generations valued intrinsic rewards more than all other rewards, but companies should be careful not to assume this is all younger workers will need. Millennials place a lower importance on social rewards, suggesting that structuring work around teams to recruit and retain young workers may not pay off. Today's workers have 'boundary-less' careers, in that they can move

frequently from one organization to the next, and that long-term employment at any one organization is not the norm. Generational differences in work values can also affect the individual's perceived fit in the organization. Perceptions can be formed in the workplace from the personality of the worker, the communication level of coworkers and managers or the overall work environment. Employee perceptions can affect job satisfaction. Key areas where employee perceptions are important are job satisfaction, duties and expectations, communication, working relationships, and diversity (Anaejinou, 2017). If organizational values and employee values clash, then misfit will occur, which can lead to negative consequence for both the company and the individual. Future research would do well to examine Millennials, as most previous research focuses on Baby Boomers and Gen Xers. Although generation information is helpful, most results report averages and tie back to oversimplified generalizations.

Generational and Employee Retention Research

The popular press contains an array of articles that describe how generational differences in the workplace relate to employee recruitment, employee retention, communication, management strategies and employee engagement. A comprehensive review and analysis of age-generation difference research found a confusing disarray of evidence, generated in a variety of contexts with various methodologies and theoretical perspectives (Lyons & Kuron, 2014). These over-generalized findings have contributed to unsupported stereotypes rather than meaningful insights. In addition, age generation research in the workplace should move beyond simple demographic descriptors or characteristics to a delineation of the principles that underpin how age differences manifest as a potential social force in the workplace. It is recommended that organization

leaders take a more balanced and critical investigative approach and avoid using overly descriptive data regarding age generation difference theories (Lyons & Kuron, 2014).

Organization Systems Typology as a Research Tool

Employing organizational systems' theory as tool for organizational research has a well-established history. A systems analysis approach provides a closer examination of the systems' components and their interactions (Daft, 2001). The concepts and motives underlying behavior in open systems move beyond the individual to exploring individuals' interactions with the organization. Von Bertalanffy, the father of systems theory, wrote: "a system is a complex of interacting elements and that they are open to, and interact with their environments... can acquire qualitatively new properties through emergence, thus they are in continual evolution" (Von Bertalanffy, 1968).

A systems' theory approach investigating the complexity of an organizational structure is overdue. The work of Constantine, Kantor and Lehr, whose work utilized the family as a study for organizational analysis, offers a social psychological understanding of individual and family interactions (Constantine, 1992; Kantor, & Lehr, 1975). From organizational systems theories, family systems theories evolved focusing on the adaptability of family members in family systems. Family members can adapt as they respond to challenges and changes in the family structure (Cox & Paley, 2003). A more accurate understanding of the system could lead to outcomes that create greater adaptability of the population within that system.

A systematic approach allows for greater understanding, building on authentic similarities between generations, (i.e., Millennials and Baby Boomers) within the

organization, not just those differences and similarities touted by age generation research. Further, because of its systemic nature, it permits organization system type preference patterns to be uncovered and analyzed. Open-systems theory's social psychology constructs appear to continually evolve. The concepts and motives for behavior in open systems move beyond the individual and explore the individual's interactions with the organization. The psychologists Katz and Kahn (Katz & Kahn, 1978) were interested in organizations and the interaction of patterned behaviors and individual behaviors.

A robust tool and methodology was needed to identify and understand systems, family systems and organizational systems. The ORAS, Organizational Regime Assessment Scale was developed by Phillips, based on the earlier work of the Family Regime Assessment Scale (FRAS) (Imig & Phillips, 1992). The ORAS allows an organization to determine its preferred and actual world views (i.e., organization system types: *CLOSED*, *OPEN*, *RANDOM* and *SYNCHRONOUS*). It identifies how an organization's components interact in *actual* and *ideal* situations. This scale provides a systemic and quantifiable approach to understanding an organization and how it relates to its environment. In addition, the scale identifies dissonance between actual and ideal within the situation. The Organizational System Assessment Scale (OSAS), based on family systems theory, employs a systems approach. The OSAS permits individuals to identify their perceived world view pattern preferences examined in light of preferred space use characteristics (Imig & Phillips, 1992).

These tools, their constructs and how they are applied are outlined in Chapter Three of this dissertation.

Literature Review Summary

In summary, the literature reviewed provides a rich overview of the potential connections among environment and behavior, organizational culture, employee retention, generational differences and the application of an organization system typology tool. It indicates that organizations are seeking to improve employee retention and struggle to know and understand their employees' world views.

The systems approach methodology that follows in Chapter 3 promotes links and an improved understanding of employee perceptions of their ideal workspace, tested through organization system typologies based on information collected from employees about their *ideal* perceptions.

CHAPTER THREE

Methods

Baby Boomers and Millennials in the Workplace: A Systems Perspective

As organizations entered the 21st Century, the age generation of their employees began to change; Millennials graduated from high school, attended college and entered the workforce as Baby Boomers began to take retirement. A greater understanding of Millennials' and Baby Boomers' space use preferences can assist organizations to improve employees' workspaces, which may contribute to more suitable work routines and greater job satisfaction across generational cohorts

The system perspective research undertaken identifies Millennials' and Baby Boomers' organizational system type preferences and assesses the similarities and differences between them relative to space use preferences. The research question is: *What are the organizational system type preferences of Baby Boomers and Millennials, and what is the relationship between those preferences and their ideal space use preferences?*

The Rationale for a Systems Theory Approach

To achieve a holistic understanding of Millennial and Baby Boomer preferences, a systemic approach was used to investigate interactions within their workspace environments. While early social psychological studies were exclusively limited to the individual and excluded open organizational inquiry, psychologists Katz and Kahn (1978) examined both patterned and individual behaviors within organizations. It is

argued that employing a more holistic research paradigm, (i.e., a systems approach) to explore age generation workforce similarities and differences will contribute to a heretofore-unachievable information baseline.

The Evolution of a Systemic Measurement Instrument

A systems' theory approach in organizational investigations was pioneered by Constantine, Kantor and Lehr, who utilized the family as the organizational unit of analysis (Constantine, 1992; Kantor & Lehr, 1975). Much of their early family theory development work, almost exclusively conducted in the clinic, focused on pathological, disturbed individuals or isolated family processes. Kantor and Lehr's work was groundbreaking because it obtained information from trained observers who actually lived with the subject families, recording and interviewing them in their own houses. Constantine "built a framework that systematically linked disparate theories into a unified model, accounting for the full organizational spectrum and varied coping styles of real families. Out of this diversity, Constantine identifies a set of fundamentally distinct themes on which the infinite variations of actual family styles are built" (Constantine, 1986).

The Family Regime Assessment Scale (FRAS) was the first attempt at developing a reliable family type measurement tool (Imig & Phillips, 1992). The Organizational Regime Assessment Scale (ORAS), a direct outgrowth of the FRAS, expanded the unit of analysis beyond the family to organizations of any size. The survey items contained in both the FRAS and the ORAS were identical in foundation, differing only in wording that accommodated an organizational context rather than a family context.

The OSAS (Organization System Assessment Scale) is the most recent iteration of the original FRAS and ORAS indices; this scale measures the *ideal* and *actual* world view perceptions of individuals based on the four system types: *CLOSED*, *OPEN*, *RANDOM*, and *SYNCHRONOUS*. Because the degree of importance is not always equal, this scale adds a respondent-weighted component to the computation to acknowledge this inequity. The OSAS provides a systematic and quantifiable approach to understanding an organization and how its members relate to their environment. Further, the scale permits dissonance quantification between *actual* and *ideal* situations based on members' world view perceptions.

Research Design

The research for this dissertation uses data from a 2013-14 University of Missouri Extension organizational study conducted by Phillips (2015). The data focuses on the following workplace issues: organizational world view, space use characteristics' preferences, great place to work measures, and environmental preferences. Selected demographic data are also collected. The dissertation uses quantitative methods (i.e., descriptive and multivariate analyses).

A Systems Perspective to Ground the Study

In the University of Missouri Extension survey, respondents rated the importance of each dimension as they perceived it to be *actually* occurring in the organization, and how they would like the dimension to occur under *ideal* circumstances.

The research design based on the OSAS Index, compares the differences and similarities between Baby Boomers and Millennials. A literature review of the theoretical

work of Kantor & Lehr (1975), and Imig & Phillips (1992), suggest that the OSAS survey is suitable for this study.

The OSAS is a written assessment tool that identifies the proportionate preference for each of four organizational system types, identifying the world views of individuals and an organization's collective world view. Rarely does an individual exhibit the stereotypical characteristics of any one descriptor; respondents typically report some combination of preferences among the four organizational types with one or two dominant or subordinate types. A Blended Type is an organization system type pattern with more than one dominant type preference. A functioning organizational system will lean toward structures and patterns of behavior that take less energy to sustain than an organization that is misaligned. A misaligned organization is an organization where dissonance between the *ideal* and *actual* perceptions is great.

The four organizational system types' conceptual orientation is illustrated in Figure 1 below:

Figure 1: Organization System Type Conceptual Orientation

A conceptual definition for each organization system type is as follows:

- The **CLOSED** System type (the Thesis) is an organizational type based on tradition with priority given to continuity and stability. People who identify with CLOSED system preferences have a low tolerance for ambiguity—a distinct preference for the ‘one right way’. Boundaries (e.g., job titles and responsibilities) are clearly defined with little or no responsibility overlap. People who prefer the

CLOSED System type believe that the organization should take priority over the needs and interests of individuals; organizational conformity among employees is paramount. A hierarchical structure dominates within the organization. Internal data is valued more than external data. Communication systems within the organization are highly regulated; decisions within the organization are made exclusively from the top of the hierarchy.

- The **RANDOM** System Type (the Antithesis of the CLOSED System Type) allows a focus on change and discontinuity. People that identify as RANDOM prefer to operate through processes that promote change by deviating from existing patterns. This RANDOM System typology promotes individuality and creativity, bolstering innovation and spontaneity. Boundaries are more open in this system type. Consensus in decision-making is not required to move forward.
- The **OPEN** System Type (a Synthesis of the **CLOSED** and **RANDOM** Types) operates by being individually and organizationally adaptable. The goal is efficacy, effectiveness and being purpose driven. Communication within the organization is top-down and bottom-up; organizational boundaries are clear, yet are flexible and sometimes fluid.
- The **SYNCHRONOUS** System type (the Anti-synthesis of the **OPEN** System type) values peace, harmony and tranquility above all else. This system is characterized by conflict-free cooperation and harmony through unspoken agreements—the hallmark characteristic of the **SYNCHRONOUS** System types is its focus on nonverbal communication. The **SYNCHRONOUS** System type is managed mostly by existing agreements among the organization's members. The

goals are cooperation without conflict and continuity without process. When everyone is of one mind, there are no conflicts between the individual and the organization.

- A fifth organizational system type occurs when more than one organizational type is preferred. **BLENDED** System types most frequently combine preference system type configurations that lie adjacent to one another as illustrated in Figure 1 above.

○ CLOSED-OPEN	Rules are important, but there are exceptions
○ OPEN-RANDOM	Consensus is important, but not at the loss of individuality
○ RANDOM-SYNCHRONOUS	Individuality is important, but not at the cost of harmony
○ CLOSED-SYNCHRONOUS	Rules are important, but they are nonverbally acknowledged and unquestioned (Phillips, 2015).

General Research Design and Procedures

The intent of the dissertation research is to produce replicable analyses procedures that improve the current understanding of Millennials' and Baby Boomers' world views, (i.e., their perception similarities and differences as they pertain to space use and organizational planning, resulting in improved employee practices and policies).

The Phillips survey was conducted electronically and distributed via E-mail to 1,068 University of Missouri Extension employees of various job titles, in several

geographic locations and among several different educational levels. The survey obtained responses from 411 respondents (38.5% response rate). Respondents were asked to consider items that indicated their ideal preferences among the variables considered (complete survey appears in Appendix E). Responses are indexed for assignment of values in the OSAS. Indexed responses are placed in algorithms relative to their index values: closed, open, random, synchronous or blended.

The Multivariate Attribute Utility Technology (MAUT) is used as a method to examine variables as attribute sets—an essential methodological characteristic required in OSAS pattern development. The MAUT assumes the participant is rational, and can read and respond to reasonable questions, as well as has sufficient knowledge to judge their experience and can consistently rank orders of preference or perceptions. The goal is to provide easy to understand expressions of complex sets of attributes (Edwards & Newman, 1982).

Analysis and Procedures

1. Code and Index Survey Responses for Systems Analysis
2. Identify Patterns in the Systems Data and Pattern Comparisons:
  - a. The Entire Sample
  - b. Baby Boomers
  - c. Millennials
3. Demographics—Descriptive Analyses
  - a. The Entire Sample
  - b. Baby Boomers
  - c. Millennials

4. Space Use Characteristics—Descriptive Analyses
  - a. The Entire Sample
  - b. Baby Boomers
  - c. Millennials
  - d. Compare Baby Boomers' and Millennials' top Ideal OSAS Index Values
5. Data Analysis
  - a. Multivariate Attribute Unit Technology
  - b. T-test for Significance of Mean Differences

Variable Transformations

Data pertaining to the OSAS are transformed into a weighted-index. Index scores are computed, from which a 25-percentile ranking is determined. The OSAS employs a scoring system ranging from 0.0 to 1.0: if a respondent's score falls between 0 and .24, it will be coded as a '1'; if a score falls between .25 and .49, it will be coded '2'; if a score falls between .50 and .74, it will be coded as a '3'; and, if a score falls between .75 and 1.00, it will be coded as a '4'. Based on these transformations, a four-digit 'pattern' is computed that represents an individual's index score for each of the four OSAS constructs. The four-digit pattern presents the percentile ranking for each of the constructs always appearing in the following order CLOSED-OPEN-RANDOM-SYNCHRONOUS (CORS). Pattern frequencies are identified for the Sample, Millennials and Baby Boomers, wherein comparisons are made. Table 2 presents an illustration of this patterning procedure:

Table 2: OSAS Index Pattern Example

CLOSED	OPEN	RANDOM	SYNCHRONOUS
(C)	(O)	(R)	(S)
3	4	4	2
(.50-.74)	(.75+)	(.75+)	(.25-.49)

Once the OSAS Index Pattern calculation is established, the values provided are computed for response to each survey item related to space use preferences. The OSAS Index computation corresponding to the component survey items is illustrated in Table 3 below:

Table 3: OSAS Index Computation and Corresponding Survey Items

CLOSED	OPEN	RANDOM	SYNCHRONOUS
(n=125)	(n=25)	(n=5)	(n=1)
1b	1d	1c	1a
2b	2a	2c	2d
3b	3d	3a	3c
4c	4a	4b	4d
5c	5a	5d	5b

The algorithm used for the index computation is expressed in the following calculations:

$$\text{Closed Index} = \frac{(((1b)+(2b)+(3b)+(4c)) \times (5c)))}{400}$$

$$\text{Open Index} = \frac{(((1d)+(2a)+(3d)+(4a)) \times (5a)))}{400}$$

$$\text{Random Index} = \frac{(((1c)+(2c)+(3a)+(4b)) \times (5d)))}{400}$$

$$\text{Synchronous Index} = \frac{(((1a)+(2d)+(3c)+(4d)) \times (5b)))}{400}$$

The results of the Organization System Assessment Scale employs an analysis that codes and weights the participant survey input, creates OSAS patterns for the Sample and employs the algorithm construction outlined here for each of the organization system types. The system types coded for the *actual* and *ideal* values are considered important above the 75th percentile level. The index value is based on a specific index value added to each of the dimensions. This computation is depicted in the following values.

The CLOSED Index Value =

((CLOSED response for the AFFECT dimension) added to
 (CLOSED response for the CONTROL dimension) added to
 (CLOSED response for the MEANING dimension) added to
 (CLOSED response for the CONTENT dimension)) multiplied by
 (response for the AFFECT dimension)

The OPEN Index Value =

((OPEN response for the AFFECT dimension) added to
(OPEN response for the CONTROL dimension) added to
(OPEN response for the MEANING dimension) added to
(OPEN response for the CONTENT dimension)) multiplied by
(response for the CONTROL dimension)

The RANDOM Index Value =

((RANDOM response for the AFFECT dimension) added to
(RANDOM response for the CONTROL dimension) added to
(RANDOM response for the MEANING dimension) added to
(RANDOM response for the CONTENT dimension)) multiplied by
(response for the MEANING dimension)

The SYNCHRONOUS Index Value =

((SYNCHRONOUS response for the AFFECT dimension) added to
(SYNCHRONOUS response for the CONTROL dimension) added to
(SYNCHRONOUS response for the MEANING dimension) added to
(SYNCHRONOUS response for the CONTENT dimension)) multiplied by
(response for the CONTENT dimension)

Individual responses in the survey could range from 0 to 10 with a maximum weighted Index Value of 400. The Index Values are reported as their arithmetic total and as a percent of 400 (the highest Index Value possible). The Index, therefore, yields a weighted Index Value across the four organization system dimensions. This procedure is conducted for the *ideal* and *actual* respondent organization perceptions. In addition, the difference between *ideal* and *actual* Index Values are computed and presented. In an attempt to further simplify the interpretation of Index Value scores, the percent Index Value scores are partitioned into one of four categories (quartiles). The OSAS Index values from the variable transformations are used in analyses with demographics and space use characteristics.

The mean OSAS Index value differences between Millennials and Baby Boomers are calculated by subtracting the *actual* mean from the *ideal* mean as illustrated in Table 4 below:

Table 4: OSAS Index Percentile Score Pattern Example

Ideal Means CORS Index	Minus	Actual Means CORS Index	Difference of the CORS
2, 5, 10, 3	-	10, 7, 3, 2	-8, 7, 3, 2
3, 6, 8, 4	-	2, 2, 10, 1	1, 2, -2, 3
2.5, 5.5, 9, 3.5	-	1, 4, 2, 3	1.5, 1.5, 7, .5

OSAS Index patterns and pattern differences for Millennials and Baby Boomers are analyzed. Information is categorized by the OSAS Index patterns.

Demographic Analysis

The following demographic variables are included in analyses for the Sample, Baby Boomers and Millennials:

- Job Title
- Length of University of Missouri Extension Employment
- Region or Campus Location
- University of Missouri Extension Discipline Category
- Gender
- Current Office Location Duration
- Number of Times Office Relocations
- Directors
- Specialists

- Associates
- Support Staff

Space Use Characteristics Analysis

The space use characteristics' preference scores are tabulated across 10 space use characteristic constructs as follows:

Accessible Spaces—*the absence of physical barriers such as stairs, and the presence of accessibility aids such as ramps, handrails, door widths, corridors, and elevators that allow easy movement;*

Safe and Secure Space—*spaces that are safe from fire and environmental hazards and are modified for accident prevention;*

Socializing and Collaborating Spaces—*spaces that permit furniture arrangements that encourage socialization and collaboration;*

Adaptable and Flexible Spaces—*multiple purpose spaces that can accommodate different types of activities;*

Private Spaces—*spaces that accommodate varying degrees of privacy, secure doors and windows, secure from unwanted visual and acoustical violation;*

Controllable Spaces—*manageable spaces that can be personalized and individualized, spaces where personal territorial claims are permitted and are recognized;*

Quality Spaces—*physical setting being well maintained; building systems function well; facility is well constructed and has quality equipment and*

furnishings; building and equipment are updated, appropriate, and function well;

Comfortable Spaces: *access to natural light and appropriate task lighting; access to fresh air and daylight; acceptable temperature, lighting, and amount of space; appropriate control of unwanted noise; spaces that relieve exposure to unwanted stimulation;*

Aesthetic Spaces: *the visual character of the facility interior and exterior portraying the desired organization image and/or brand; facility appears clean; a beautiful place to work—aesthetically pleasing;*

Efficient Spaces: *adequate amounts of space for all occupants; rooms and spaces efficiently located for working with others; facility operates efficiently—spaces organized to maximize collaborative work if appropriate.*

The two highest frequency scores for each space use characteristic construct are identified for Millennials and Baby Boomers. Further, OSAS Index patterns are compared with space use frequencies as an additional comparative analysis between Baby Boomers and Millennials. This analysis will identify differences in the space needs of Baby Boomers and Millennials based on OSAS Index preferences.

Statistical Analysis

A t-test is performed between the mean scores of Millennials' and Baby Boomers' space use characteristics' preferences to determine if statistical differences exist.

Summary

Using a systems approach to study age generation differences provides a unique opportunity to research space use characteristics within the workspace as described by Millennials and Baby Boomers. Knowledge gained from this research creates an information baseline from which further investigations can emanate. In addition, the results arm organizations with more complete knowledge regarding their employees' perceptions, contributing to informed decision-making and improvement in employee retention, policies, recruiting and onboarding strategies.

CHAPTER FOUR

Results

This chapter presents findings related to demographic characteristics, OSAS Index analyses, Space Use Characteristics analyses, and concludes with an analysis of the relationship between the OSAS Index and Space Use Characteristics. Further, analyses are presented comparing the Sample, Millennial, and Baby Boomer results.

Demographic Characteristics: Sample, Millennials and Baby Boomer

Data collected through an electronic survey among the 1,068 University of Missouri Extension employees yielded a self-selected Sample (n=411) with a 38.5 percent response rate.

The typical Sample respondent is a 50-year-old female (53%) who has worked for University of Missouri Extension for 13-1/2 years, has occupied an office for an average of 8.4 years and has relocated her office slightly fewer than 1-1/2 times. She is located on the Columbia campus (39.8%) within the Human Environmental Sciences category (27.9%). The most frequently reported job title is Regional Specialist (22.4%).

The profile of the typical Millennial respondent is a 22-year-old female (77.8%) who has worked for University of Missouri Extension for 2-3/4 years, has occupied an office for an average of 1.8 years and has relocated her office slightly more than one-third times. She is located on the Columbia campus (44.4%) within the Human Environmental Sciences category (34.6%). The most frequently reported job title is Regional Specialist (23.1%).

The typical Baby Boomer respondent is 57.3-year-old female (64.0%) who has worked for University of Missouri Extension for 17.3 years, has occupied an office for an average of 10.8 years and has relocated her office slightly more than two times. She is located on the Columbia campus (41.9%) within the Human Environmental Sciences category (28.7%). The most frequently reported job title is Regional Specialist (20.1%).

Table 5 below illustrates Sample, Millennial, and Baby Boomer Selected Demographic Descriptive Statistics.

TABLE 5: DEMOGRAPHIC CHARACTERISTICS

	(n)	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION
LENGTH OF UNIVERSITY OF MISSOURI EXTENSION EMPLOYMENT (Years)					
Sample	286	0	49	13.53	10.958
Millennials	23	1	7	2.76	1.781
Baby Boomers	143	0	39	17.29	10.562
AGE (Years)					
Sample	283	19	79	49.76	12.06
Millennials	27	19	30	27.22	2.991
Baby Boomers	161	49	67	57.27	4.341
CURRENT OFFICE LOCATION DURATION (Years)					
Sample	266	0	45	8.46	7.939
Millennials	21	0	5	1.83	1.173
Baby Boomers	140	0	39	10.79	8.11
NUMBER OF TIMES OFFICE RELOCATION (Years)					
Sample	297	0	8	1.48	1.823
Millennials	25	0	2	0.36	0.638
Baby Boomers	142	0	8	2.07	2.009

While the absolute number of Millennials in the Sample is low, the mean and standard deviation differences among the three groups (i.e., Sample, Millennials, Baby Boomers) are marginal.

Table 6 presents where the respondents are housed in the University of Missouri Extension system in Missouri delineated by the regions and campus configuration in 2014. Information about the sample as to the actual number of employees at each location was unavailable, therefore the valid percent reflects the number of survey respondents within the sample. The 39.8 percent response rate from the Columbia campus, as well as the percent of Millennials and Baby Boomers located on the Columbia Campus, is likely due to the high proportionate number of campus based employees for University of Missouri Extension. The data indicate a higher percentage of Millennials in the Urban and Southwest Regions, followed by the Columbia Campus. Baby Boomers report higher percentages in the Urban Region, the Southwest Region, and the East Central Region followed by the Columbia Campus.

Of the 11 Region or Campus Locations, Kansas City, Rolla, and Saint Louis campuses are underrepresented in the Sample. Within the remaining Region or Campus Locations, a relatively even distribution is reported, with the exception of the Columbia Campus accounting for 47 percent of the Sample.

TABLE 6: REGION OR CAMPUS LOCATION

SAMPLE	(n)	PERCENT
Urban Region	36	11.1
Northeast Region	27	8.3
Northwest Region	20	6.2
Southeast Region	21	6.5
Southwest Region	32	9.9
Columbia Campus	129	39.8
Kansas City Campus	1	0.3
Rolla Campus	1	0.3
Saint Louis Campus	2	0.6
East Central Region	25	7.7
West Central Region	19	5.9
Not Assigned to Region or Campus	11	3.4
MILLENNIALS		
Urban Region	4	14.8
Northeast Region	2	7.4
Northwest Region	1	3.7
Southeast Region	0	0
Southwest Region	4	14.8
Columbia Campus	12	44.4
Kansas City Campus	0	0
Rolla Campus	0	0
Saint Louis Campus	0	0
East Central Region	1	3.7
West Central Region	1	3.7
Not Assigned to Region or Campus	2	7.4
BABY BOOMERS		
Urban Region	16	10
Northeast Region	12	7.5
Northwest Region	8	5
Southeast Region	11	6.9
Southwest Region	16	10
Columbia Campus	67	41.9
Kansas City Campus	0	0
Rolla Campus	0	0
Saint Louis Campus	1	0.6
East Central Region	13	8.1
West Central Region	11	6.9
Not Assigned to Region or Campus	5	3.1

Table 7 indicates a higher percentage of females in the Sample, Millennials and Baby Boomers with a slightly less than two-to-one ratio of females to males in the

Sample, a slightly less than four-to-one ratio of females to males among Millennials, and a slightly less than two-to-one ratio of females to males among Baby Boomers.

TABLE 7: GENDER

SAMPLE	(n)	PERCENT
Male	110	33.5
Female	218	53
MILLENNIALS		
MALE	6	22.2
Female	21	77.8
BABY BOOMERS		
Male	58	36
Female	103	64

Table 8 presents the University of Missouri Extension Discipline Categories for the Sample, Millennials, and Baby Boomers. The University of Missouri Extension discipline category refers to the subject matter or business unit to which employees are assigned. The most frequently reported University of Missouri Extension Discipline Category in all three groups (i.e., Sample, Millennials, Baby Boomers) is the Human Environmental Sciences category. In general, the Human Environmental Sciences discipline employs more women than men, hence the sample results reflect this condition. A relatively even distribution is also reported among University of Missouri Extension Categories with the Clerical/Support Staff category being slightly underrepresented and the Human Environmental Sciences category being slightly overrepresented.

**TABLE 8: UNIVERSITY OF MISSOURI EXTENSION DISCIPLINE
CATEGORY**

SAMPLE	(n)	PERCENT
Administration/Management	39	12.2
Agriculture & Natural Resources	53	16.6
Business Development	26	8.2
Clerical/Support Staff	18	5.6
Community Development	27	8.5
Continuing Education	21	6.6
Human Environmental Sciences	89	27.9
4-H/Youth	46	14.4
MILLENNIALS		
Administration/Management	2	7.7
Agriculture & Natural Resources	3	11.5
Business Development	2	7.7
Clerical/Support Staff	3	11.5
Community Development	2	7.7
Continuing Education	1	3.8
Human Environmental Sciences	9	34.6
4-H/Youth	4	15.4
BABY BOOMERS		
Administration/Management	24	15
Agriculture & Natural Resources	22	13.8
Business Development	11	6.9
Clerical/Support Staff	6	3.8
Community Development	15	9.4
Continuing Education	12	7.5
Human Environmental Sciences	46	28.7
4-H/Youth	24	15

Table 9 identifies the Job Titles within the Sample, Millennials and Baby Boomers. The list of job titles sampled illustrates the Job Title range within the Sample. Respondents report holding 57 of the 94 possible Job Titles within University of Missouri Extension. The distribution among Job Title categories indicates a comprehensive cross-section of workforce perspectives.

**TABLE 9: JOB TITLE FREQUENCY DISTRIBUTION FOR SAMPLE,
MILLENNIALS AND BABY BOOMERS**

SAMPLE	N	PERCENT
Adjunct Professor	1	0.3
Administrative Assistant	10	3.1
Administrative Associate	5	1.5
Assistant Director	1	0.3
Assistant Professor - Teaching	3	0.9
Associate Professor - Teaching	2	0.6
Associate State Specialist	3	0.9
Associate Vice Provost for Programs	1	0.3
Business Development	4	1.2
Business Manager	3	0.9
Business Specialist	8	2.5
Clinical Instructor	1	0.3
Conference Coordinator	2	0.6
Conference Office Director	1	0.3
Continuing Education Director	5	1.5
Coordinator Program/Project Support	3	0.9
Data Base Programmer/Analyst	1	0.3
Director of Development	1	0.3
Editor	4	1.2
Engineer	1	0.3
Executive Staff Assistant	1	0.3
University of Missouri Extension Associate	22	6.7
University of Missouri Extension Professional	24	7.4
Fire Rescue Specialist	1	0.3
Graduate Assistant	3	0.9
Information Specialist	5	1.5
Instructor	2	0.6
Lecturer	1	0.3
Office Support Staff	4	1.2
Professor	3	0.9
Program Assistant	13	4.3
Program Associate	32	9.8
Program Director	4	1.2
Program Specialist	8	2.5
Programmer/Analyst	3	0.9
Project Coordination/Director	10	3.1
Project Manager	1	0.3
Regional Director	5	1.5
Regional Educator	2	0.6
Regional Specialist	72	22.4
Research Assistant	2	0.6
Research Associate	5	1.5
Research Specialist	2	0.6
State Coordinator	3	0.9
State Specialist	18	5.5
Statewide Administration Support	3	0.9
Student Assistant	1	0.3
Support Staff	4	1.2
System Administration	1	0.3
System Support Analyst-Specialist	1	0.3
Temporary Clerical	2	0.6
Trainer	1	0.3
Training Associate	1	0.3
Training/Development Coordinator	1	0.3
Vice Provost/Director	1	0.3
Volunteer	2	0.6

TABLE 9: JOB TITLE (...continued)

	N	PERCENT
MILLENNIALS		
Adjunct Professor	0	0
Administrative Assistant	1	3.8
Administrative Associate	0	0
Assistant Director	0	0
Assistant Professor - Teaching	0	0
Associate Professor - Teaching	0	0
Associate State Specialist	0	0
Associate Vice Provost for Programs	0	0
Business Development	0	0
Business Manager	0	0
Business Specialist	1	3.7
Clinical Instructor	0	0
Conference Coordinator	0	0
Conference Office Director	0	0
Continuing Education Director	0	0
Coordinator Program/Project Support	2	7.7
Data Base Programmer/Analyst	0	0
Director of Development	1	3.8
Editor	2	7.7
Engineer	0	0
Executive Staff Assistant	0	0
University of Missouri Extension Associate	3	11.5
University of Missouri Extension Professional	0	0
Fire Rescue Specialist	0	0
Graduate Assistant	2	7.7
Information Specialist	0	0
Instructor	0	0
Lecturer	0	0
Office Support Staff	0	0
Professor	0	0
Program Assistant	2	7.7
Program Associate	1	3.8
Program Director	0	0
Program Specialist	0	0
Programmer/Analyst	1	3.8
Project Coordination/Director	1	3.8
Project Manager	0	0
Regional Director	0	0
Regional Educator	0	0
Regional Specialist	6	23.1
Research Assistant	2	7.7
Research Associate	0	0
Research Specialist	0	0
State Coordinator	0	0
State Specialist	0	0
Statewide Administration Support	0	0
Student Assistant	1	3.8
Support Staff	0	0
System Administration	0	0
System Support Analyst-Specialist	0	0
Temporary Clerical	0	0
Trainer	0	0
Training Associate	0	0
Training/Development Coordinator	0	0
Vice Provost/Director	0	0
Volunteer	0	

TABLE 9: JOB TITLE (...continued)

	N	PERCENT
BABY BOOMERS		
Adjunct Professor	0	0
Administrative Assistant	4	2.6
Administrative Associate	3	1.9
Assistant Director	1	0.6
Assistant Professor - Teaching	3	1.9
Associate Professor - Teaching	1	0.6
Associate State Specialist	2	1.3
Associate Vice Provost for Programs	1	0.6
Business Development	0	0
Business Manager	1	0.6
Business Specialist	3	1.9
Clinical Instructor	1	0.6
Conference Coordinator	0	0
Conference Office Director	0	0
Continuing Education Director	3	1.9
Coordinator Program/Project Support	1	0.6
Data Base Programmer/Analyst	0	0
Director of Development	0	0
Editor	1	0.6
Engineer	0	0
Executive Staff Assistant	1	0.6
University of Missouri Extension Associate	10	6.5
University of Missouri Extension Professional	12	7.8
Fire Rescue Specialist	1	0.6
Graduate Assistant	0	0
Information Specialist	2	1.3
Instructor	2	1.3
Lecturer	0	0
Office Support Staff	3	1.9
Professor	2	1.3
Program Assistant	7	4.5
Program Associate	16	10.4
Program Director	2	1.3
Program Specialist	5	3.2
Programmer/Analyst	0	0
Project Coordination/Director	2	1.3
Project Manager	0	0
Regional Director	4	2.6
Regional Educator	0	0
Regional Specialist	31	20.1
Research Assistant	0	0
Research Associate	3	1.9
Research Specialist	2	1.3
State Coordinator	0	0
State Specialist	0	0
Statewide Administration Support	2	1.3
Student Assistant	0	0
Support Staff	2	1.3
System Administration	0	0
System Support Analyst-Specialist	1	0.6
Temporary Clerical	0	0
Trainer	1	0.6
Training Associate	1	0.6
Training/Development Coordinator	1	0.6
Vice Provost/Director	1	0.6
Volunteer	2	1.3

The 57 Job Titles were recoded and transformed into one of five categories: Administration, Directors, Specialists, Associates, and Support Staff. The results of this transformation appear in Table 10 below.

TABLE 10: JOB TITLE CATEGORY FREQUENCY DISTRIBUTION: SAMPLE, MILLENNIALS AND BABY BOOMERS

SAMPLE	(n)	PERCENT
Administration	12	2.9
Director	31	7.5
Specialist	145	35.3
Associate	110	26.8
Support Staff	28	6.8
MILLENNIALS		
Administration	1	3.7
Director	3	11.1
Specialist	10	37
Associate	11	40.7
Support Staff	1	3.7
BABY BOOMERS		
Administration	7	4.3
Director	12	7.5
Specialist	66	41
Associate	53	32.9
Support Staff	16	9.9

Organization System Assessment Survey (OSAS): Sample, Millennials and Baby Boomers

Table 11 depicts the OSAS Index mean scores and CORS (*CLOSED/OPEN/RANDOM/SYNCHRONOUS*) Patterns for the Sample, Millennials and Baby Boomers. The Table identifies the preferred *ideal* OSAS Index Scores of Millennials and Baby Boomers. The preferred organization system type for the Sample, Millennials and Baby Boomers is *OPEN*, as reflected by the four in the CORS Pattern scores. The primary difference between Millennials and Baby Boomer OSAS Index mean scores is that Millennials report higher mean score preferences for *CLOSED* and *SYNCHRONOUS* organization system types than do Baby Boomers.

TABLE 11: OSAS INDEX MEAN SCORES AND CORS PATTERNS FOR SAMPLE, MILLENNIALS, AND BABY BOOMERS

	(n)	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION	CORS PATTERN
SAMPLE						2432
Closed	310	0	0.93	0.4561	0.199931	
Open	318	0	1	0.8052	0.17756	
Random	318	0	1	0.5084	0.23699	
Synchronous	311	0	0.88	0.4345	0.19781	
MILLENNIALS						3433
Closed	24	0.21	0.83	0.5653	0.17963	
Open	24	0.47	1	0.8173	0.12334	
Random	24	0.16	0.95	0.5483	0.22763	
Synchronous	24	0.14	0.88	0.533	0.19928	
BABY BOOMERS						2432
Closed	133	0	0.93	0.4313	0.19463	
Open	137	0.08	1	0.8046	0.18705	
Random	138	0	1	0.5187	0.24075	
Synchronous	131	0	0.86	0.4114	0.19526	

Interpreting the results presented in Table 12 involves examining the CORS Pattern sequence. The first digit in the CORS Pattern, beginning with the left side of the pattern number, is the percentile ranking of the mean OSAS Index score for the *CLOSED* organization system type. The digit second from the left is the percentile ranking of the mean OSAS Index score for the *OPEN* organization system type. The third digit is the *RANDOM* organization system type and the digit to the far right is the *SYNCHRONOUS* organization system type percentile ranking. This four-digit pattern (CORS) represents the best systemic indicator of the combination of organization system preferences. The frequency counts for the ranked CORS Patterns gives a snapshot of the organization preferences by organization system type.

For the Sample, Millennials and Baby Boomers, the *OPEN* component of the CORS Pattern is consistently reported above the 75th percentile. The only other system type component that scores above the 75th percentile is the *RANDOM* system type in combination with the *OPEN* type in the Sample (3443), yielding a preference for a blended CORS Pattern of *OPEN-RANDOM*. For all three respondent groups, the *OPEN* system type is the dominant (most preferred) organizational system type.

Variation between Millennials' and Baby Boomers' OSAS Index CORS Patterns can be observed where Millennials report a greater preference for the *CLOSED* system type albeit within the same dominant *OPEN* system type CORS Pattern configuration. The (3432) and (3433) CORS Patterns occur for both respondent groups as either the highest or second highest CORS Pattern preferences.

TABLE 12: OSAS INDEX CORS PATTERN FREQUENCY, PERCENT, AND RANK ORDER FOR SAMPLE, MILLENNIALS, AND BABY BOOMERS

SAMPLE (n=301)			
CORS PATTERN	(n)	PERCENT	RANK
2432	27	9	1
3433	19	6.3	2
2422	18	6	3
3432	13	4.3	4
3443	9	3	5
2332	8	2.7	6 tie
2433	8	2.7	6 tie
3423	8	2.7	6 tie
MILLENNIALS (n=24)			
CORS PATTERN	N	PERCENT	RANK
3432	2	8.3	1 tie
3433	2	8.3	1 tie
BABY BOOMERS (n=128)			
CORS PATTERN	N	PERCENT	RANK
2432	10	7.8	1 tie
3433	10	7.8	1 tie
2422	8	6.3	2 tie
3432	8	6.3	2 tie

An examination of those respondents who report the highest OSAS Index mean scores (i.e., scores falling into the 75th percentile category), indicates that 37.5 percent of Millennials, while 51.5 percent of Baby Boomers preferred the *OPEN* organization system type. Of note, is the total of 31.9 percent of Millennials who prefer blended organization system types. Baby Boomers report a total of 33.4 percent who also prefer blended organization types, with the highest percentages of 8.3 for both *OPEN-RANDOM-SYNCHRONOUS* and *CLOSED-OPEN* system types.

**TABLE 13: HIGHEST PREFERENCE (>75TH PERCENTILE) OSAS INDEX
CORS PATTERN FREQUENCY AND PERCENT FOR MILLENNIALS AND
BABY BOOMERS**

CORS PATTERN	MILLENNIALS		BABY BOOMERS	
	(n)	PERCENT	(n)	PERCENT
Closed	1	4.2		
Open	9	37.5	66	51.2
Random	1	4.2	1	4.2
Synchronous	1	4.2		
Open-Random	9	7	2	8.3
Open-Synchronous	2		1	4.2
Open-Random-Synchronous	2	8.3	1	4.2
Closed-Open			2	8.3
Closed-Open-Random			1	4.2
Closed-Open-Random- Synchronous	4	16.6		
Closed-Open-Synchronous			1	4.2

Space Use Characteristics: Sample, Millennials and Baby Boomers

The Space Use Characteristic Typology results are examined using the *ideal* mean degree of importance among the space use characteristics constructs. Only the *ideal* space use characteristics appear in the survey. The research attempts to identify the space use characteristic constructs of greatest and least importance under *ideal* conditions. Table 14 presents the construct preference mean values for the Sample across the *ideal* condition and the corresponding percent distribution.

Of the 10 space use characteristics constructs, the Sample reports four above the 75th percentile: *Quality Spaces*, *Comfortable Spaces*, *Efficient Spaces* and *Safe and Secure Spaces*. The remaining six constructs preferences fall within the 50th to 74th percentile category with *Socializing and Collaborating Spaces* and *Accessible Spaces* identified as the least important *ideal* space use characteristic constructs as identified in Table 14 below.

Table 14 shows the results of OSAS Index and space use characteristics mean values. The Sample results are discussed, followed by Millennials and Baby Boomers data discussions. The discussion below refers to those space use characteristics that are at the 75th percentile and above.

The Sample respondents who prefer the *CLOSED* organization system type report the highest space use characteristic mean value for *Quality Spaces*, followed by (in descending order) *Efficient Spaces*, *Safe and Secure Spaces*, *Comfortable Spaces*, *Private Spaces*, *Adaptable and Flexible Spaces*. At the reporting threshold, the Sample *CLOSED* respondents indicate that six of the 10 space use characteristics are important to them. For those in the Sample who report a preference for the *OPEN* organization system type, *Comfortable Spaces* emerge with the highest mean value, followed by *Quality Spaces*, *Efficient Spaces*, *Safe and Secure Spaces* and *Private Spaces*. This indicates that five of the ten space use characteristics are important to the *OPEN* respondents in the Sample. *Comfortable Spaces*, followed by *Quality Spaces*, *Efficient Spaces* and *Safe and Secure Spaces* is the Sample preference for respondents who prefer the *RANDOM* organization system type, which shows that four of the 10 space use characteristics are important to this group. The preference of respondents who prefer the *SYNCHRONOUS* organization

system type are *Quality Spaces*, *Comfortable Spaces*, *Efficient Spaces*, *Safe and Secure Spaces*, *Private Spaces* and *Controllable Spaces*. For the *SYNCHRONOUS* respondents in the Sample, six of the 10 space use characteristics are above the 75th percentile.

Millennials who prefer the *CLOSED* organization system type report the highest space use characteristic mean values for *Efficient Spaces*, followed by *Private Spaces*, *Comfortable Spaces* and *Controllable Spaces* (tied), *Quality Spaces*, *Safe and Secure Spaces*, and *Social Collaborative Spaces*. Millennials *CLOSED* respondents indicate that seven of the ten space use characteristics are important to them. Millennials who report a preference for the *OPEN* organization system type prefer, in descending order, *Comfortable Spaces*, *Controllable Spaces* and *Efficient Spaces* (tied), which indicates that only three of the space use characteristics are preferred by *OPEN* Millennials.

Millennials' preference for the *RANDOM* organization system type include *Comfortable Spaces*, followed by *Quality Spaces*, *Controllable Spaces*, *Adaptable and Flexible Spaces*, *Efficient Spaces*, *Social and Collaborative Spaces*, and *Safe and Secure Spaces* to reflect seven of the 10 space characteristics. *SYNCHRONOUS* Millennials report preferences for all 10 of the space use characteristics in the following order: *Comfortable Spaces*, *Efficient Spaces*, *Private Spaces* and *Social Collaborative Spaces* (tied), there is a three-way tie among *Safe and Secure Spaces*, *Controllable Spaces*, *Quality Spaces*, followed by *Aesthetic Spaces* and *Adaptable and Flexible Spaces* (tied) and *Accessible Spaces*.

CLOSED organization type Baby Boomers prefer *Safe and Secure Spaces*, followed by *Efficient Spaces* and *Quality Spaces* (tied), *Comfortable Spaces*, *Aesthetic Spaces*, *Accessible Spaces*, *Private Spaces* and *Controllable Spaces*, which is reporting

eight of the ten space use characteristics. Baby Boomers who prefer the *OPEN* organization system type rank (in descending order) *Quality Spaces*, *Efficient Spaces*, *Comfortable Spaces*, *Safe and Secure Spaces*, *Private Spaces*, *Adaptable and Flexible Spaces* and *Accessible Spaces*, noting that seven of the space use characteristics are important to them. *RANDOM* Baby Boomers rank their nine space use characteristic preferences as *Comfortable Spaces*, *Quality Spaces*, *Efficient Spaces*, *Safe and Secure Spaces*, *Adaptable and Flexible Spaces*, *Private Spaces*, *Social and Collaborative Spaces*, *Accessible Spaces* and *Aesthetic Spaces*. *SYNCHRONOUS* organization system type Baby Boomers report seven of the 10 space use preferences in the following descending order: *Safe and Secure Spaces*, *Quality Spaces*, *Accessible Spaces*, a tie between *Comfortable Spaces* and *Efficient Spaces*, then *Controllable Spaces* and *Private Spaces*.

Comfortable Spaces is the most preferred space use characteristic of the **combined** Sample, Millennials and Baby Boomers. The Sample shows the following ranking of space use characteristics across all OSAS organization system types: *Quality Spaces*, *Comfortable Spaces*, *Efficient Spaces*, *Safe and Secure Spaces*, *Private Spaces*, *Adaptable and Flexible Spaces*, *Controllable Spaces*, *Aesthetic Spaces*, *Accessible Spaces* and *Social and Collaborative Spaces*.

Millennials show the following ranking of space use characteristics across all OSAS organization system types: *Comfortable Spaces*, *Efficient Spaces*, *Controllable Spaces*, *Quality Spaces*, *Private Spaces*, *Social and Collaborative Spaces*, *Safe and Secure Spaces*, *Adaptable and Flexible Spaces*, *Aesthetic Spaces* and *Accessible Spaces*.

Baby Boomers show the following ranking of space use characteristics across all OSAS organization system types: *Safe and Secure Spaces*, *Quality Spaces*, *Comfortable*

Spaces, Efficient Spaces, Private Spaces, Accessible Spaces, Adaptable Spaces, Controllable Spaces, Aesthetic Spaces and Social and Collaborative Spaces.

**TABLE 14: 75th PERCENTILE OSAS *IDEAL* MEAN INDEX VALUES
FOR SPACE USE CHARACTERISTICS *IDEAL* MEAN VALUES**

SAMPLE	MEAN INDEX PERCENT									
75% <i>IDEAL</i> ORGANIZATION SYSTEM TYPE	Accessible	Safe & Secure	Socializing/ Collaboratin	Adaptable/ Flexible	Private	Controllable	Quality	Comfortable	Aesthetic	Efficient
CLOSED										
<i>ideal</i>	73.0	83.3	68.1	75.2	80.0	73.9	85.6	82.7	72.8	84.1
OPEN										
<i>ideal</i>	69.6	78.3	70.7	74.3	77.3	70.8	83.6	87.8	71.8	82.5
RANDOM										
<i>ideal</i>	72.4	79.6	63.8	74.1	74.7	71.7	83.5	84.7	74.9	83.3
SYNCHRONOUS										
<i>ideal</i>	74.4	80.4	68.3	73.8	78.3	75.0	86.1	82.0	70.3	81.6

Organization System Type Preference Above 75 Percent

**TABLE 14: 75th PERCENTILE OSAS *IDEAL* MEAN INDEX VALUES
FOR SPACE USE CHARACTERISTICS *IDEAL* MEAN VALUES (...continued)**

MILLENNIALS

MEAN INDEX PERCENT

75% <i>IDEAL</i> ORGANIZATION SYSTEM TYPE	Accessible	Safe & Secure	Socializing/ Collaboratin	Adaptable/ Flexible	Private	Controllable	Quality	Comfortable	Aesthetic	Efficient
CLOSED										
<i>ideal</i>	66.7	76.7	75.0	68.3	90.0	86.7	85.0	86.7	65.0	93.3
OPEN										
<i>ideal</i>	42.9	71.4	68.6	58.6	72.9	82.9	74.3	88.6	50.0	82.9
RANDOM										
<i>ideal</i>	71.7	75.0	76.7	80.0	73.3	83.3	88.0	95.0	70.0	78.0
SYNCHRONOUS										
<i>ideal</i>	76.7	83.3	85.0	81.7	85.0	83.3	83.3	93.3	81.7	91.7

Organization System Type Preference Above 75 Percent

BABY BOOMERS

MEAN INDEX PERCENT

75% <i>IDEAL</i> ORGANIZATION SYSTEM TYPE	Accessible	Safe & Secure	Socializing/ Collaboratin	Adaptable/ Flexible	Private	Controllable	Quality	Comfortable	Aesthetic	Efficient
CLOSED										
<i>ideal</i>	79.7	86.4	71.7	72.2	77.8	75.6	82.8	82.7	81.7	82.8
OPEN										
<i>ideal</i>	75.3	81.5	70.3	76.2	79.4	72.1	86.5	82.1	74.2	85.2
RANDOM										
<i>ideal</i>	77.3	80.9	77.6	78.8	78.2	72.7	84.1	87.6	76.1	82.6
SYNCHRONOUS										
<i>ideal</i>	79.7	85.8	70.6	72.7	77.2	78.5	80.9	79.4	70.0	79.4

Organization System Type Preference Above 75 Percent

Space Use Characteristics: Sample, Millennials and Baby Boomers

Table 15 indicates differences for preferred space use characteristics between Millennials and Baby Boomers. Millennials highest mean score (i.e., most preferred) is for *Comfortable* and *Quality Spaces* (8.62 each), whereas Baby Boomers highest mean score (8.12) is for *Quality Spaces*. Millennials lowest mean score (i.e., least preferred) is for *Accessible Spaces*, whereas Baby Boomers lowest mean score is for *Socializing and Collaborating Spaces*.

**TABLE 15: SPACE USE CHARACTERISTIC FREQUENCY MEAN SCORES
FOR MILLENNIALS AND BABY BOOMERS**

MILLENNIALS

SPACE USE CHARACTERISTICS	(n)	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION
Accessible Spaces	26	0	10	6.04	3.053
Safe & Secure Spaces	26	3	10	7.5	1.726
Socializing & Collaborating Spaces	26	1	10	7.12	2.026
Adaptable/Flexible Spaces	26	2	9	7.12	2.046
Private Spaces	26	1	10	6.81	2.281
Controllable Spaces	26	1	10	7.15	2.378
Quality Spaces	25	3	10	8	1.732
Comfortable Spaces	25	3	10	8	1.732
Aesthetic Spaces	26	1	10	6.46	2.58
Efficient Spaces	26	2	10	7.92	2.415

BABY BOOMERS

SPACE USE CHARACTERISTICS	(n)	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION
Accessible Spaces	153	0	10	7.31	2.382
Safe & Secure Spaces	156	2	10	7.98	7.892
Socializing & Collaborating Spaces	152	0	10	6.43	2.531
Adaptable/Flexible Spaces	154	0	10	6.81	2.403
Private Spaces	157	0	10	7.48	1.842
Controllable Spaces	155	0	10	6.94	2.358
Quality Spaces	156	1	10	8.17	1.786
Comfortable Spaces	157	1	10	8.06	1.87
Aesthetic Spaces	155	0	10	6.9	2.34
Efficient Spaces	157	0	10	7.94	2.107

Most Preferred Space Use Characteristic

Least Preferred Space Use Characteristic

Table 16 presents the results of a statistical test undertaken to provide appropriate boundaries (cut-offs) for conducting t-tests when looking for statistical significance in data. Where comparison means are not statistically significantly different, one cut-off point is used; when comparison means are statistically significantly different, a different cut-off point is required. This is an important test for these data as several means have similar values. A score of $<.05$ is required to be significant.

TABLE 16: LEVINE’S TEST FOR EQUALITY OF VARIANCES FOR SPACE USE CHARACTERISTIC MEAN SCORES BETWEEN MILLENNIALS AND BABY BOOMERS

	LEVINE’S TEST FOR EQUALITY OF VARIANCES	
SPACE USE CHARACTERISTICS	F	SIGNIF.
Accessible Spaces	3.679	.057
Safe & Secure Spaces	.387	.535
Socializing & Collaborating Spaces	4.432	.037
Adaptable/Flexible Spaces	1.749	.188
Private Spaces	1.666	.198
Controllable Spaces	.036	.850
Quality Spaces	.009	.925
Comfortable Spaces	.4343	.511
Aesthetic Spaces	.691	.407
Efficient Spaces	1.165	.282

Statistically Significant

Student t-test for Mean Differences between Baby Boomers'/Millennials' Space Use Characteristics

Table 17 describes the results of a t-test to determine the statistical differences between Millennials and Baby Boomers on space use characteristic mean values. A difference is said to be statistically significant with a SIGNIF score $<.05$. *Accessible Spaces* is the space use characteristic that is statistically significant between Millennials and Baby Boomers.

TABLE 17: STUDENT T-TEST FOR DIFFERENCES BETWEEN MILLENNIALS' AND BABY BOOMERS' MEAN SPACE USE CHARACTERISTICS SCORES

SPACE USE CHARACTERISTICS	t	df	SIGNIF. (2-tailed)	MEAN DIFFERENCE	STANDARD. ERROR DIFFERENCE
<i>Accessible Spaces</i>	-2.404	177	.017	-1.269	.528
Safe & Secure Spaces	-1.214	180	.226	-.481	.396
Socializing & Collaborating Spaces	1.583	39.6	.190	.688	.447
Adaptable/Flexible Spaces	.608	178	.544	.304	.500
Private Spaces	-1.674	181	.096	-.676	.404
Controllable Spaces	.424	179	.672	.212	.500
Quality Spaces	-.452	179	.652	-.173	.383
Comfortable Spaces	1.420	181	.157	.552	.389
Aesthetic Spaces	-.877	179	.381	-.442	.503
Efficient Spaces	-.043	181	.966	-.020	.456

Statistically Significant

Organization System Assessment Survey (OSAS) Index Scores and Space Use

Characteristics: Millennials and Baby Boomers

Table 18 illustrates the contrast between Millennials and Baby Boomer mean scores by the top two preferred OSAS Patterns. This view (by OSAS patterns) illustrates a difference from the basic Sample scores illustrated in the previous table. From the OSAS Pattern perspective, the **most preferred space use characteristic** is *Quality Spaces* for Millennials with a mean score of 9.25, while Baby Boomers have a mean score of 8.08. *Quality Spaces and Comfortable Spaces* are the **most preferred space use characteristics** for Baby Boomers with a mean score of 8.08, while Millennials have a mean score of 9.25. Conversely, the **least preferred space use characteristic** for Millennials is *Accessible Spaces* with a mean score of 3.75, whereas Baby Boomers have a mean score of 7.65. Baby Boomer **least preferred space use characteristic** is *Socializing and Collaborating Spaces* with a mean score of 6.09, while Millennials have a mean score of 7.25 for *Socializing and Collaborating Spaces* as **least preferred space use characteristic**.

TABLE 18: TWO MOST FREQUENTLY PREFERRED OSAS PATTERNS BY SPACE USE CHARACTERISTICS FREQUENCY, MINIMUM, MAXIMUM, MEAN, AND STANDARD DEVIATION FOR MILLENNIALS AND BABY BOOMERS

MILLENNIALS

SPACE USE		STANDARD			
CHARACTERISTICS	(n)	MINIMUM	MAXIMUM	MEAN	DEVIATION
Accessible Spaces	4	0	8	3.75	3.862
Safe & Secure Spaces	4	4	7	6.25	1.500
Socializing & Collaborating Spaces	4	6	8	7.25	.957
Adaptable/Flexible Spaces	4	7	8	7.75	.500
Private Spaces	4	1	7	5.00	2.828
Controllable Spaces	4	7	9	7.75	.957
Quality Spaces	4	9	10	9.25	.500
Comfortable Spaces	4	8	10	9.00	1.155
Aesthetic Spaces	4	3	9	6.25	2.500
Efficient Spaces	4	2	10	7.00	3.559

TABLE 18: TWO MOST FREQUENTLY PREFERRED OSAS PATTERNS BY SPACE USE CHARACTERISTICS FREQUENCY, MINIMUM, MAXIMUM, MEAN, AND STANDARD DEVIATION FOR MILLENNIALS AND BABY BOOMERS (...continued)

BABY BOOMERS

SPACE USE	STANDARD				
CHARACTERISTICS	(n)	MINIMUM	MAXIMUM	MEAN	DEVIATION
Accessible Spaces	34	2	10	7.65	1.937
Safe & Secure Spaces	36	3	10	7.65	1.937
<i>Socializing &</i>					
<i>Collaborating Spaces</i>	35	3	9	6.09	2.582
Adaptable/Flexible Spaces	36	1	10	6.89	2.482
Private Spaces	36	3	10	7.39	1.644
Controllable Spaces	36	3	10	7.33	2.293
<i>Quality Spaces</i>	36	1	10	8.08	2.020
<i>Comfortable Spaces</i>	36	1	10	8.08	1.857
Aesthetic Spaces	36	1	10	7.08	2.477
Efficient Spaces	36	3	10	8.06	1.739
<i>Most Preferred Space Use Characteristic</i>					
<i>Least Preferred Space Use Characteristic</i>					

The statistical analysis shows that Millennials' strongest space use characteristic preference for is *Quality*. Quality spaces is defined as: the physical setting being well maintained; building systems function well; facility is well constructed and has quality equipment and furnishings; building and equipment are updated, appropriate, and function well. While *Quality* is not the most or least preferred space use characteristic for Baby Boomers, the mean is just a few points below the Baby Boomer most preferred. In contrast, Millennials least preferred space use characteristic is *Accessible Spaces* defined as: the absence of physical barriers such as stairs, and the presence of accessibility aids such as ramps,

handrails, door widths, corridors, and elevators that allow easy movement. There was a larger range between the means for Millennials and Baby Boomers in Accessible Space Use Characteristics (7.65-3.75), which could be indicative of the differences in ages and the physical capacity changes that occur from younger to older workers.

Baby Boomers' strongest preferences for space use characteristics are *Quality Spaces* and *Comfortable Spaces*. *Quality Spaces* as defined earlier are spaces where the physical setting is well maintained; building systems function well; facility is well constructed and has quality equipment and furnishings; building and equipment are updated, appropriate and function well. *Comfortable Spaces* include access to natural light and appropriate task lighting; access to fresh air and daylight; acceptable temperature, lighting, and amount of space; appropriate control of unwanted noise; spaces that relieve exposure to unwanted stimulation. Millennials' mean scores for *Quality Spaces* and *Comfortable Spaces* are the two highest rated scores. The University of Missouri Extension system utilizes a number of various types of office spaces across the state. This finding might be a reflection of the variations of perceived quality and comfortability in the large number of offices across the state. The data do not reveal the reason for this preference, but the literature points to Baby Boomers' and Millennials' preference for work environments that are well suited to their workplace activities.

CHAPTER FIVE

Conclusions

Discussion -- General Overview

In order to examine organization system types and space use characteristic preferences, a model was developed and tested to measure organizational system typologies across a specific array of variables. The model analyzed demographic information among Millennials and Baby Boomers to pinpoint employees' ideal preferences regarding space use characteristics. The research further tested a coding and indexing analysis strategy to identify variable relationships.

Demographics

The demographic profile of the survey Sample provides insight into the University of Missouri Extension system. The 'typical' respondent for this survey is housed on the Columbia campus, is 50-years-old and has worked more than 13 years in University of Missouri Extension. The subject matter category most frequently reported is Human Environmental Sciences. A potential educational response bias is mitigated because job titles that require degrees (undergraduate or graduate) as well as those that do not are represented in the Sample. As expected, Columbia campus houses the largest number of employees in contrast to any other University of Missouri Extension location in the system. The number of respondents from Columbia campus may slightly skew the average age of the respondents. Educational requirements are also likely higher for most Columbia campus respondents due to the nature of their responsibilities and appointments on the University campus.

The average age of all respondents is 50-years-old. The mean for Millennials is 27.22 years and 57.27 for Baby Boomers, reflecting a wide range of life experiences in the workplace

While the number of Millennial respondents in the Sample was fewer than the number of Baby Boomers, similar means and standard deviations were reported for both groups.

Multivariate-Attribute Utility Technology (MAUT)

In previous studies, the MAUT contributed an increased understanding of a variable's importance and/or degree of preference. In this study, while a critical tool for developing the OSAS Index and for measuring Space Use Characteristic preferences, the MAUT proved less effective in differentiating between Millennial and Baby Boomer Space Use Characteristic preferences.

Organization System Analysis Survey (OSAS)

The greatest OSAS mean percent index value across all job titles in this study is the OPEN system type followed by the RANDOM system type. The OPEN system type is preferred by all disciplines, followed by the RANDOM system type. SYNCHRONOUS and CLOSED system types are the least preferred system types among all University of Missouri Extension discipline categories.

The most frequently occurring organization system type is the OPEN system type across all locations, across all age generations, by office location durations and by the number of times office relocation occurs. OPEN is the preferred organization system type for employees 35 years of age or less, which also agrees with the literature as to how

Millennials like to know what the boundaries are but still desire flexibility. Data for employees beyond 35 years of employment is inconclusive.

The OPEN system type is preferred by both males and females in the organization, with males preferring the OPEN type slightly more frequently than do females. The mean ideal organization system types for both genders rank (in descending order) OPEN, RANDOM, CLOSED, and SYNCHRONOUS.

The OPEN organization system type is also the dominant preferred system type for Millennials and Baby Boomers in the University of Missouri Extension Sample. In general, OPEN organization types operate with notable characteristics of being organizationally adaptable, preferring to work individually, preferring top-down communication, and preferring organizational boundaries that are clear but with some flexibility. In the literature review, University of Missouri Extension culture is referred to as a *clan*, which could account for the desire for top down communications and boundaries, just as many families behave.

The second most preferred organization system type is RANDOM, with preferences expressed as an openness to change and discontinuity. People who identify as RANDOM promote change by deviating from existing patterns. University of Missouri Extension educators are expected to teach practices to their clients that represent a change of behavior, so their openness to change and a discontinuation of the status quo comes naturally to University of Missouri Extension educators. Teaching people pragmatic methods to change their behaviors requires discontinuity. The nature of the educational mission might be one possible explanation for the RANDOM system type ranking as the second most preferred type.

Space Use Characteristics

The Sample ideal space use characteristic preference is Quality Spaces, (building and systems maintained and appropriate functioning equipment). Millennials prefer Comfortable Spaces, (access to light and fresh air, with acceptable temperatures and control of unwanted noise). Baby Boomers prefer Quality Spaces and Comfortable Spaces, (well-maintained and purposeful workspaces with access to natural lighting with noise and temperature control.) Mean differences are marginal across all three characteristics.

Comfortable Spaces should be highly considered when thinking about space use characteristics preferred by Millennials. This finding is consistent with the literature as Millennials are noted for preferring less formalized work situations, which could include a desire for Comfortable Spaces. Additionally, work environment is one of the ‘voluntary employee turnover drivers’, making this finding something University of Missouri Extension should note in efforts to reduce Millennial employee turnover.

Baby Boomers preference for Quality and Comfortable Spaces may be a result of a greater understanding of work flow and workspace needs to be successful, given their experiences.

Comfortable Spaces is reported second most frequently as a Sample preference, yet ranks first for Millennials and second for Baby Boomers. At the 75 percentile Efficient Spaces, (adequate space for the occupants and organized for effective work) is tied as second overall for the Sample as a preferred space characteristic. The data are not explicit as to why Baby Boomers prefer Efficient Spaces, but their willingness to work

long hours might explain why they would prefer workspaces to be efficient for the work they are doing and the time they spend in their workspaces.

Least important space use preferences across the Sample are: Socializing and Collaborating Spaces, Aesthetic Spaces, Adaptable/Flexible Spaces and Controllable Spaces with mean values reported between the 50-75th percentile. While these space use characteristics are preferred, they are less important than those scoring above the 75th percentile cutoff point. This finding is interesting as social and collaborative behaviors are expected by organizations to build teams or to integrate work. Organizational work is often complex, requiring teams to focus concentrated effort in addressing problems and issues.

In workspace design, collaborative spaces are considered highly important for teamwork. The same rationale is true for Adaptable and Controlled Spaces where the organizational space may be modified to meet emerging needs. This result may relate to the nature of University of Missouri Extension work in that teaching and collaboration with partners occurs across many settings in many communities. University of Missouri Extension employee workspaces may not be the only environment where collaboration and socialization occurs. Millennials may do more collaborative work via technology while Baby Boomers may do more of their teamwork face-to-face over lunch or in another setting.

OSAS by Space Use Characteristics Findings

The OPEN system type is most closely associated with Comfortable Spaces, Quality Spaces and Efficient Spaces, consistent with the need for information control; the

least important space use characteristic was Accessible Spaces. The Accessible Space use construct is not significantly associated with any of the organization system types in this study. The overarching culture and work conducted by University of Missouri Extension employees is one of traveling to the teaching location. University of Missouri Extension employees work, plan, teach and facilitate in all types of workspaces and classroom settings. Federal laws dictate what accessible means for public places where University of Missouri Extension educators deliver programming. One interpretation as to why Accessible Spaces are not very important to University of Missouri Extension employees is that they deal with difficult and complex situations outside of their workspace, so the importance of accessibility in their workspace is negligible.

The RANDOM type in this study is most closely associated with Comfortable Spaces. Quality Spaces and Efficient Spaces, consistent with the need for maximizing individuality and getting work done; the least important space use characteristic construct is Aesthetic Spaces. RANDOM types prefer to promote individuality and creativity, which means their preference for Comfortable Spaces, Quality Spaces and Efficient Spaces may relate to the various drivers that individuals possess to fuel creativity in workspaces that support their work style.

The CLOSED system type is most closely associated with the Quality Spaces, Efficient Spaces and Safe and Secure Spaces, which are consistent with their need for non-ambiguous elements. CLOSED system types prefer stability. One interpretation of this finding could be that working in a space that is quality and can adapt to one's needs allows employee stability needs to be met. The least important space use characteristic construct is Socializing and Collaborating Spaces. The hierarchy and decisions coming

through the organizational channels are important for the CLOSED system type, which could partially explain the minimal preference for Socializing and Collaborating Spaces.

The SYNCHRONOUS system type is most closely associated with Quality Spaces and Comfortable Spaces and is consistent with the need for buildings and workspaces that support basic work functions. This organization system type also desires continuity without process. The ability to work in a workspace that is quality and comfortable could mean that SYNCHRONOUS types do not need to think about their workspace or environment and choose to purposefully work without worry about their workspace.

Conclusions

Survey Instrument and Sampling

Data were collected using an electronic survey; an initial email blast followed by several reminders resulted in an adequate response rate, which may be attributed to employees having an opportunity to potentially improve the organization. The survey instrument collected employee demographics, Organization System types and Space Use Characteristics across an array of conditions and contexts. As a case study, the research is successful. While measuring instruments developed and tested produced useful results for gaining a better understanding of University of Missouri Extension, generalizations beyond this population are inappropriate and are discouraged. The efficacy of using a systems approach as a viable research method in studying employee preferences is confirmed. Similar studies may replicate this research with the assurance that utilizing a systems approach in the University of Missouri Extension study provided positive and

useful results, offering a more authentic understanding of organization system types and Millennials' and Baby Boomers' space use characteristic preferences.

Demographics

An important result of the demographic information gathered for University of Missouri Extension, is the opportunity to understand how age differences and differing generational experiences might influence productivity across the organization.

For example, the demographic analysis yields interesting results with the average Sample respondent having worked in University of Missouri Extension for 13 years. This information on mid-career employees could spur additional professional development or improved employee retention strategies. University of Missouri Extension offers numerous on-boarding and subject matter professional development opportunities.

Females were the largest respondent group among both Millennials and Baby Boomers, primarily in Human Environmental Sciences with workplaces on the Columbia campus, possibly because Human Environmental Sciences (HES) employs more women than men. The greatest number of HES employees without graduate degrees work in the Family Nutrition Education Program (outside of clerical type positions in Missouri University of Missouri Extension). The greatest number of respondents were from Columbia campus due to the concentration of University of Missouri Extension employees on the Columbia Campus.

A possible addition to the demographic analysis could be to note employee placement by University of Missouri Extension region and age generation, to pinpoint the

emphasis of their job assignments, and to target professional development opportunities that will enhance job retention.

Multi-Attribute Utility Technology (MAUT)

The MAUT analysis failed to identify noteworthy differences among the Space Use Characteristic survey items for several reasons. First, the relatively low number of Millennials in the Sample confounded potential differences between groups. Secondly, using a rank order measuring system for the Space Use Characteristic survey items rather than the MAUT may result in a more useful method for capturing the inherent variability across those items.

In retrospect, all of the Space Use Characteristics could conceivably contribute to a more preferred work setting. Because of this inherent bias towards preference, a ranking system that would force respondents to rank (e.g., from 1 to 10) each of the characteristics may increase variability among items and therefore increase the usefulness of this particular set of measures.

The MAUT analysis method was far more effective in developing the OSAS Index where the four primary constructs were conceptually orthogonal.

Organization System Analysis Survey (OSAS)

Organizational knowledge about the world view preferences within an organization can influence how the organization communicates, creates policies, supports practices and works directly with its employees.

University of Missouri Extension operates within the larger hierarchical structure of The University of Missouri System, which is a CLOSED system—the organization system type that is both least capable of adapting to change and least innovative. The CLOSED system type organizes itself around tradition and around status related job titles. At the University, these titles are, in ascending order, from students to the University President. Deeply rooted in tradition, there is an identifiable chain-of-command and policies in place that delineate how one interacts with the hierarchy.

The literature suggests that organizational culture can be so dominant that it forces all employees to adapt to it, independent of their organization system type preference. Moreover, it is argued that people who are attracted to an organization with a strong organizational culture come to realize their assimilation into that culture is the more efficient avenue for belonging than expecting the culture to conform to their preferred system type. For now, Millennials are in the minority in University Extension. As time progresses and the proportion of Baby Boomers is reduced, one can expect organizational attention to be aimed at addressing and meeting the burgeoning Millennial workforce preferences.

The OSAS Index results may immediately help administration and communication units understand how to more effectively work with their employees. University of Missouri Extension survey responses point to an organization that prefers a more OPEN and RANDOM approach to daily operations. Despite the over-arching CLOSED organizational framework presented by the University system, University of Missouri Extension employees prefer a more encouraging and involving organizational

system, interested in positive feedback and embracing complexity rather than overcoming resistance.

The preferred dimensions of the OPEN/RANDOM system type are meaning and control, where individuality is valued over top-down authority, and collaboration and consensus is valued over traditional hierarchy. The blended system type focuses on an individually interdependent model of operation wherein communication is informal and explicit. The OPEN/RANDOM system type motto could be: 'Individuality is important, but not at the expense of consensus.'

One interpretation of the lack of differences among Millennials and Baby Boomers may be because the dominant CLOSED culture of the University System demands assimilation. While preferences may differ from the dominant system of the University, the pressure to conform is evident in two aspects of employment: who is attracted to work for University of Missouri Extension, and who remains as employees, regardless of organization system type preference or generational type.

The RANDOM system type prefers to operate through processes that change by deviating from existing patterns, which allows for spontaneity and innovation. Boundaries are more open in this system; it was the second most frequently preferred organization system type for the Sample, the Millennials and the Baby Boomers, which may be related to the distributed location system within University of Missouri Extension. The distributed system allows employees to innovate and make changes in subject matter based on University of Missouri Extension customer needs.

RANDOM is an unusual preference in organizations that function under direct supervision, and with directed programs delivered at multiple locations. The understanding that OPEN and RANDOM system types are the top two employee preferences, regardless of being a Millennial or a Baby Boomer, should be of interest to University of Missouri Extension across several operational considerations:

- Change deliverables -- allow for individuality in implementing changes local sites
- Communication – ‘from the top’ information
- Policy changes – ‘top down’ assistance with employee-driven implementation.

Space Use Characteristics

Many locations and spaces are not designed for the type of work conducted by University of Missouri Extension; the distributed location system allows some workspaces to be designed and updated for the type of work conducted by University of Missouri Extension, but most are not.

The data suggest that Quality workspaces are the most preferred among the Sample, which addresses workspaces being well constructed with updated equipment and with building systems operating well. This description does not describe a number of University of Missouri Extension workspaces on and off campus.

A high-ranking space use characteristic preference, while seeming elementary to basic employee workspaces, could signal a need to review that set of space use characteristics across all University of Missouri Extension workspaces.

In contrast to the expectation that much of today's work requires collaboration, integration of programmatic efforts in Extension is infrequently undertaken by a single individual. In the Sample, Socializing and Collaborating Spaces were the least important space use characteristic, yet literature regarding highly functioning organizations and organizational cultures indicates that collaboration is very important to organizational success. These findings might be a result of the disproportionate number of Baby Boomer respondents. Nevertheless, University of Missouri Extension may wish to consider this result so that attention can be given to team building, integrating program efforts, creating new partnerships, and developing volunteers, all of which require Socializing and Collaborating Spaces. Baby Boomers may need additional support in this area.

OSAS by Space Use Characteristics

The systems approach employed to investigate the OSAS Index by Space Use Characteristics shows that Millennials and Baby Boomers world view systems are operating in parallel.

SAMPLE: The most frequently occurring organization system type preference at the 75th percentile (i.e., assigned a value of 4), for the Sample is OPEN, with the CORS Pattern for the Sample being 2432. The 2432 pattern means the highest ranking of the Sample prefer an OPEN (4), followed by RANDOM (3) and tied for CLOSED and SYNCRHONOUS (both at 2) in the CORS Pattern.

MILLENNIALS: CORS Pattern ranking was tied with a 3432 and a 3433 pattern, which means their preference is OPEN (4), followed by a tie for CLOSED (3) and RANDOM (3), with SYNCHRONOUS receiving a (3) and a (2) ranking. One

interpretation of this finding again deals with the overarching strength of the University of Missouri Extension organizational culture.

BABY BOOMERS: The two most frequent CORS Patterns were 3432 and 3433, which means they prefer OPEN (4) and (4) in each of the Patterns, followed by a RANDOM (3) and (3) in each of the Patterns, followed by a tie between CLOSED (3) and (2), and SYNCHRONOUS (3) and (2). For both age generation groups, the primary distinguishing feature is that Baby Boomers prefer a slightly reduced preference for the SYNCHRONOUS system type than do Millennials. However, the difference is marginal; more evidence for the potential power of organizational assimilation is manifested in the CORS Pattern results.

The OPEN system type is most closely associated with Comfortable Spaces and Quality Spaces, consistent with the need for information control. The need for spaces that support work conducted in an efficient and quality manner allows University of Missouri Extension employees to focus on the actual work without worrying about where to get materials ready for teaching. The least important space use characteristic for the OPEN system type was Accessible Spaces. Quality Spaces is also the most preferred space use characteristic of Millennials, while Quality Spaces and Comfortable Spaces are the most preferred spaced use characteristic of Baby Boomers. Why Millennials rate Quality Spaces high is inconclusive, though the literature suggests they grew up living in buildings purposely designed for specific equipment and environmental quality.

Based on these results, University of Missouri Extension may wish to investigate attention given to ensure that their employees work in Quality Spaces. Additional

standards defining the meaning of this space use characteristics is warranted for University of Missouri Extension to move forward with policy or environmental changes.

The Accessible Space use construct is not associated with any of the organization system types. Accessible Spaces may be of little importance due to the mobility needed to effectively conduct one's work. University of Missouri Extension employees are required to utilize a number of meeting room type spaces in the communities they serve and to provide presentation equipment and supplies. An additional factor is the federal law (i.e., the Americans with Disabilities Act, ADA) that requires accessibility for public places, particularly for those receiving federal dollars.

The RANDOM type is most closely associated with Comfortable Spaces, Quality Spaces and Efficient Spaces, consistent with the need for maximizing individuality via a supportive workspace; the least important space use characteristic is Aesthetic Spaces. Millennials least preferred Accessible Spaces, presumably because they are able-bodied, while Baby Boomers least prefer Social and Collaborating Spaces. With Accessible Spaces being least important to Millennials, University of Missouri Extension may need to train and develop this sensitivity among their Millennial workforce. Their customers will likely represent generational differences and Millennial employees will need to accommodate their program participants need for Accessible Spaces.

On the other hand, Baby Boomers lack of preference for Social and Collaborating Spaces may need organizational help to learn how to collaborate and socialize for work. As teamwork, engagement, partnerships and integration of program efforts are critical for the future of University of Missouri Extension, workspaces in local University of Missouri Extension offices and on campus will require this environmental feature. Baby

Boomers may also need professional development to help them conduct the work necessary for a ‘modern day’ University of Missouri Extension Service. Linking space use characteristics to organization system types using a systems approach allows multiple variables to be tested within the system, allowing a more authentic picture of the relationship between organization system type patterns and the associated preferred space use characteristics.

Study Limitations

Methods -- Sampling

The case study approach used in this research focuses on the University of Missouri Extension. Oversampling was not conducted to increase the number of Millennials in the study. A more balanced Sample of Millennials and Baby Boomers could have further increased the usefulness of the results.

Multi-Attribute Utility Technology -- MAUT Applicability

The use of the MAUT in earlier studies assisted in the delineation of importance and preferences. In this study, the use of the MAUT yielded few differences among the Space Use Characteristics. Another form of analysis utilizing a rank ordering system could assist in better understanding space use characteristics’ importance and preference. Rank ordering would increase the variability of survey items, thereby mitigating the inherent preference bias susceptibility of the MAUT.

Organization System Analysis Survey (OSAS) Applicability

This study contains a limited number of Millennials in the Sample. Additional studies with improved balance of Sample age may yield different results. This study involves only one organization from higher education, which could have inadvertently skewed responses that might have been applicable to all organizations. The MAUT analysis failed to yield the depth of expected differences, it also limited the interpretation of the analysis. This study has created new knowledge, but the variances observed were marginal among the space use characteristics and their relationships to the OSAS Index.

Directions for Future Research

Random Sampling

The continued application of an employee engagement strategy should be employed in future studies so information specific to the organization can be analyzed. Random sampling could improve the external validity of the results, in contrast to the convenience sampling used in this study. A random sample of an organization's employee population will present information that can better distinguish preferences between Millennials and Baby Boomers, allowing organizations to tailor training programs and workspace designs.

Reword OSAS Items for Clarity

Some of the OSAS survey items may require revision and retesting for additional simplicity to lessen any potential confusion about their meaning. The current vetted and peer reviewed survey items leave room for improvements that may lead to increased reliability (i.e., internal validity).

Space Use Characteristics Rank Order Transformation

A rank order measuring method is recommended to improve understanding of preferred workspace importance. Modification of the analysis will likely create study results with additional clarity and increased survey item variances. Additional space use characteristics' and organization system world view studies, in relationship to policies and practices in organizations, could improve organizations' employee retention rates by using rank order data transformations.

Survey Organizations with more Millennials in the Population

Increasing numbers of Millennials entering and progressing in the workplace should be surveyed to increase knowledge of the populations' preferences; knowledge about Millennials entering the workforce, via employee engagement studies, will help organizations be more proactive and responsive to their workforce. Examining organizations with dissimilar cultures to University of Missouri Extension (e.g., a Millennial dominant culture) would elicit different research outcomes. Studies of this nature may yield a more accurate picture of the role of age generations.

Millennials vs. Baby Boomers Organizational Comparison Studies

Future studies should seek to secure a more balanced sample of Millennials and Baby Boomers for comparison as they are the two largest segments in the workforce. Or perhaps more specifically, studies that compare Millennial-dominant and Baby Boomer-dominant organizations should be undertaken. The question not fully answered in this study is the role of organizational culture influence over an individual's experiences and the world views they bring to the organization; however, the question now comes to the

forefront. Various types of organizations may utilize this research model to determine if these findings occur across organizational types and cultures. Additional replicated studies will further build on the indexing, patterning and analysis in this research as well as the analyses leading to statistical significance. Organizations may take this research and apply some practices that reflect directly on world view types and their relationships to organizational constructs. The study findings could help improve production and employee retention as demographic and work changes take place within the organization. Testing another organizational culture will help determine if this study model is fully replicable in its current form.

Longitudinal Study of Millennial Organizations

A longitudinal study on Millennials utilizing this model could help identify specific Millennial organization system types, and link their needs to various space use characteristics.

Study Contributions

Because employee ideal preferences related to space use characteristics in the workspace have not been previously examined, the contributions of this research are important to the field of Environment and Behavior. The opportunity to test space use characteristics in real time with real employees, allows a fresh look at organizational needs in an empirical manner. This research specifically illustrates which organization system types employees prefer and the various ideal space use preferences associated with those types.

This research also contributes to the understanding of organizational culture as the analysis provides opportunity to study within an organization, and retrieves information from employees linked to other organizational aspects. Data and analysis specific to one's organization allows organizations to make informed decisions about their employees, an increasingly important issue as organizations change their work focus, as workspaces change to meet both organizational work demands, and as workforce demography continuously changes.

The use of a systems approach (i.e., the OSAS Index) allows this work to be replicated across an array of organization types. The design of this research model tests both processes and analysis in the model development, taking individual survey information and transforming it into data that analyzes employees' preferences beyond the limit of age and generational description, and links it to space use characteristic preferences.

This study also contributes to an infrequently studied organization, University of Missouri Extension. University of Missouri Extension has various types of workspaces in many different locations. Like other organizations, University of Missouri Extension is experiencing a change in workforce demography. The fundamental research presented in this study could serve as a foundation piece for University of Missouri Extension to study their employees resulting in improved production and increased employee retention.

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APPENDIX

Appendix A

Letter of Informed Consent

Your participation in this research is voluntary and anonymous. You can stop at any time. You do not have to answer any questions you do not wish to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise. All publications and/or presentations resulting from the research will be reported in aggregate form only; no personally identifiable information will be collected. The University of Missouri's Institutional Review Board may review records related to this research study.

Your completion of the survey will be deemed as your consent to participate in the study.

Please contact the principal investigator, Dr. Ronn Phillips (Housing and Environmental Design Extension State Specialist), if you have questions or concerns about this research: Email: phillipsr@missouri.edu. If you have any questions, concerns, problems about your rights as a research participant or would like to offer input, please contact the University of Missouri Institutional Review Board at 573.882.9585 or by mail at 483 Reynolds, University of Missouri, Columbia, MO 65211.

I know how limited and valuable your time is. So, the instrument is designed to be completed by most participants in about 15- 20 minutes. I have completed mine. I hope you will complete yours as soon as possible.

Thank you in advance for your participation in this valuable effort to strengthen University of Missouri Extension.

Appendix B

Initial Contact: Dr. Michael Ouart

IRB:10207311

Subject: “Your link to the Learning Organization Survey at University of Missouri Extension”

Dear Colleagues:

I am inviting you to participate in the Learning Organization Survey that is being conducted by University of Missouri Extension and encouraging your participation in this important research undertaking.

A learning organization has a simple premise at its core: it is an organization that encourages its employees to more effectively collaborate and continue to learn in a climate of ever-increasing change, positioning the organization to become agile and versatile.

The survey is designed to gain the clearest picture of the structure and nature of the learning organization. A precise perspective of the system’s components permits a learning organization to improve the dynamics among its parts – to effectively evolve. A people-oriented focus allows the learning organization to promote unambiguous and open communication yielding shared understanding and meaning, and ultimately leads to sharpened leadership skills, the capacity to think differently, and make faster and better decisions. Striving for the synergy only possible from group collaborations, the learning organization attempts to transcend accomplishments based on individual efforts.

This understanding stems from two important perspectives: (1) how individuals perceive the organization in its current condition (ACTUAL), and (2) how individuals would prefer to see the organization operate (IDEAL). Because of the importance of gaining a holistic understanding of the organization, the survey population includes all University Extension personnel, (i.e. administration, faculty, specialists, and staff).

The 15 – 20 minute survey can be accessed through SurveyMonkey at:

<https://www.surveymonkey.com/s/LearningOrganizationSurveyUniversityOfMissouriExtension>

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Thank you in advance for your participation in this valuable effort to strengthen University of Missouri Extension.

Appendix C

First Follow-Up: Dr. Ronn Phillips

Subject: “Your link to the Learning Organization Survey at University of Missouri Extension”

Dear Colleagues:

A few days ago, you were E-mailed an invitation to participate in the Learning Organization Survey in University of Missouri Extension. I am writing to you to remind you of the importance of your participation in this survey. As you know, this survey is designed to enhance our understanding of the structure of the organization in order to become more versatile and agile in a climate of ever-increasing change.

If you have already completed the survey, please accept my sincere thanks. If you have not completed the survey, I hope you will do so as soon as possible.

The E-mail with the specific survey site link should have arrived within the past few days from Dr. Michael Ouart with the header “Your link to the Learning Organization Survey at University of Missouri Extension.” If, by chance, you accidentally deleted or did not receive the E-mail, the survey site may be accessed at the following link:

<https://www.surveymonkey.com/s/LearningOrganizationSurveyUniversityOfMissouriExtension>

Your participation in this research is voluntary and anonymous. You can stop at any time. You do not have to answer any questions you do not wish to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise. All publications and/or presentations resulting from the research will be reported in aggregate form only; no personally identifiable information will be collected. The University of Missouri’s Institutional Review Board may review records related to this research study.

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Thank you in advance for your participation in this valuable effort to strengthen University of Missouri Extension.

Appendix D

Second Follow-Up: Dr. Ronn Phillips

Subject: “Your link to the Learning Organization Survey at University of Missouri Extension”

Dear Colleagues:

A few weeks ago, you were E-mailed an invitation to participate in the Learning Organization Survey in University of Missouri Extension. I am writing to you to remind you of the importance of your participation in this survey. As you know, this survey is designed to enhance our understanding of the structure of the organization in order to become more versatile and agile in a climate of ever-increasing change.

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I know how limited and valuable your time is. So, the instrument is designed to be completed by most participants in about 15 - 20 minutes. I hope you will complete the survey as soon as possible.

Thank you in advance for your participation in this valuable effort to strengthen University of Missouri Extension.

Appendix E

Workplace Attributes Survey

The survey items below are the substantive data collection components in hardcopy format. The final electronic survey will contain all necessary instructions for completing the survey. Upon approval of this survey, the electronic survey will be developed and resubmitted for final approval.

ASSIGN A VALUE OF 10 TO ONLY ONE ANSWER FOR THE (ACTUAL) CONDITION THAT BEST DESCRIBES YOUR OPINION. THEN, ASSIGN A VALUE FROM 0 TO 9 TO EACH OF THE REMAINING ANSWERS IN THE (ACTUAL) VALUE LIST COMPARING IT WITH THE ONE YOU IDENTIFIED AS BEST DESCRIBING YOUR OPINION. REPEAT THIS PROCEDURE, BUT FOR THE (IDEAL) CONDITION THIS TIME.

- (1) What is the approach University of Missouri Extension most typically uses to achieve and accomplish what it wants (ACTUAL)? And, what approach would you prefer it uses to achieve and accomplish what it wants (IDEAL)?

ACTUAL   IDEAL
VALUE   VALUE

(a) Unstated agreements and just knowing what to do		
(b) Authority, rules, and discipline		
(c) Personal freedom, individual competence, and choice		
(d) Cooperation, discussion, and mutual agreement		

- (2) In what manner does University of Missouri Extension express its caring and support for each other (ACTUAL)? And, how would you prefer that it expresses its caring and support for each other (IDEAL)?

ACUTAL   IDEAL
VALUE   VALUE

(a) Expressive, responsive, and given willingly		
(b) Private, formal, and regulated		
(c) Spontaneous, public, and enthusiastic		
(d) Limited, reserved, and rarely expressed because we know we care deeply for each other		

- (3) How would you describe the “essence” or identity of University of Missouri Extension (ACTUAL)? And, how would you prefer the “essence” or identity to be described (IDEAL)?

	ACTUAL VALUE	IDEAL VALUE
(a) Impulsive, instinctive, and energetic		
(b) Traditional, stable, and consistent		
(c) Precise, exact, controlled, and harmonious		
(d) Practical, tolerant, and relevant		

- 4) As University of Missouri Extension experiences the objective events and situations in life, how does it seek to understand those events (ACTUAL)? And, how would you prefer that it seeks to understand those events (IDEAL)?

	ACTUAL VALUE	IDEAL VALUE
(a) By being flexible, questioning, and challenging		
(b) By relying on individual strengths, unique explanations, and by being explorative		
(c) By being methodical, conservative and by using timetested explanations		
(d) By being knowing, certain, wise, and assured		

- (5) What is University of Missouri Extension’s most important characteristic (ACTUAL)? And, what would you prefer to be its most important characteristic (IDEAL)?

	ACTUAL VALUE	IDEAL VALUE
(a) Our understanding of the objective world around us		
(b) The identity of the organization, who we are and what we stand for		
(c) The care and support that we give to each other		
(d) That we accomplish, achieve, and do what we want		

- (6) How important is each of the following workplace attributes to University of Missouri Extension (ACTUAL), and to you (IDEAL)?

ACTUAL
VALUE   IDEAL
VALUE

(a) SECURITY: financial strength, secure and stable work environment - both the physical (office/workplace) and business environment (pay, policies, practices)		
(b) INTEGRITY: behaving with integrity, employees work well together – they place faith and trust in each other		
(c) RECIPROCITY: valuing the employer/employee relationship -- both are equally important		
(d) CITIZENSHIP: dedicated to doing the right things in organizational dealings, in the work environment, and in the community		
(e) AUTHENTICITY: employees get to be their true selves -- empathy, solidarity and tolerance is shown to everyone		

- 7) How important is each of the following environmental preferences to University of Missouri Extension (ACTUAL), and to you (IDEAL)?

ACTUAL
VALUE   IDEAL
VALUE

(a) PHYSICAL FACILITY: layout, technology, equipment, well-constructed, well-maintained, adequate privacy, appropriate workspace(s)		
(b) FURNITURE & EQUIPMENT: congruent, ergonomic, comfortable, natural & artificial lighting, comfortable ventilation		
(c) CONTROL: workplace location & options, collaboration space(s) or opportunities, accessibility to stimulation, lighting; ventilation & privacy, personalization, adjacent activity centers		
(d) CULTURE: facility fits image/brand, adaptable space(s), aesthetically pleasing, privacy fit, finishes & materials demonstrate image/brand, clear workspace(s)		

(e) AMENITIES: adequate lounge space, vending areas and food service space(s), soothing space(s), operable windows, adequate storage, up-to-date equipment		

(8) How important to you (IDEAL) are the following workplace attributes?

	IDEAL VALUE
(a) ACCESSIBLE SPACES: absence of physical barriers such as stairs; presence of accessibility aids such as ramps and handrails; and door widths, corridors, and elevators that prevent easy movement.	
(b) SAFE & SECURE SPACES: spaces are safe from fire and environmental hazards and are modified for accident prevention.	
(c) SOCIALIZING & COLLABORATING SPACES: spaces that permit furniture arrangements that encourage socialization and collaboration.	
(d) ADAPTABLE/FLEXIBLE SPACES: multiple purpose spaces that can accommodate different types of activities.	
(e) PRIVATE SPACES: spaces that accommodate varying degrees of privacy, secure doors and windows, secure from unwanted visual and acoustical violation.	
(f) CONTROLLABLE SPACES: manageable spaces that can be personalized and individualized, spaces where personal territorial claims are permitted and are recognized.	
(g) QUALITY SPACES: physical setting is well maintained; building systems function well; facility is well constructed and has quality equipment and furnishings; building and equipment are updated, appropriate, and function well.	
(h) COMFORTABLE SPACES: access to natural light and appropriate task lighting; access to fresh air and daylight; acceptable temperature, lighting, and amount of space; appropriate control of unwanted noise; spaces that relieve exposure to unwanted stimulation.	
(i) AESTHETIC SPACES: visual character of facility interior and exterior portrays the desired organizational image and/or 'brand'; facility appears clean; a beautiful place to work – aesthetically pleasing.	

(j) EFFICIENT SPACES: adequate amount of space for all occupants, rooms and spaces efficiently located for working with others; facility operates efficiently – spaces organized to maximize collaborative work if appropriate.	

FOR EACH OF THE SURVEY ITEMS BELOW, SELECT THE ONE RESPONSE
THAT BEST DESCRIBES YOUR SITUATION.

- (9) Which of the following responses best describes your job title – the area in which most of your work is undertaken? (Select one from below)

PULL DOWN MENU FOR ALPHABETIZED LIST OF JOB TITLES – SEE
ADDENDUM B

- (10) How long have you been employed with University of Missouri Extension?

_____ years (specify)

- (11) In which Extension Region or Campus are you currently assigned? (Select one from below)

(a) Urban Region
(b) Northeast Region
(c) Northwest Region
(d) Southeast Region
(e) Southwest Region
(f) Columbia Campus
(g) Kansas City Campus
(h) Rolla Campus
(i) Saint Louis Campus
(j) Not Assigned to a Region or Campus

- (12) The majority of your work assignments occur in which of the following University of Missouri Extension categories? (Select one from below)

(a) Administration/Management
(b) Agriculture & Natural Resources
(c) Business Development
(d) Clerical/Support Staff
(e) Community Development
(f) Continuing Education
(g) Human Environmental Sciences
(h) 4-H/Youth

- (12) Your Gender?

(a) Male
(b) Female

- (13) Your Age?

_____ years (Specify)

- (14) How long have you worked in your current office location?

_____ years (Specify)

- (15) During your employment with University of Missouri Extension, how many times have you relocated from one office facility to another?

_____ number of times (Specify)

Thank you for your participation!

VITA

Beverly Coberly is currently the Chief Operating Officer for the eXtension Foundation. She retired from University of Missouri Extension in December 2016 as the Associate Vice Chancellor and Associate Director after working for over 36 years with the University. She worked and served as an Area Home Economics Specialist, a County Program Director, a Regional Human Development Specialist, a Regional Family Nutrition Education Program Coordinator, the Southwest Regional Director, the Director of Off Campus Operations and as the Associate Vice Provost and Associate Director of Extension.

Beverly is a graduate of Hartville High School in Missouri, a graduate of The College of the Ozarks with a Bachelor of Science in Home Economics Education with a minor in Business, a graduate of the University of Missouri, Human Environmental Sciences, Clothing and Textiles with a minor in Education, and has a graduate certificate in Community Development and the core of another Master's program in Human Development.

She is married to Doran Coberly and they have three grown children, Dr. Jared Coberly, Lieutenant Colonel Jeffrey Coberly, and Jena Coberly, M.Ed. Her contact information is:

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