

The Multi-Generational Workplace and Organizational Culture

Literature Review

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## Literature Review

### Introduction

Multiple generations in the office environment have significant implications to employees, workplaces and organizations. Four generations are working together in the office for the first time in history noted Lancaster and Stillman (2002). “Employers must address the growing challenge of a multi-generational workforce as it applies to employee relations, recruitment and retention” (SHRM, 2008, p. 5). Corporations will continue to use workplace design not only to attract and retain employees of all generations (Society for Human Resource Management, 2008), but as a vehicle to foster collaboration and workplace productivity (Steelcase, 2009). The 2008 *Gensler Workplace* survey revealed “a strong correlation between workplace quality and organizational performance” (Keegan, 2008, p. 10). Yet the definition of one generation’s workplace may vary greatly from another’s. Phrases such as clashing, crashing or colliding of the generations appear frequently in the popular literature. A Pew Research Center survey (Taylor & Keeler, 2010) found that 79% of people surveyed said that there was a generation gap. However, today’s generation gap is not rooted in the social and political issues of the 1960’s, but rather in the use of technology (Taylor & Keeler, 2010). Older generations see technology as a tool, while younger workers see technology as an “extension of themselves” (Smith, 2008, p. 34), “...embedded in everything” (Herman Miller, 2010a, p 6).

Generational titles express a “short hand way to factor in historic events or culture that may have a long lasting impact on a specific age cohort” (Pitt-Catsouphe & Smyer, 2007, p.4). Strauss and Howe (1991) have identified the following generational demarcations: (a) Silent, 1925-1942; (b) Baby Boomers, 1943-1960; (c) Thirteenth –now referred to as Generation X, 1961-1981; and (d) Millennials, 1982-?. The literature now closes the Millennial generation birth date in 2000. Generations are “complex groups” (Herman Miller, 2010a, p. 6) and individuals may or may not exhibit characteristics of the group. The Millennials we interviewed were sensitive about being stereotyped (E. Erikson, personal communication, April 22, 2010 and B. Lee, personal communication, January 22, 2010). These labels are used in this review as a method to distinguish age cohorts and not for the purpose of “generational generalizing” (Herman Miller, 2010a, p. 6). Other labels associated with the Silent Generation include the Traditionalists, the Veterans and the Greatest Generation. (Zemke, Raines & Filipczak, 2000). The label Traditionalist will be used in this review. The Baby Boomer’s name evolved from the post World War II boom that overtook the US in production of goods, services and babies. The Generation X label was popularized by Douglas Coupland’s 1991 novel *Generation X: Tales of an Accelerated Culture* (Herman Miller,

2010a, p. 4). The Millennial generation label comes from the new century with which their birth dates are associated. This group has also been referred to as the Nexters (Zemke, et al, 2000), Generation Y, Echo Boomers, New Boomers, Gen Text and Gen Why (Gibson, 2009). The generation after the Millennials, still being born, has been identified in some literature as Generation Z (Lancaster & Stillman, 2002). Herman Miller (2010a) and D. Coles (personal communication, April 23, 2010) suggest that professionals continue to engage in mentoring, acting as the mentor to young professionals and being mentored by younger generations. The Society of Human Resource Management (2008) encourages reverse mentoring--the process where workers engage with a mentor 20 years younger to explore new ways of thinking and learning. E. Rendin wonders how any mentoring can go on if new employees are sent "virtual" on day one (personal interview, April 28, 2010). This question encapsulates the employee-workplace-organizational dynamic of the multi-generational workplace: the what, where, how and why of work.

This literature review was informed by personal interviews with thought leaders and research of scholarly literature. In addition, writings from various popular sources were consulted for context. Research was centered on four themes: the characteristics of generations at work, specifically in offices in the US and to a lesser extent in the UK; examination of how the workplace environment supports various generations; investigation of the organizational culture of corporations; and the research methods used in this literature. The multi-generational trends have impacted our work lives and our personal lives as the Pew Research Center (2010) reports a 33% increase in multi-generational households since 1980. Interior designers with an understanding of the generational perspectives, personalities, and preferences, as well as workplace characteristics and the organization's culture will be equipped to design supportive, responsive workplaces.

### **Generation of Employees**

The average American employee has been exposed to a variety of popular media stories on generations in alternative workplaces. According to a *National Public Radio* four part series on workplace flexibility, a 2009 Labor Department study indicated that in 70% of families with children, both parents work. And the numbers have been rising (Cornish & Ludden, 2010). "Results only work environments" where one's work place is not defined by an office setting, now accounts for about 3% of businesses. Increased productivity, less stress, more flexibility, and better well being had been attributed to these alternative workplaces by the National Institutes of Health (Cornish & Ludden, 2010).

The US Census Bureau reported more women, minorities and older employees in the workforce. By 2050, 20.7% of the population will be 65 years old or older, as compared to 12.4% of the population in 2000 (Holder & Clark, 2008). This “aging trend is expected to continue for several decades,” indicated Pitt-Catsoupes and Smyer (2007, p. 1). US Census data projects almost 20% of the 65 year and older population will remain in the work force beyond traditional retirement age (Holder & Clark, 2008). In addition, the birth rate in the developed world is below the replacement rate of 2.2 (Drucker, 2001). (The replacement rate is defined as the number of children the average woman needs to have to maintain current population levels.) The four generations in the US workplace were categorized by Lancaster and Stillman (2002) and Pitt-Catsoupes and Smyer (2007):

- Traditionalists, comprise approximately 13% of the workforce;
- Baby Boomers, number about 80 million and represent approximately 48% of the workforce;
- Generation X, the smallest cohort group at approximately 46 million, make up 22% of the workforce;
- Millennials, number approximately 76 million and are 16% of the workforce.

Factors influencing the workforce population, in addition to age, have been defined by Pitt-Catsoupes and Smyer as “life course perspective” (2007, p. 6). Chronological age, generational age, career stage and life course perspective (Pitt-Catsoupes & Smyer, 2007) all influence an employee’s interaction with the workplace. Chronologic age no longer predicts life or career stage (Herman Miller, 2010b). Ongoing since 1998, the “Emerging Workforce® Study” (Spherion Staffing Services, 2009) identified three types of workers: “emerging; migrating; and traditional” (p.7). Culture/work environment was noted as a contributing factor in each category, along with work/life balance and compensation/benefits (Spherion, 2009).

Zemke et al., (2000) outlined core values of each generation. Traditionalists have been found to be dedicated, conforming, respect authority, willing to make sacrifices and delay rewards. They follow orders with no questions asked and duty rules their conscience (Gibson, 2009). The Baby Boomers are optimistic, team oriented, value work, youth, health and wellness (Zemke, et al, 2000). They have been known for their competitiveness and rebellious nature (Gibson, 2009). Generation X thinks globally, values diversity, informality, balance and fun. They are self-reliant and pragmatic (Zemke et al., 2000).

Business has been devouring books on the Millennial generation since they entered the workforce in 2000. In *M Factor*, Lancaster and Stillman (2010) noted this group’s need for speed, collaboration and meaning at work.

Social networking and strong connections with their parents have been integrated into their lives (Lancaster & Stillman, 2010). Zemke et al., (2000) identified optimism, confidence, achievement, morality and street smarts as Millennial core values. The Pew Research Center Millennial survey (Taylor & Keeler, 2010) found this group the most educated generation, with elevated graduate school enrollment due to the economy. Other statistics of the Millennials from the Pew Research include: (a) 75% have a profile on a social networking site, as compared to 30% of Baby Boomers and 6% of Traditionalists; (b) 20% have posted videos of themselves online; (c) 25% have a piercing other than an ear lobe; (d) 57% sleep with their cell phones. They are racially and ethnically diverse (Taylor & Keeler, 2010) and have seen their careers and first jobs seriously impacted by the economy (Queenan, 2010). According to Burnett, “iPods are the new doors,” for this generation (2006, p.114). Interestingly of the four generations Pew studied, the Millennials were the only one not to cite work ethic as a generational distinction (Taylor & Keeler, 2010).

The older generations are beginning to adopt behaviors and attitudes of the Millennials (Steelcase, 2010). In *Decoding Generational Differences*, Smith (2008) has indicated that all “generations basically want the same things, but priorities; expectations and behavior are different, delivered in different packages” (p. 25). Smith identified commonalities among all generations in the workplace. He refers to them as the “3-R’s: respected, recognized, remembered; and the 3-C’s coached, consulted, connected” (p. 26). These workplace knowledge workers “are people with considerable theoretical knowledge and learning” (Drucker, 2001 p. 2). Educated workers build knowledge in the workplace by integrating four ways of working: focusing, collaborating, learning, and socializing (Gensler, 2008). In *Knowledge Creating Company* (1995) Nonaka and Takeuchi categorized knowledge on three levels: individual, group and organization. They further analyzed knowledge as explicit knowledge, that can be expressed in language or formulas and tacit knowledge that involves personal experiences. Integrated workplace strategy (Becker, 1995) uses a cafeteria analogy to enable the individual or team to craft the workspace and work location best suited to fit the knowledge work in which they were engaged.

Grantham and Ware (2008) have shown that corporate flexible workplace policies have been introduced in increasing numbers. Their Workplace Agility Survey found 35% of corporations offered a flexible work option subject to management approval; 19% offered a very flexible policy where employees could work anywhere at their discretion; 37% utilized a restrictive policy where only a few employees were eligible; and 6% prohibited flexible work. Organizational issues of managers not being physically located with their direct reports and worker’s concern

of being out of sight and out of mind with management still exist. Flexible work requires revisions to business processes and technology (Grantham & Ware, 2008).

In their Welcoming Workplace study Erlich and Bichard (2008) explored “implications for supporting alternative ways of working” (p. 281). Looking at the needs of the older worker, their study participants had an established style of working accumulated from a lifetime of work. Paper-less or empty desk policies were found to be detrimental to their productivity. The respondent’s current workplace options did not allow opportunities for talking openly without disturbing others and space where messiness was allowed. In addition, the study explored the need for both collaboration and concentration spaces. Health and physical environment issues focused on improved lighting and ergonomic seating. Interestingly, the study addressed the concept of recuperation and rest in the workplace. As the work/home borders are being blurred, the acknowledgement of “natural fluctuations of the body” (p. 281) must also be addressed. In conclusion, Erlich and Bichard found that older workers were hesitant to be singled out as it was unclear to them, the value the organization placed on their services. The recommendation was to provide accommodations for the entire workforce.

McElroy and Morrow (2010) sought to compare the impacts of one group of employees re-assigned in an office with another group of employees who remained in the original office/cubicle environment. The study looked to compare perceptions of organizational culture, employee attitudes toward their jobs and whether age of the employees was a factor. Gen X and Boomers reacted similarly to the change, expressing concerns about less room and distractions in the newly designed offices. Favorable comments on décor, design and furniture were countered with negative comments on lack of privacy and distractions. Millennials reacted less to change, when compared to Gen X and the Boomers. McElroy and Morrow suggested that the Millennial’s diminished reaction to change was potentially due to their lack of experience with office configurations, their impressionable years of development, different value systems or their generational ability to tune out distractions. Overall, the study findings did confirm that age of employees was a factor and the physical environment could be used to support organizational change.

Brennan, Chugh and Kline (2002) assessed the long term impacts of employees relocating from traditional offices to open plan workspaces. This case study did not consider age as a factor. Prior to the move, 76% of employees occupied 144 square foot (SF) private offices with a door. After the move, 81% of respondents were in open plan workstations with 65” high panels. The data indicated that employees were negatively affected by the relocation to open offices and that the negative perception did not abate over time, as satisfaction was reported at its

lowest after employees had been in the new space for six months. “The primary complaints ... were lack of privacy, confidentiality and increased noise” (p. 294). The authors cite previous studies which contradict the premise that open plan facilitates communications, arguing that lack of privacy prevents communications from occurring. Workspace and storage were also perceived to be inadequate. The authors noted that “the perceived adequacy of office space was found to be more important than the actual amount of space provided to employees” (p. 295). The establishment of a training plan was recommended to improve environmental satisfaction.

Training employees on how to act in the office and establishing protocols for interactions in the open office plan (Brennan et al., 2002; Herman Miller, 2010b) should become a part of the change management process. The “wild west of technology” (K. Sargent, personal communication, January 22, 2010) currently has no rules for Blackberry hours. B. Lee (personal communication, January 22, 2010), a Millennial, reported having two phones: his work Blackberry that he turns off after hours and his personal phone which he uses to stay connected at all times. User created 3-D virtual worlds, like Second Life, are being used in the workforce for recruiting by the IRS, for training by Northrup Grumman and for meetings by IBM. Technology, in this case, puts all on a level playing field (Gratke, 2010).

Younger workers do engage in more communication and monitor more information in a multitude of ways; however, Haworth (2009) suggests that the Millennial multi-tasking is a myth. Haworth contends that this generation has not altered human physiology and Millennial’s ability to process multiple complex tasks has not improved when compared to other generations. In fact Haworth suggests that multi-tasking lowers task performance, produces “techno-brain burnout...reduces sensitivity to face to face social cues” (p. 2).

Elsbach and Bechky (2007) suggest that interior design impacts decision making. When employees no longer have an assigned office desk, if they are of a paper generation, their books, reports and files reside at home. When confronted with a decision to make at the office, if the data/paper is not at hand, the decision will either be delayed until the data/paper can be accessed and analyzed or the decision will be made on intuition. Enabling an alternative working arrangement, based on generation, organizational culture and project requirements could benefit the employee and employer.

Drucker (1999) observed that current employment law is based on full time employment, while older workers are frequently not in the traditional 9am-5pm framework. Part time, consulting, temporary and special assignments (Drucker, 2001) leased and contingent worker arrangements (HRthatWorks, 2008) are more prevalent

employment choices for this generation. Grantham and Ware (2008) acknowledged that “social and economic bonds between workers and organizations will be weaker, shorter and more fluid” (slide 4). Job flexibility must be balanced with compliance issues (HRthatWorks, 2008) as employers struggle with the policy, technology and workplace. Gensler (2008) proposed an annual employment contract where one would sell 1800 hours to an organization and discuss how the time would be spent. Simple alternative workplace solutions include the “four hour overlap” where all employees are required to be in the office from 10am to 2pm (M. Adleman, personal communication, April 28, 2010). Smith (2008) contends that flexible work arrangements are a place to start, but are too narrow, often determined on a case by case basis and address only one dimension of a person’s career. Employers must “increase adaptability of a workplace to a changing workforce” (Smith, 2008, p.79) and interior designers must adapt the workplace to meet this requirement.

### **Workplace**

Herman Miller (2010b) indicated in their research that the “cost efficiency of the work environment and the productivity of workers” (p. 2) are the top issues affecting facilities strategy. How a corporate organization interprets these strategies in their workplaces varies significantly. Herman Miller (2010b) also noted a discrepancy between facility managers and design/architecture professionals with regard to amount of space allocated to collaboration in the next five years. Facility managers reported that 36% would increase collaboration space in their organizations, while 88% of design/architecture professionals anticipated an increase in collaborative space for their clients (Herman Miller, 2010b). This disconnect reflects the paradigm shift as the office moves into a new form. B. Berthold (personal communication, April 26, 2010) likens this “transition from the horse and buggy to the automobile.” At the beginning, “there were no paved roads, no gas stations. Now we don’t even have a road map” for where the office is headed. Transitioning from the desk-centric arena with an occasional meeting to the meeting-centric arena with occasional time at your desk, his message to the furniture industry is “don’t show me the latest cube where people don’t sit anymore” (B. Berthold, personal communication, April 26, 2010). E. Rendin (personal communication, April 28, 2010) found alternative workplace policies inconsistent, being determined by business units. While espousing to be bottom-line oriented, surprisingly conventional workstations, most un-occupied, many with ineffective 48” high sliding screens in place of a door, caused E. Rendin to pause and ask “what are we doing here?” (personal communication, April 28, 2010).

The purpose, intent, and role of the office have evolved. Despite the many versions of alternative work, the physical office takes on symbolic meaning (Elsbach & Bechky, 2007). Employees return to the office for face time, meetings, training and mentoring, as their presence in the office “improves perceptions of employee performance” (p. 80). “The symbolic effects of time spent in the office...are correlated with higher job satisfaction and lower turnover rates” (p. 81).

This “in the office” satisfaction and performance perception has been disputed by Coles, Grantham and Ware (2009) in their work with SCAN Health. SCAN Health aligned their corporate real estate workplace strategy to support their overall corporate strategy. Change management and metrics to measure employee performance and satisfaction throughout the process indicated superior employee engagement and productivity for their employees that moved home to work (D. Coles, personal communication, April 23, 2010).

Propst (1968) described the office “as a thinking place” (p. 19) forty years ago. Today “mind- oriented living spaces” (p. 19) extend beyond the confines of the office. Grantham and Ware (2008) have found that “two thirds of knowledge work done today, takes place outside corporate offices” (slide 6). Knowledge workers are presented with numerous ways to work outside the office, so choice and flexibility within the office has become essential. In organizational ecology suggested by Becker and Steel (1995) “one size does not fit all” (p. xxi). Fik (2010) warns to “look out for design that throws out the one of us for the all of us” (D. Fik, personal communications, April 21, 2010). Zemke et al, (2000) suggests that “generationally friendly companies allow the workplace to shape itself around the work being done...” (p. 156). The Sloan Center on Aging & Work (2009) states that “employee engagement can be greatly enhanced...by promoting a culture of workplace flexibility...” (p. 1). “Flexibility and creativity” ranked second in the Gensler Workplace Survey (Sullivan, 2008, p. 9). Almost three quarters of respondents from top performing corporations were “highly satisfied” with the “functionality of their personal workspace” as compared to 48% of respondents from average performing corporations (p 9).

A review of workplace characteristics in a multi-generational corporation by Erlich and Bichard (2008) found many options for collaboration and teaming, but fewer opportunities for focus work. Their research indicated that hot desking, when employees work at a different un-assigned desk every day, was “detrimental to collaboration and concentration” (p. 279). Their findings indicated that older workers would be more likely to hot desk as their assignments were often flexible, special or short term and thus not be assigned a permanent workstation. With regard to the use of computers and telecommunications, Erlich and Bichard evaluated all the equipment in a typical

workspace and suggested that no additional space was available for anything other than computer work. Control of the physical work environment was also a desired attribute, including control of lighting and furniture (Erllich and Bichard, 2008). “Sit-stand desks and meeting tables were unanimously approved and perceived as a potential asset...” (p. 280). Interestingly, the study also investigated the use of non-sitting work positions such as “semi-reclining, stand up, perch and even walking positions” (p. 282) as potential benefits for employees of all ages.

Kupritz (2003) reported that older workers and younger workers may prefer a certain attribute of the workplace for differing reasons; one group may prefer an office to conduct small meetings while another would prefer an office for speaking privately. A larger personal work space ranked first among older and younger respondents; however, neither group placed full height walls and a door as a first priority. Other factors in the study included adequate worksurface, being located away from the traffic flow, adequate lighting, more personal storage and flexible workspace where furniture could be re-arranged.

The distinguishing aspect of SCAN Health’s new workplace revolves around the ability for employees to create their own workspace. Teams of four, six or eight employees are provided with a kit of mobile furniture parts to configure and re-configure as the work demands within a fixed 256 SF or 384 SF framework. (D. Coles, personal interview, April 23, 2010).

Taken in isolation, the reduction of square footage in an employee’s workstation has negative consequences, but when an office project with the aim to reduce overall square footage was viewed as a whole, other aspects such as “layout, décor and ambience have a positive impact” (McElroy & Morrow, 2010, p. 628).

Moreover, the influx of Millennials and departure of Baby Boomers from the workforce suggest that initial adverse reactions to office redesigns will diminish with the passage of time while improvements in culture and work attitudes should extend to all generational groups (p. 628).

Interviews with thought leaders, individuals with ideas of merit and importance, and review of the literature concurred that the age of an employee does not demand special workplace considerations to facilitate job performance. D. Coles’ SCAN Health project does not provide special age related accommodations and reports that their team of Senior Advocates works side by side with twenty five year old employees (D. Coles, personal communications, April 23, 2010). In his work developing the multi-year, multi-million SF workplace strategy project for Capital One, Berthold’s team did not provide any generational differentiation in the workplace. “Generations did not matter” in the success of this project (B. Berthold, personal communications, April 26, 2010).

Kupritz (2003) suggests that aging workers do not require any special accommodations to perform their jobs. Haworth (2009) contends that knowledge workers from all generations require the same work places to foster collaborative and concentrative work. “Workplaces and work spaces must be designed so that they are appropriate for the work that is done within them, no matter what the generation of the workers involved” (Haworth, 2009, p. 3).

### **Organizational Culture and the Office**

Organizational culture’s impact on the office has been noted as a significant feature by interviews with thought leaders and review of the literature. The office “...will be a place for collaboration, face to face encounters, knowledge sharing and bonding to build company culture” (Sargent, 2009, p. 7). Office redesign favorably impacts “perceptions of company culture and employee attitudes” (McElroy & Morrow, 2010, p. 628). Employees that were engaged in new innovative office environments viewed the company culture as less formal and itself innovative when compared to more traditional interiors (McElroy & Morrow, 2010). The Google offices make no overture to accommodate employee gender, generation or culture, but rather the office functioned primarily as a physical manifestation of their dominant organizational culture and resulting brand (Anonymous, personal communication, April 9, 2010). The Society for Human Resource Management (2008) “recognizes the impact of organizational culture” in their workplace trends (p. 6). “Leaders create culture, leaders embed culture” and leaders teach culture to new generations (Schein, 2004, p. 225). Hugh De Pree infused his culture of design into every aspect of his family’s furniture business. “That was the Herman Miller culture handed down generation to generation...” (Martin, 2009, p. 114). Fik said it most succinctly: “culture trumps strategy” (D. Fik, personal communication, April 19, 2010).

Schein (2004) suggests that culture is not good or bad, right or wrong, “culture simply exists” (p. 60). Culture is the personality of an organization. Observers can see the behaviors manifest in an organization, but not necessarily the forces at work. Schein (2004) likens corporate culture to anthropology with a view to customs and rituals. “Culture is easy to observe and very difficult to decipher” (p. 36). Corporate culture fulfills a need for “stability, consistency and meaning” (p. 17). Schein observes some level of corporate culture within “any social unit that has some kind of shared history” (p. 22) and a stable membership. Within organizations, Schein identifies three organizational sub cultures: operator culture-deals with the people; technology culture-focuses on machines and processes; and executive culture-the economic/financial aspects. In organizations with an “integrated culture,”

the groups will “share a single set of assumptions” (p. 200). In a “differentiated culture” the groups will exhibit “powerful sub cultures (which) disagree on certain crucial issues, such as labor and management” (p. 200). In a “fragmented culture “there is little consensus on any cultural dimensions.... such as a financial conglomerate with no overarching set of assumptions that are shared” (p. 200). Schein contends that in large organizations, these multiple sub cultures are complex and competing.

Developed originally in 1999, the *Competing Values Framework* (Cameron & Quinn, 2006) assists employees and employers in recognizing the identifiable values, beliefs and vision of a corporation.

The Competing Values Framework “has been found to be an extremely useful model for organizing and understanding a wide variety of organizational and individual phenomena, including theories of organizational effectiveness, leadership competencies, organizational culture, organizational design, stages of life cycle development, organizational quality, leadership roles, financial strategy, information processing and brain functioning (Cameron, 2009, p. 5).

Different departments, divisions, or work groups in an organization may exhibit varying cultures, but the common culture is what binds the organization together. Corporate culture can be diagnosed and changed to improve performance (Cameron & Quinn, 2006) and the redesign of office interiors frequently plays a role in the transformation. The office environment represents a cultural artifact (Elspace & Bechky, 2007; McElroy & Morrow, 2010; Schein, 2004), that may contribute to organizational culture change (McElroy & Morrow, 2010). Schein (2004) defines artifacts as “visual by products of culture...” (p. 25). The workplace is an important artifact for culture with its “physical and social meaning” (p. 163). These space messages are not limited to the interior environment, but extend to the building location. The meaning of an office located in an urban high rise or in a warehouse or in an industrial park all have different cultural implications. Schein (2004) advises business leaders to get their cultural messages correct and not the leave the cultural interpretation solely to the interior designer.

Design professionals must be informed by an organization’s culture. Cameron and Quinn (2006) have developed a six question “organizational culture assessment instrument” (p. 23). The questions request whether the respondent’s corporation “now” or would “prefer” to exhibit the characteristics in the following areas: “(1) dominant characteristics, e.g. organization: personal or results oriented; (2) organizational leadership, e.g. entrepreneurship or aggressive; (3) management of employees, e.g. competitive or predictable; (4) organizational glue, e.g. loyalty or

achievement oriented; (5) strategic emphases, e.g. creating new challenges or efficiency and control; and (6) criteria for success, e.g. newest products or outpacing competition” (Cameron & Quinn, 2006, pp. 26-28).

The “organizational culture assessment instrument results identify four major culture types:

- hierarchy culture (controlling) ;
- market culture (competing) ;
- clan culture (collaborative) ;
- adhocracy culture (creative)” (Cameron & Quinn, 2004, p. 46).

If the corporate real estate strategy was aligned with the overall organizational strategy, then the office re-design team should play an integral role. The Cameron and Quinn methodology to access and implement organizational culture, can integrate with the interior design process. First “reach consensus on the current culture.... reach consensus on the desired future culture....determine what the changes will and will not mean....identify illustrative stories....develop a strategic action plan....develop an implementation plan (Cameron & Quinn, 2006, pp. 90-101).

Schein (2004) maintains that typologies may oversimplify the complexities of organizational culture; may organize reasoning into incorrect categories; and may limit the perspective to see complex patterns. However, Schein (2004) does acknowledge their value to simplify and to establish categories to sort out complexities. In the scope of a typical office redesign project, interior designers will not become experts in the theories of organizational culture. However, the Cameron and Quinn (2006) *Competing Values Framework*, may provide basis for identification of cultural characteristics.

## **Research Methods**

This research methods section is not intended to represent an analytical study of the methods, but rather a summary of methods used by the sources contained within this literature review. Further study on research methods will be a future subject for this author.

### **Informed Interviewee Research Methods**

In the informational interviews conducted by this author, thought leaders involved in corporate office research and design discussed their research methods. They are summarized below in descending order of relevance to my research and interest.

- Narrative inquiry is a method of research where one collects data not easily attained in other methods (J. Dohr, personal communications, May 6, 2010). Narrative inquiry has been increasing as a form of scholarship and encourages inter-disciplinary collaboration (Budd, 2000). By definition “narrative inquiry is the process of gathering information for the purpose of research through storytelling. The researcher then writes a narrative of the experience...” (Colorado State University, 2010, p. 1).
- When SCAN Health initiated its workplace transformation, metrics were used to measure performance. Six months prior to project start up, SCAN engaged Gallup to develop a telecommuting survey. Customer service satisfaction was also measured. The project incorporated “focus groups, pilot projects, lessons learned sessions, pre and post occupancy surveys” (D. Coles, personal communication, April 23, 2010). SCAN management required monthly measurement reports as performance was a key indicator throughout their office redesign process (D. Coles, personal communication, April 23, 2010.)
- The IDEATION Group within Haworth, Inc. conducts theoretical and applied research, employing social scientists, designers and facility managers. Fik discussed “emotive: in person and rational: on line” responses in surveys and research (D. Fik, personal communication, April 21, 2010.)
- Interface/FLOR began an internal program to educate its sales reps on how to sell carpet to different generations. That original effort evolved into a major interview-research project. National speaking engagements now present an ever growing pool for interviews and data generation for A. Lukken (personal communication, April 21, 2010).
- Designing unique questionnaires for specific client requirements in their generational consulting and training practice, S. Gibson and A. Mancini, incorporate undergraduate students at the University of Wisconsin-White Water into their research (S. Gibson, personal communication, April 2, 2010).
- Contextual research scans the literature for patterns, identifies trends, searches databases and video ethnography looks at behavior of subjects in their natural environment. These methods are used by the Doblin group in their research for clients. (H. King, personal communication, April 20, 2010).
- Metrics governed the Capital One project from inception through implementation. “Prove it to do it” was required by the analytical nature of the client (B. Berthold, personal communication, April 26, 2010). Measurements backed up every decision as “surveys, time utilization studies, observation and calendar

records” were among the techniques used to track the success and challenges of the process (Grantham, Ware & Williamson, 2007, p. 66).

- TVS Designs partnered with Herman Miller research for the redesign of their Atlanta office. Implementing “space syntax analysis” the team studied their current offices, particularly tracking opportunities for interaction (M. Adelman, personal communication, April 28, 2010).

### **Scholarly Article Research Methods**

Erlich and Bichard (2008) implemented an “integrated method approach” including interviews (two hour-semi structured), group discussions and design interventions. The design interventions involved the creation of three conceptual office environments where subjects came to work, test and discuss. Their feedback was recorded and analyzed. The authors noted that the size of this small case study and the fact that only older workers were included as the two limitations. The workplace was described as the “UK headquarters of a global organization” (Erlich & Bichard, 2008, p. 273).

Kupritz’s (2003) research method was the cognitive ethnographic method, Heuristic Elicitation Methodology (HEM). “HEM stimulus materials are respondent-generated and respondent categorized rather than investigator-generated and investigator-categorized” (Kupritz, 2003, p. 113). This method incorporated questionnaires and interviews. Kupritz (2003) indicated that the questionnaire matrix took respondents about 20 minutes to complete and that her experience indicated that the sample size of 50 was stable. The workplace used in the study was described as “service organizations in the same geographic area” (Kupritz, 2003, p. 113).

Brennan et al., (2002) conducted a field study organized into two segments: (1) interviews and focus groups with administrative employees were used to develop a questionnaire; (2) the questionnaires were administered just prior to relocation, one month after the move and six months after the move. Noted limitations of the study were the size of the sample, attrition of participants, no control group and a “lack of objective measures” (Brennan et al., 2002, p. 295) as respondents’ perceptions of the space could not be verified by hard data on the respondents’ performance in the space. The organization was described as a “large private oil and gas company in western Canada” (p. 286). The original offices were in a downtown high rise and the new offices were located in an industrial park in the same city.

McElroy and Morrow (2010) developed an on-line survey administered to 350 employees. Chi-square and *t*-tests were used to control for differences in the sample of employees who were moving to the new space and those who were remaining in the existing offices. A Multiple Analysis of Variance (MANOVA) test determined “whether move status and age cohort have effects across all the outcome (dependent) variables” (p. 622). Analysis of Variance “...ANOVA was used to determine the moderating effects of age on the effects of the change in office design” (p. 625). Noted limitations of the study were the non-random assignment of respondents moving to the new offices and the respondents remaining at the existing offices; some of the respondents had worked at the original offices and may have been making comparisons between new and old offices; the inability to “isolate the precise office design dimension responsible for these results” (p. 629); and “perception about the company culture, the organizational willingness to invest in its employees, between the movers and non-movers” (p. 629). The office was described as a large Midwestern financial services organization.

When adding the dimension of culture to a research method, Schein (2004) admonishes the researcher to “overcome our own cultural prejudices” (p. 60) and personal bias when evaluating a culture. In observing an office environment, Schein suggests that a formal hierarchical plan does not necessarily signal an ineffective culture. Schein (2004) further suggests that when observing a culture at a distance, the “data may be clear, but undecipherable” (p. 205). When the researcher is involved in the “participant observer/ethnographer” role, Schein cautions that “we unwittingly change the very phenomena we are trying to study” (p. 205). Lastly, with regard to the study of corporate culture, Schein (2004) warns that many organizations will not allow information on corporate culture to be made public. He likens the publishing of an organization’s cultural details to therapy, where corporations may not be ready “for the insights that therapy inevitably brings” (p. 215).

### **Other Organization’s Research Methods**

The *Gensler 2008 Workplace Survey-US* utilized on-line questions from 900 full time employees who worked primarily at an assigned location, included all levels of staff, and were geographically distributed across the US. Numerous business sectors were incorporated. The survey included company profit and revenue growth, values, brand and performance questions. An independent research firm, Added Value a subsidiary of WPP, worked in collaboration with Gensler (Gensler, 2008). For office design projects when actual observation was not possible,

the Gensler team used a photo-ethnography method, where respondents replied to an on-line survey by uploading photos of their workplace (Sullivan, 2008).

The *Generation Y and the Workplace Annual Report 2010* team designed a web-based interactive questionnaire that used images to build a visual profile (Johnson Controls, 2010). The web site [www.Oxygenz.com](http://www.Oxygenz.com) gathered data from a specific age cohort. Respondents numbering 5,375 from the US, Asia and Europe represented a variety of business sectors. Questions focused on Generation Y's (Millennial) "preferences around ways of working and workspace design" (Johnson Controls, 2010, p. 15). The target age of respondents was 18 to 25 years old. This presented limitations in that an unknown (or unrevealed) number of respondents were speculating about their preferred way of working and workplace design rather than from experience, as they had not yet worked in an office environment.

The Society for Human Resource Management convenes thirteen "Special Expertise Panels to identify topics of importance to the human resources (HR) profession" (SHRM, 2008, p. 2). Panel members serve a one to three year term, are subject matter experts in their discipline and reports are published annually.

Spherion (2008) engages Harris Interactive to conduct the bi-annual Emerging Workforce<sup>®</sup> Study. The research was conducted by phone and on-line via two respondent groups: (a) HR managers-numbering 306 and (b) employed adults over the age of 18 years old-numbering 2,519.

The Sloan Center on Aging & Work at Boston College has conducted numerous studies on the generations at work. The most recent gathered data from two five month time periods in 2007 and included approximately 2,210 employees from nine US workplaces spanning twelve different department types. Data was collected mostly from on-line surveys, with some written questionnaires. Questions ranged from perceptions of their work, perceptions of the organization and work group to work-style and outlook on life.

The Pew Research Center utilized telephone surveys to gather the data for the *Millennials: Confidant. Connected. Open to Change* survey (Taylor & Keeler, 2010). The method included a random digit sample of landline and cell phone numbers from the continental US. The methodology did not specifically state, however this author surmises that the data for this particular study may have also incorporated the "oversampling" strategy where more members of a particular sub-group are included. This ensures that "more reliable estimates can be reported for that group" (Pew Research Center for the People & the Press, 2009, p. 3). Also interesting to note, Pew included approximately 25% of random survey calls to cell numbers and 75% to landlines.

### **Sample Questionnaires**

Many of the works in this literature review included sample questionnaires. Becker (2004) developed “Workplace change readiness tool: sample questions” (pp. 128-130). Becker embraces change in an informed method stating “The best management tools don’t make decisions, they stimulate informed debate” (p. 125). Grantham and Ware (2008) inform their research by on-line survey instruments. Customized for the needs of a specific client, the results are often proprietary and distributed only to members of their network. Steelcase WorkWays<sup>®</sup> Survey Reporting Tools enable customers to select from a variety of “pre-made” survey questionnaires. For a nominal fee, Steelcase will implement the on-line survey to a corporation, track and report on results. Designed primarily for corporations, the survey summarizes by department, generation/age and position tenure, meaning how long one has held their current position.

Zemke et al., in *Generations at Work* incorporated a do it yourself survey: “Inventory: How Cross-Generationally Friendly is Your Work Group, Department, Business or Organization” (pp. 253-257). Respondents discuss how employee differences are addressed, and also workplace choices, management style and retention. There is a four part scale to score the results.

Cameron and Quinn (2006) include two survey instruments. The first is an “Organizational Culture Assessment Instrument-Current Profile” (pp. 26-30). In six questions, business leaders rate their organizational culture- now and preferred. A simplified score sheet determines which of the four cultures from the competing values framework (hierarchy, clan, market or adhocracy) your organization would fit. The second instrument, “Management Skills Assessment Instrument Self-Assessment Form” (p. 171), is a sample form which Cameron and Quinn administer to their business clients. The 97 questions designed to be completed by an organization’s managers are also administered to the manager’s “subordinates, peers and supervisors in the organization” (p. 171). The survey assesses behavior and requests that respondents reply as they act, not on the basis of how they think they should act. A competencies report will be produced comparing the results with 80,000 other business managers.

### **Discussion**

In reflecting on this body of literature, four published pieces and three personal interviews stand out as most influential in this review. The research done by McElroy and Morrow (2010) most closely represents my area

of interest. Their study incorporated workplace design, generational age and organizational culture factors by comparing the impacts on one group that re-located to new offices and to another that remained in the existing offices. The Erlich and Bichard (2008) UK study incorporated the research data aspects common to these scholarly endeavors, but also analyzed the psychological and cultural anthropology aspects of the findings. While the *Gensler 2008 Workplace Survey* did not factor age into their findings, the summary did incorporate numerous workplace categories and the descriptor of “top” and “average” performing defined the success of the organization. Numerous writers cite this research. The brief but informative summary, *An Introduction to the Competing Values Framework* (Cameron, 2009) in a succinct style, introduced the concept and identified the significance of identifying organizational culture. The generosity of individuals consenting to personal interviews and facility tours was humbling. In particular, D. Coles’ discussion of the SCAN Health project translated the theory into practice. D. Fik, himself a researcher, was skilled enough to present complex principles in comprehensible packages. At the conclusion of my interview with H. King, he apologized for perhaps not being able to speak to my questions as I had expected, which was the precise point of his value. King is a meta-thinker, looking beyond for complex patterns and relationships. The notes from that interview continue to reveal findings not completely understood at their writing.

This literature review has identified four factors for consideration and future study.

- First, the aspect of tenure, the length of time someone has occupied a current position, did not appear to be included in the studies reviewed. The Steelcase surveys did integrate that aspect into the data tabulation; however, the others appeared to only capture chronologic age.
- Second, the significance of alternative work options were discussed but not incorporated into the research methods. Did employees have the opportunity to work off-site or from home or from a Third Place (Grantham & Ware, 2008)? Non full-time or temporary respondents were typically excluded from the research. How would that group’s responses impact the findings?
- Thirdly, in the scholarly literature, the impacts of technology were discussed largely as they influenced the respondents’ workstation. The popular writings did discuss the impact of technology on facilitating alternative work policies and on the various generational perceptions of technology: the freedom to work anywhere or the demand to be constantly connected. Elsbach and Bechky (2007) touched on the implications of technology in the workplace when discussing the decision making process and the need

for data, but no studies addressed the impacts of data storage or cloud computing on the generations in the workplace.

- Finally, only McElroy and Morrow (2010) incorporated corporate culture considerations into their research. They did not attempt to categorize the culture as did Cameron and Quinn (2006), but rather just acknowledged that the new office space offered a new and different culture than the existing offices. The other studies only listed the industry sector of the office in the methodology section: a large global organization or a privately held mineral concern or a large financial institution. Were all these offices hierarchical in nature and what (if any) impact did the organizational culture have on the workplace and the generations at work there?

Companies are increasingly under pressure to update their organizational culture. Concepts like design thinking in business (Martin, 2009) offer methods to transform organizations using a blend of exploration and exploitation. Martin (2009) suggests that businesses too often rely on analytical thinking where “all proof emanates from the past” (p. 24). With regard to the design of their offices, many organizations take the conventional approach, perimeter private offices, interior high panel cubicles or some variation on this theme. Martin calls it “worshiping at the altar of reliability” (p. 24).

Further research on generations in the workplace by this author could incorporate the following criteria:

- Generational:
  - the chronological age of respondents;
  - the tenure of respondents, meaning how long have they worked in their current role/position, not necessarily at this particular company, but in their career.
- Operational:
  - the respondents are full or part time employees;
  - if the respondents are involved in alternative workplaces (do they have an assigned or un-assigned workstation);
  - capture the locations and relative percentage of time where the respondent works .
- Cultural:
  - the organization’s culture is stable or in transition;
  - discern the organization’s culture using the *Competing Values Framework*.

- Technological:
  - document the physical devices of technology in use by the respondent;
  - record the software, social media and methods integrated into getting the work done (e.g. impact of cloud computing).
- Workplace
  - document respondent's primary workplace(s)
  - develop (or borrow) descriptive categories to characterize work-types (e.g. nomad...).

Workplaces, culture, technology, generations, policies all contribute to how work gets done. Much has been written, studies conducted, products sold, consultant fees paid, debris land filled, space leased or not around this question. "When you go to work, it matters" (M. Pitt-Catsouphes, personal communication, March 12, 2010).

## References

Becker, F. (2004). *Offices at work: Uncommon workspace strategies that add value and improve performance*. San Francisco, CA: Jossey-Bass.

This book focuses specifically on space in the office environment. Becker investigates questions of space as a competitive advantage for business, how office space influences behavior/performance and how innovation in space design impacts brand, corporate culture, organizational dynamics and the bottom line. Enlightened business leader and design/ architecture professionals will immediately connect with this easy to read book. Case studies and practical approaches investigate what works and what does not work in office planning. Each chapter concludes with an "Implications for Practice" section with bullet points to immediately apply concepts into practice. Becker is a professor at Cornell University and director of the International Workplace Studies Program, whose research contributed to this work. He is also the founding editor of the *Journal of Corporate Real Estate* and the *Journal of Facilities Management*. The underlying fundamentals of office planning are still current in the six years since this book's publication. It serves as a ready resource on all matters relating to office design and planning.

Becker, F., & Steel, F. (1995). *Workplace by design: Mapping the high-performance workscape*. San Francisco, CA: Jossey-Bass.

The fifth in a series of workplace strategy books aimed at the design community, facility managers and business executives involved in the planning and development of high performance offices. The tenants of organizational ecology are discussed: work processes, physical settings and furniture and information technology. Concepts now common practice such as the universal plan and the fixed service spine were elucidated in this work. Becker is a professor at Cornell University and director of the International Workplace Studies Program, whose research contributed to this work. He is also the founding editor of the *Journal of Corporate Real Estate* and the *Journal of Facilities Management*. Steele is a former professor, teaching at Yale University and Harvard University. He has a consulting practice on organizational and environmental change. This seminal writing on the workplace will provide a perspective on where the office has been as a guide to future directions.

Brennan, A., Chugh, J. S., & Kline, T. (2002) Traditional versus open office design: A longitudinal field study. *Environment and Behavior*, 34, 279. doi: 10.177/0013916502034003001

This article discussed a research study measuring employee satisfaction with new open plan offices over time. The study was a pilot to determine if the organization should implement the open plan offices company wide. Generational age was not considered in this study. Brennan was a PhD candidate at the University of Calgary studying industrial-organizational psychology at writing of this article. Chugh was a human factors engineer with a US consulting firm at the writing of this article. Kline was a professor of psychology at the University of Calgary, specializing in creating organizational excellence. Understanding research methods and the implications for office redesign after the initial move are key components of value in this article. The writing is targeting a scholarly audience. The summary does not discuss if the open plan alternative was assumed as a company standard in light of the negative results of this study.

Budd, C. (2000). Narrative research in design practice: Capturing mental modes of work environments. *Journal of Interior Design*, 26(2), 58-73.

STUDIOS Architects and Budd practice narrative inquiry as a design research method. The narrative inquiry tool enables more complex analysis of the interior environment in the broader business context. The article defines narrative inquiry, describes how STUDIOS incorporates this research method into their practice and details two case studies. Budd is a managing principal of the firm with a MS in Environmental Analysis from Cornell University. The relevance of the article is enhanced by the ensuing years since its publication, establishing longevity for this research method. Interior design practitioners and scholars will find value in this accessibly written article.

Burnett, L. (2006, May 1). Welcome Millennials. *Contract Magazine*, 48(5), 114.

*Contract Magazine*, a major commercial interior design industry publication since 1950, publishes monthly in print and on-line on news, trends and projects. Burnett is a staff writer. This article highlights the interior design industry's challenges in assimilating the Millennial generation. It provides a very basic introduction to the demographics of this age cohort.

Cameron, K. (2009). *An introduction to the competing values framework*. Retrieved from <http://www.haworth.com/en-us/Knowledge/Workplace-Library/Documents/An%20Introduction%20to%20the%20Competing%20Values%20Framework.pdf>.

This organizational culture white paper outlines in easy to comprehend text, the principles of the competing values framework. Originally developed 20 years ago by Cameron and a colleague at the University of Michigan, this business model evaluates organizational culture, leadership roles, management skills and information processing styles. Haworth, a major furniture manufacturer, partnered with the author and the University of Michigan to interpret the competing values framework into physical space (e.g. offices) for business. This short article written for the design/architecture profession includes graphics to colorfully illustrate the principles. Dr. Cameron is a professor in management and organizations at the University of Michigan's Ross School of Business. For design professionals designing space for business, the competing frameworks model provides a comprehensible mechanism to categorize corporate culture.

Cameron, K. E., & Quinn, R. E. (2006). *Diagnosing and changing organizational culture: Based on the competing values framework*. San Francisco, CA: Jossey-Bass.

The authors contend a company's organizational culture impacts their success and provides a competitive advantage far greater than conventional business strategies. Targeted at business leaders, the book's accessible style and numerous examples offer insights into the success of businesses that recognize and cultivate their organizational culture. Cameron and Quinn, both professors in management and organization at the University of Michigan's Ross Business School have incorporated their years of consulting with the Fortune 500 to illustrate their principles.

While some of the examples are now dated, the premise of the framework is still robust and in use as intellectual property by the University of Michigan. *Diagnosing and Changing Organizational Culture* can serve as a workbook for the process of changing organizational culture. Relocation to new office space is often one component of a culture change, so the methodologies in this book are immensely important to interior designers engaged in the process.

Coles, D., Grantham, C., & Ware, J. (2009, October 7). *Getting real: Transforming the workplace at scan health*. Presentation at International Facility Management (IFMA) WorldWorkplace, Orlando, FL. Presentation retrieved from <http://www.slideshare.net/jpware/getting-real-transforming-the-workplace-at-scan-health-1309959>

This presentation targeted to facility managers and design/architecture professionals highlighted the process and end product of SCAN Health's total office transformation. Cole, the Director of Workplace Services at SCAN, partnered with applied researchers Grantham and Ware of the Work Design Collaborative, to develop and implement an alternative workplace strategy. Coles was the recipient of the 2009 IFMA National Achievement Award. Grantham and Ware are authors, speakers and workplace strategists on the future of work. The SCAN project embodies characteristics of how offices may be designed in the future and having access to this primer on the SCAN project process will serve as a valuable reference point. The concepts described in this presentation are so forward thinking that currency is not a factor.

Colorado State University, Writing Center. (2010). *Narrative inquiry*. Retrieved from <http://writing.colostate.edu/guides/research/observe/com3a2.cfm>

This short articulate description on narrative inquiry provides a detailed list of opportunities for data collection and discusses applicable fields for this research method. It is authored by the Colorado State University Writing Center staff. This narrative inquiry entry is one among numerous other research methods explored on this site. The intended college student audience will find this information current and comprehensive.

Cornish, A., & Ludden, J. (2010, March 14). Nine to five no more: New shifts for labor. *National Public Radio Podcast*. Podcast retrieved from <http://www.npr.org/templates/story/story.php?storyId=124667594>

This is first in a series of National Public Radio broadcasts on the changing workplace and making the workday more flexible. In this podcast the host, Audie Cornish, a Washington DC based NPR News reporter is interviewing NPR Morning Edition's reporter Jennifer Ludden. The piece suggests that all generations of workers are seeking a more flexible work day; "it's a completely new attitude toward work..." (p. x) This timely report includes Labor Department statistics and discussion on "results only" work environments. NPR Popular broadcasts are a primary source of information about the generations for the office population. Developing an understanding from this perspective will assist in creating a research instrument for this audience. Written transcripts are available for all podcasts on NPR.

Drucker, P. (1999). Knowledge-worker productivity: The biggest challenge. *California Management Review*, 41(2), 79-94.

Drucker, the late seminal writer and management consultant, coined the phrase "knowledge worker" in 1959. In this article, he discusses measuring and accessing the productivity of knowledge workers. Interested in the behavior of people, Drucker outlines factors which will determine knowledge worker productivity including: innovation, quality/quantity and autonomy. While over a decade old, this article is often cited in office design research studies and will bring his business acumen to my workplace thinking.

Erlich, A., & Bichard, J. (2008). The welcoming workplace: Designing for ageing knowledge workers. *Journal of Corporate Real Estate*, 10(4), 273-287.

This article documents a UK study to investigate the needs of older knowledge workers in one global organization. The research team was multi-disciplinary and the research methods included interviews, group discussions and design interventions. Interior and environmental design researchers, human resources, real estate and facilities management professionals will find this of value. Erlich is a psychologist and consultant to the Royal College of Art in London where she advises on research for design innovation and workplace environments. Bichard is trained as a social anthropologist and is a research fellow at the Royal College of Art. The authors have expanded the Welcoming Workplace study research into a book due out in June 2010, *New Demographics, New Workplace: Office Design for the Changing Workforce*. This very current work exactly reflects my topic area. Two additional items of particular note are: older workers do not want to be singled out which brings negative connotations, and their research did not test to see if younger workers at the same organization had similar issues.

Elsbach, K. D., & Bechky, B. A. (2007). It's more than a desk: Working smarter through leveraged office design. *California Management Review*, 49(2), 80-101.

Elsbach and Bechky discuss the symbolic meaning of the office: workers continue to work outside of the physical office environment. The authors argue that the office is more than a place for practical functions and can influence operations. The significance of organizational culture is acknowledged as a crucial aspect of office design. Written for a business and designer/architect audience, this accessible article includes graphic representations of Elsbach and Bechky's Leveraged Office Design's three functions of workplace design. Both professors at University of California-Davis, Elsbach's specialty is organizational behavior and Bechky is an ethnographer of work and occupations. This article did not include primary research, but relied on the scholarship of others to inform the findings. While aspects of generation were not included, the organizational culture and workplace discussion is most relevant.

Gensler. (2008). *2008 Workplace survey United States: A design + performance report*. Retrieved from [http://www.gensler.com/uploads/documents/2008\\_Gensler\\_Workplace\\_Survey\\_US\\_09\\_30\\_2009.pdf](http://www.gensler.com/uploads/documents/2008_Gensler_Workplace_Survey_US_09_30_2009.pdf)

This widely cited study surveyed 900 US respondents on their workplace, including questions on their company's revenue growth, values, brand and performance. The report is highly visual, with findings reflected in charts, graphs diagrams and photographs. Gensler is a global design/architecture firm focused on business. A similar report on the workplace in the UK is also available. The audience includes Gensler's business clients, design/architecture professionals, facility managers and corporate real estate professionals. The data was being collected prior to the current financial crisis, thus some of the conclusions must be tempered within the economic conditions. The results speak to business and design.

Gibson, S. J. (2009). *The zoom guide to generations: A quick overview and practical application guide to generational communication*. Lexington, KY: BookSurge.

This quick guide identifies the generational characteristics and defines their perspective in the workplace. In addition to addressing common questions, tables outline effective communication methods, management styles and motivational factors. While not a scholarly journal, a bibliography and resources are included. The author's public relations and marketing background lead to graduate work on generation tailored communications. She continues her research by teaching at University of Wisconsin-Whitewater and engaging her students in generational studies commissioned by her consulting and training clients. While this book is self-published and largely serves as a take-away for her speaking engagements, it provides an excellent introduction to the generations.

Grantham, C., & Ware, J. P. (2008, June 12). *The future of work: It's already here-just not evenly distributed*. Presentation at the CoreNet Chapter Meeting, Chicago, IL. Presentation retrieved from [http://clients.astekweb.com/perm/CoreNetGlobalChicagoChapter/presentations/080612\\_ChangingWorkplace.pdf](http://clients.astekweb.com/perm/CoreNetGlobalChicagoChapter/presentations/080612_ChangingWorkplace.pdf)

Frequent speakers to the CoreNet corporate real estate (CRE) establishment, Grantham and Ware discuss at a high level how “the nature of work is changing, what the new landscape will look like and implications” (slide 2). Included are results from their 2008 Workplace Agility Survey, “speed bumps on the road to the future,” and highlights from their new book *Corporate Agility*. Grantham and Ware are co-founders of The Work Design Collaborative, “a research and advisory firm with a single mission: helping create the future of work.” This presentation is a useful summary of CRE concerns and strategies, still relevant as economic conditions challenge conventional workplaces.

Grantham, C., Ware, J., & Williamson, C. (2007). *Corporate agility: A revolutionary new model for competing in a flat world*. New York, NY: AMACOM.

This book outlines corporate real estate challenges and then provides alternative solutions, many of which are beyond the normal office boundaries. Many case studies illustrate the successes and failures of various approaches. The chapters speak to business, facility management, real estate and design professionals addressing topics such as “The Virtual Workforce” (p. 129) “Offices without Walls” (p. 161), and “The Well Designed Workplace” (p. 193). Grantham & Ware’s research company, Work Design Collaborative, consults on workplace strategies with Fortune 500 businesses. Their corporate work brings reality to their research. The authors’ research places theoretical thinking into a real life environment. The book’s many diagrams, sketches, tables and graphs visually illustrate principles. *Corporate Agility* serves as a go to guide for corporate real estate strategies.

Gratke, K. (2010, April 19). Second life: Webkinz at work? Message posted to <http://tcbmag.blogs.com/generations/2010/04/second-life-webkinz-at-work.html>

The Minneapolis offices of Bridgeworks, a generational consulting business founded by the authors of *When Generations Collide*, hosts a blog on one of the local business web sites, *Twin Cities Business*. The weekly posting directed at business, focuses on some aspects of generations at work. In Second Life: Webkinz at Work, the use of Second Life on-line software is investigated. In Second Life one creates an avatar and a virtual world. Global businesses like IBM and Northrup Grumman are using it to host virtual job fairs, conduct team meetings and even present to clients. Millennials with their built-in gaming skills, are their initial target audience. The author, on staff at Bridgeworks, a Generation X’er himself, found Second Life being used as a recruiting tool by many organizations, including the IRS. Virtual software’s impact on the design of the physical office must be considered in any study of the generational workplace. The archived postings from this blog will be investigated further.

Haworth Inc. (2009, April). *Designing across generation: Generations summary*. Retrieved from <http://www.haworth.com/en-us/Knowledge/Workplace-Library/Documents/Designing%20Across%20Generations.pdf>

This document summarizes five research papers written by Haworth Furniture company researchers on designing for multiple generations in the office. Jay L. Brand, PhD, a cognitive psychologist at Haworth’s IDEATION group, while not credited with this *Generations Summary*, has written numerous other generational publications for Haworth. The article states that Generation Y is not better at multi-tasking than other generations and argues that “knowledge workers from all generations need approximately the same physical design conditions...” (p. x). The audience is Haworth’s customers, the architecture and design community. Research papers are well documented and include graphics/visual to illustrate concepts. Research articles of this nature offer the following: a) examples of the extent of research information most designers are exposed to; b) applied research studies which offer implementable strategies to designers and end users; and c) understanding of research by furniture companies to sell their brand and ultimately product.

Herman Miller. (2010a). *Generations at work*. Retrieved from [http://www.hermanmiller.com/MarketFacingTech/hmc/research/research\\_summaries/assets/wp\\_Generations.pdf](http://www.hermanmiller.com/MarketFacingTech/hmc/research/research_summaries/assets/wp_Generations.pdf)

In this Herman Miller Research Summary, similarities in the generations are emphasized to create a workplace that works for everyone. Miller, the global furniture manufacturer, interviewed their in house researchers, for this article interspersed with classic Miller graphs and graphics. A high level view, this summary points out key generational factors and methods for reaching consensus. Numerous references are included.

Herman Miller. (2010b). *The results are in*. Retrieved from <https://www.hmofficeexperts.com/MediaServer/3/documents/The%20Results%20are%20in%20n1.pdf>

A brief summary of survey results from Herman Miller's annual *Better World* report, this succinct document covers facilities strategy and space allocation and was offered as an incentive to design and facilities professionals to participate in a Herman Miller on-line survey. The information is most current and in an attractive graphic format.

Holder, K. A., & Clark, S. L. (2008, August 2). *Working beyond retirement-age*. Presentation at the American Sociological Association Annual Conference, Boston, MA. Presentation retrieved from <http://www.census.gov/hhes/www/laborfor/Working-Beyond-Retirement-Age.pdf>

This presentation presents US Census data on American's working population past the conventional retirement age of sixty-five. These statistics confirm the validity of the multi-generational office topic and provide the additional perspectives of gender, income, education and geographic location. Holder and Clark are researchers, with the Labor Force Statistics Branch of the US Census and are frequent presenters at national conferences. The document includes numerous graph and charts illustrating the data. This summarized information from the 2006 American Community Survey provides data interpretation for use by researchers, demographers, informed business professionals and graduate students.

HRthatWorks. (2008). *Hr that works: 15 workplace trends*. Retrieved from <http://www.hrthatworks.com/free/15trends.pdf>

HRthatWorks is a consulting company that sells human resources (HR) training programs. Headed by Don Phin, an attorney, author and speaker, they market to small and large corporations seeking HR training and development via a membership system. This short article identifies trends in HR, many with direct applications to workplace design. While not scholarly, it serves as an excellent resource for HR trends, targeted to their potential customers.

Johnson Controls. (2010). *Generation Y and workplace: Annual report 2010*. Retrieved from [http://www.johnsoncontrols.fi/publish/etc/medialib/jci/be/global\\_workplace\\_innovation/oxygenz.Par.41451.File.dat/Oxygenz%20Report%20-%202010.pdf](http://www.johnsoncontrols.fi/publish/etc/medialib/jci/be/global_workplace_innovation/oxygenz.Par.41451.File.dat/Oxygenz%20Report%20-%202010.pdf)

Johnson Controls, a global supplier of building management, automotive and power systems sponsored this research project in collaboration with Haworth, the furniture manufacturer and iDEA, the media services agency. Puybaraud and a team of six researchers were responsible for the design, implementation and synthesis of this work. Positioned for the clients of the contributing organizations, the document outlines Generation Y's (Millennial) characteristics and preferences from travel, to the workplace to social networking. The research instrument utilized a graphically pleasing on-line survey of visuals and words to pose the questions. This survey targeted the 18-25 age group and more than 3,000 participants responded. The data was collected from July- September 2009. While this data is very current, the concept that most of the respondents have not yet worked in an office environment, makes those results skewed to their preferences, rather than based on their actual work experiences. This document will provide valuable ancillary information regarding this age group globally. In addition, the survey instrument will inform my investigations on unique research tools.

Keegan, E. (2008). Why the top tier leverages the workplace. *Dialogue*, 15. Retrieved from [http://www.gensler.com/uploads/documents/D15\\_07\\_14\\_2008.pdf](http://www.gensler.com/uploads/documents/D15_07_14_2008.pdf)

This article is an information packed one page summary of the 2008 Gensler Workplace Survey. Highlights of the survey are categorized into themes with succinct statistics and an illustrative graphic. Although brief, this piece is useful for researchers interested in attaining the results of the survey without reading all 35 pages of the full report. Keegan is a freelance writer often contributing articles to design/architecture magazines.

Kupritz, V. (2003). The effects of physical design on routine work activities. *Journal of Architectural and Planning Research*, 20(2), 110-121.

This study addresses how age impacts older office worker's needs. Dr. Kupritz is an associate professor in University of Tennessee/Knoxville's School of Communications. Her research focuses on workplace privacy and communication in the multi-generational workforce. This scholarly journal article relies on data collected from 2001 with a sample of workers between the ages of 35-60. The survey instrument "Beliefs Matrix Questionnaire" (figure 1, p. x) identifies the key workplace preferences in an easy to understand format, however the report relies heavily on statistically ranked data displayed in tables. The findings suggest that the design of certain office features have different importance to older office workers. *Inform Design*, where this article was first located, is hosted by the University of Minnesota as an online tool to enable interior designers to apply research to practice. Its focused search parameters deliver relevant results from its large database of abstracted articles.

Lancaster, L., & Stillman, D. (2010). *The m-factor: How the Millennial generation is rocking the workplace*. New York, NY: HarperCollins.

Lancaster and Stillman's second book on the generations, *M-Factor* focuses on the Millennial generation, born between 1982 and 2000. Written for any business professional engaging with this generation, the book addresses characteristics, transition from life to worklife and managing in the workplace. Similar to their first book, *When Generations Collide*, *M-Factor* combines insightful stories with tales from the front lines. The authors themselves represent two generations, Stillman-Gen X and Lancaster-Baby Boomer. Their company, Bridgeworks, conducts surveys and seminars. They offer generational certification training and speak internationally on the generations. Providing an up to the minute perspective on the Millennials, this timely work gets at the core of this youngest generation in the workplace.

Lancaster, L., & Stillman, D. (2002). *When generations collide: Who they are, why they clash, how to solve the generational puzzle at work*. New York, NY: HarperCollins.

Business leaders, human resources professionals, recruiters, any one participating in a business environment with multiple age employees will enjoy this engaging resource. It defines the generational characteristics, identifies areas of conflict and makes recommendations on how various age groups can best understand and work together. There are many examples told from various age perspectives. The chapter layout allows one to search for specifics such as recruiting, retaining and managing across various age groups. The authors themselves represent two generations, Stillman-Gen X and Lancaster-Baby Boomer. Their company, Bridgeworks, conducts surveys and seminars. This book, a compilation of their research, drills down into generational characteristics, preferences and mind-sets. The numerous, often humorous examples illustrate thinking beyond stereotypes. Note that some of the examples are outdated due to dramatic changes in business climate since this book was written. *When Generations Collide* serves as a definitive guide to the generations at work.

Martin, R. (2009). *The design of business: Why design thinking is the next competitive advantage*. Boston, MA: Harvard Business Press.

Martin's premise for design thinking utilizes "the knowledge funnel" concept, where an idea or question passes from broad idea, "mystery," to becoming more formulated, "heuristic phase," to the last phase where the idea is ready for implementation, the "algorithm phase." Case studies and current business examples offer practical application to his thinking. Martin began his career in business as the co-director of the design consulting firm, Monitor and currently is the Dean of the Rotman School of Management at the University of Toronto. Martin and this design of business topic are increasingly popular in design and management circles.

McElroy, J. C., & Morrow, P. C. (2010). Employee reactions to office redesign: A naturally occurring quasi-field experiment in a multi-generational setting. *Human Relations*, 63, 609. doi: 10.1177/0018726709342932

This article describes an office relocation project with generational age and corporate culture components. With regard to generations, their findings suggest that age did not play a role, however perceptions of work culture were favorably impacted by the move to newly re-designed offices. This research incorporates all of the themes of my focus area. McElroy and Morrow are both professors in the Department of Management at Iowa State University with research interests in office design, loyalty, turnover and self-handicapping. Further study of their findings and personal contact with the authors will inform my research.

Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-creating company*. New York, NY: Oxford.

Nonaka and Takeuchi were the first to associate the knowledge created at Japanese companies with their corporate success. Transforming tacit knowledge, that which must be experienced, into explicit knowledge, that which can be formally articulated, is the premise for their theory of "organizational knowledge creation" (p. x). Both received PhD's from the University of California at Berkeley in the 1970's. Nonaka is a professor in the School of Knowledge Science at Japan's Advanced Institute of Science and Technology. Takeuchi is a professor of management at the Institute of Business Research at Hitotsubashi University, Japan. Design professionals facility managers and business executives investigating how knowledge workers use office space often refer to their four ways of working: focusing, collaborating, learning, and socializing. The fundamentals of the case studies are still referenced by researchers investigating the office environment, despite the elapsed time since their writing.

Pew Research Center for the People & the Press. (2009). *Sampling methodology*. Retrieved from <http://people-press.org/methodology/sampling/>

The Pew Research sampling methodologies are discussed in detail in this article. Their methods focus on telephone surveys including details about sample size, oversamples and cell-landline proportions. In addition to informing how the Pew Millennial surveys were conducted (see Taylor in this reference list), this information will be of assistance in understanding sampling methods for future research.

Pew Research Center. (2010, March 18). *The return of the multi-generational family household*. Retrieved from <http://pewresearch.org/pubs/1528/multi-generational-family-household>

This article is a one page summary of findings for the recent research on family household living arrangements. The prevalence of multiple generations at home as well as work, brings into focus the significance of my research. Race and ethnicity are also factored into the findings. Graphics illustrate the trends. A full report is available via a link within this article.

Pitt-Catsouphes, M., & Smyer, M. A. (June 2007). *The 21<sup>st</sup> century multi-generational workplace*. Retrieved from [http://www.bc.edu/research/agingandwork/meta-elements/pdf/publications/IB09\\_MultiGenWorkplace.pdf](http://www.bc.edu/research/agingandwork/meta-elements/pdf/publications/IB09_MultiGenWorkplace.pdf)

This Issue Brief from Boston College's Sloan Center on Aging & Work online newsletter succinctly outlines chronological age, generational age, life course and career stage. Written from a multi-disciplinary perspective with numerous citations, it translates the research for business leaders and scholars. Pitt-Catsouphes, the director of the Sloan Center, is an Associate Professor at Boston College Graduate School of Social Work. Smyer is a professor in the Department of Psychology at Boston College, a licensed clinical psychologist and a clinical geropsychologist. The conclusions from this article inform employers (and interior designers) on issues of aging in the workplace and are pertinent and relevant today.

Propst, R. (1968). *The office: A facility based on change*. Elmhurst, IL: Business Press.

Included for historic comparison, Propst's iconic writing on change in the workplace was published the year Herman Miller first introduced Action Office, the world's first open plan office furniture system. His discussions of change and the office as a thinking place are particularly pertinent, as today's workplace still struggles with these issues. Propst joined Herman Miller originally as a consultant conducting studies on people in work situations. Many early product introductions were based on his research. I received my copy of *The Office: A Facility based on Change* from Herman Miller during a visit to Zeeland, MI in 1977; however, it is still available in print.

Queenan, J. (2010, May 15-16). A lament for the class of 2010: New college graduates face a labor force that neither wants or need them; a plum job interning at a street fair. *The Wall Street Journal*, p. W-3

Queenan tells a series of stories about the job hunting trials of several recent college graduates. He discusses the costs of a college education and the payback in terms of increased wages. A graphic on tuition costs, unemployment rates and the federal deficit are included. Queenan, a frequent contributor to the Wall Street Journal, in print and online, has several books always with a satiric cultural criticism bent. The article puts a story to the Millennial generation and their efforts to enter the workplace at this point in time.

Sargent, K. (2009). A pivotal shift: Leveraging for advantage. *Contract Magazine*. Retrieved from <http://www.contractdesign.com/contract/photos/stylus/101507-PivotalShift.pdf>

A workplace strategist and generational expert, Sargent is a principal with IA Interior Architects in Washington, D.C. An excerpt of this white paper was published in the print version of *Contract Magazine*. Outlining the metamorphosis of the office, Sargent discusses business, social and cultural trends which impact corporate real estate decisions. Numerous photographs from IA's portfolio are incorporated. The audience of design/architecture professionals will appreciate the global and sustainable perspective. Sargent and this specific article have informed my research from its inception.

Schein, E. (2004). *Organizational culture and leadership*. San Francisco, CA: Jossey-Bass.

First published in 1985, this often cited work discusses how the culture of an organization impacts its business. Credited with first coining the term "corporate culture," Schein is a professor at MIT's Sloan School of Management. Schein uses analogies to ancient civilizations when he reports that culture is "easy to observe and very difficult to decipher" (p. 36). The discussions on artifacts or what we first experience when observing a new culture are most applicable to my topic area. Familiarity with Schein's definitions of organizational culture will inform my work as related to office environments.

Society for Human Resource Management. (2007-2008). *The 2007-2008 workplace trends list: The top trends according to SHRM's special expertise panels*. Retrieved from <http://www.shrm.org/Research/SurveyFindings/Articles/Documents/2008WorkplaceForecast.pdf>

The Society for Human Resource Management (SHRM) reports access the knowledge and insights of their membership to forecast trends. SHRM, founded in 1948, is the oldest and largest human resources professional organization in the world. With over 250,000 members in 140 countries, the society “advances the interests of the HR profession” (p.x) Special expertise panel members form committees ranging from corporate social responsibility to technology and human resources management. Multiple forecast trends directly impact the design of multigenerational workplace. This annual report, published for the society members, compares trends from the last six years providing a long range trend analysis.

Sloan Center on Aging & Work. (2009). *Employees strength in downturn: Generation gap may be a resource as companies struggle to survive*. Retrieved from [http://www.bc.edu/research/agingandwork/all\\_feeds/2009-06-24.html](http://www.bc.edu/research/agingandwork/all_feeds/2009-06-24.html)

This one page article discusses the generational differences in seeking employment during an economic downturn. The research is based on findings from their Center on Aging and Work studies at Boston College. This brief outlines the generations, issues of job security and impressions of effectiveness at work. The target audience is business leaders and researchers interested in the generations at work.

Smith, W. S. (2008). *Decoding generational differences: Fact, fiction... or should we just get back to work?* Retrieved from [http://public.deloitte.com/media/0507/250608/us\\_DecodingGenerationalDifferences.pdf](http://public.deloitte.com/media/0507/250608/us_DecodingGenerationalDifferences.pdf)

Written specifically to inform Deloitte LLP's partnership and clients, this report outlines attitudes, strategies and dilemmas of generations in the workplace. Deloitte's National Director of Next Generation Initiatives, Smith held various human resources leadership roles prior to joining Deloitte. Written in a conversational and often times irreverent tone, the guide is a ready resource for business or design/architectural professionals. While the last three chapters read as an advertisement for Deloitte's talent recruitment process, the remainder of the volume is free of organization or business specific rhetoric. Decoding Generational Differences will serve as a valuable resource on the generation's perspective on work and career.

Spherion Staffing Services. (2009). *Emerging workforce 2009 forging ahead: Workplace strategies for a new time*. Retrieved from [http://www.spherion.com/EW\\_Study/Spherion\\_EmergingWorkforce09\\_executivesummary.pdf](http://www.spherion.com/EW_Study/Spherion_EmergingWorkforce09_executivesummary.pdf)

Spherion, a recruiting and staffing firm, engages Harris Interactive, the international polling firm, to research and produce a workforce study every two years since 1997. This document “provides a comprehensive portrait of changes in the American workforce...” (p. x). The report identifies “traditional, migrating and emergent” (p. x) workers, discusses the adoption of social media and work/life balance programs in the workplace. The audience is Spherion's staffing and recruiting clients, but the interior design professional will gain valuable insights into categories of employees and how they perceive the workplace. The information is very current, with data gathered online and by telephone interviews in the spring of 2009.

Steelcase. (2009, August). *Attracting & engaging today's workers: Shifts in attitudes and behaviors make the workplace more important than ever*. Received from <http://steelcase.idigitaledition.com/issues/2/>

In this short article targeted for the design/architecture community, Steelcase, the global furniture manufacturer, discusses Generation Y's attitudes and behaviors in the workplace. They acknowledge that this newest generation in the workplace is changing how work is done. The most significant value of this piece is the eight workplace shifts identified. They include issues surrounding career path, technology use, trust off-line and online, and work life separation. No references or citations are included.

Strauss, W., & Howe, N. (1991). *Generations: The history of America's future, 1584-2069*. New York, NY: William Morrow.

This scholarly work examines the generations to understand American history and civilization. It describes a cohort group biography and labels and identifies generations before they are born. Strauss and Howe map out generational cycles including dates, demographics, location in history, leadership and sample members. This seminal text is referred to in most major generational research. Its publication date only furthers the currency and relevance as current generations are filling in the blanks the authors left for them. This is the first of several books the pair would write. Strauss, educated at Harvard Law School, is an author, historian, playwright, theater director and lecturer. He has a consulting firm that forecasts generational trends. Howe, educated in philosophy at Yale University, is the founder of the consulting firm, Life Course Associates. In addition to writing, Howe is a historian, economist, demographer and national speaker. A literature review on the generations must include this important work.

Sullivan, C. (2008). The next workplace revolution. *Dialogue*, 15. Retrieved from [http://www.gensler.com/uploads/documents/D15\\_07\\_14\\_2008.pdf](http://www.gensler.com/uploads/documents/D15_07_14_2008.pdf)

This short article in Gensler's online magazine discusses workplace trends including: the importance of data, mass customization and embracing mobility. Examples for current and recent projects provide practical context for the design/architecture reader or a corporate client. Sullivan is a former editor of *Architecture* magazine and currently a freelance writer.

Taylor, P., & Keeler, S., (Eds.). (2010, February). *Millennials: Confidant. connected. open to change*. Retrieved from <http://pewsocialtrends.org/pubs/751/millennials-confident-connected-open-to-change>

This executive summary from the Pew Research Center analyzes their most recent survey on the Millennial generation. It outlines demographic characteristics of this generation, along with information on their long-term financial goals, their views on religion, education, political leanings and work/life priorities. This up to the minute data confirms and refines findings from older sources. The Pew Research Center's byline is "Numbers, Facts & Trends Shaping your World" (p. 1). This "fact tank" has data and statistics on almost anything. The findings are non-partisan and independent, so they are cited from Capital Hill to Main Street. This opinion research organization has been funded by the Pew Charitable Trust since 1996. The editors lead a staff of nine researchers in this effort with data gathered by phone interviews in July 2009 and January 2010. Understanding specifics of this generation will inform my workplace research.

Zemke, R., Raines, C., & Filipczak, B. (2000). *Generations at work: Managing the clash of veterans, boomers, xers and nexters in your workplace*. New York, NY: Amacon.

Written as a guide for the business professional, *Generations at Work* outlines the characteristics of each generation and how they interact in the workplace. "Play on words" (p. x) chapter titles including "The Gen Xers: Absence and Malice" (p. x), set the tone and context for his primarily Baby Boomer audience. Providing historic context, case studies and "Advice-o-Plenty" (p. x), the authors provide an analysis of challenges, work ethics, leadership styles and personalities. The late Zemke, founded Performance Research Associates, a Minneapolis based training and consulting company. Raines is a trainer, business speaker, organizational consultant and generational expert. Filipczak is a national speaker on the Millennial generation and works for the State of Minnesota. The inventory provided to determine the generational friendliness of your workplace will enable future teams to assess their workplace. Some of the resources provided in the appendix are out-of-date, but many offer valuable sources. This book will add a dimension to my specific knowledge on what events shaped each generation's perspective.

**Personal Interviews with Thought Leaders**

Note: These interviews were conducted by phone and in-person from January 2010 to present. Every interview is not included in the literature review. They are catalogued alphabetically by last name.

Adelman, M. (personal communication, April 28, 2010)

Mark is the principal in charge of interiors at the Chicago TVS office. Formerly he was one of the founding partners of the Environments Group. While TVS clients are not focusing on generational issues in the workplace, our conversation focused on generations in their generation rich offices and the redesign of the TVS Atlanta office. TVS, the international architectural firm, does not have a formal research department, so they engaged Herman Miller Research to assist with project, implementing a “space syntax analysis.” Mark discussed TVS’s “four hour overlap” rule to ensure that teams have time together in the office.

Anonymous (personal communication, April 9, 2010)

This interviewee must remain nameless as their employer, Google, forbids employees from discussing the workplace. I passed the security clearance and inquiries as a “family friend,” as we toured the Chicago offices and enjoyed one of the famous Google free lunches in their 10<sup>th</sup> floor café. This individual has worked at Google since 2007 when their company was acquired. We discussed how the Wi and foosball tables remain un-touched, Google’s staggering growth, their supremely rigorous hiring practices and how it feels like the Google offices were designed by Tom Hanks in the 1988 movie, *Big*, about the boy who grew up too fast. In the end, they reminded me, “it’s just a place to work, with all the same issues as any other place or may be more.”

Barnish, M.E. (personal communication, April 6, 2010)

Mary Elin has served many roles relating to my graduate school endeavors including topic & learning plan advisor as well as mentor on the education industry. It was her risk mitigation theory that originally helped make the graduate school decision for me. This conversation discussed the process of the literature review, how to know when you are done, scientific voice and APA. She has an EdD, has taught interior design to high school students, was a high school administrator and now mentors young teachers via a State of IL program.

Berthold, B. (personal communication, April 26, 2010)

Bryan’s experience includes VP of Corporate Real Estate at Toronto Dominion Bank Financial Group, at Washington Mutual and at Capital One. His alternative workplace strategy program at Capital One has garnered national recognition. Collaborating with colleagues in Human Resources and Information Technology and using in-house space utilization data, the Capital One Future of Work (FOW) program was established. Measuring the project throughout the process delivered the metrics to measure the FOW’s success. Berthold, trained as an architect, has been a faculty member for CoreNet Global, the highly regarded commercial real estate professional organization. He has been a frequent speaker on strategic planning, change management and customer experience management.

Carver, J. (personal communication, May 5, 2010)

James is the manager of the Chicago OfficePort, a co-working office concept, where members rent small spaces to conduct business. The concept attracts entrepreneurs, fosters collaboration and provides superior connectivity speeds. He toured me through their office spaces (reclaimed condominium model space) and discussed people’s need for offices outside of the home. He described OfficePort as the antithesis of Regus, the international virtual office industry giant.

Coles, D. (personal communication, April 23, 2010)

Diane Coles is the Director of Workplace Services for SCAN Health Plan in Long Beach, CA. She aligned their corporate real estate strategy with her company's overall business objectives. The results of that process lead her team to institute a flexible work program which enables employees to work from home or from other locations. In addition, she spearheaded an aggressive redesign of their corporate headquarters facility. Implementing a "neighborhood concept," using moveable furniture, employees can create and revise their workplaces based on team/project/work style. They implement benchmarking metrics as measures of job performance. They have multigenerational teams and foster a "Senior Advocate" program. Diane was awarded IFMA's (International Facilities Management Association) 2009 National Achievement Award and is the co-author of *Cut It Out*, a facilities management handbook on maximizing corporate real estate capital. Ongoing access to Diane and her experience will serve as a learning lab for future research.

Crocker, S. (personal communication, February 24, 2010)

Sandy is a diversity specialist and workgroup consultant. She is an international speaker, workshop leader, facilitator and presenter to designer and architects, as well as corporate clients. Her expertise focuses on generational, cultural and gender differences in the workplace. A former Haworth sales representative, Sandy has a master's degree in psychology with a diversity specialization.

Dohr, J. (personal communication, May 6, 2010)

Joy has been an advocate and mentor since October 2009, when my graduate school process began. This conversation centered on interior design research methods, reading recommendations and preparing for next quarter's Methods of Research Competence. We discussed narrative inquiry at length. This method has strong implications in the practice of interior design, as we discussed Christopher Budd's work. Dohr is the former interior design department head of the University of Wisconsin-Madison. As Professor Emeritus, she has authored numerous publications, is currently working on a book about narratives, and remains active on campus and with a number of organizations including the Interior Design Educator's Council (IDEC).

Domer, G. (personal communication, April 23, 2010)

Gaylene is Vice President of Office Services for National Equity Fund (NEF), a national syndicator of low income housing tax credits. Ten years ago, we (the author while in partnership with Vincent, Lynn & Lee, Ltd) designed the 50,000SF NEF headquarters, one of the first Chicago projects to use the Herman Miller Resolve product. Gaylene has gone on to implement the Chicago office concept in all other NEF offices. A multi-faceted change management program eased the transition to all open plan (yes, even the lawyers, HR and the president). We discussed the challenges of the generations in the office, workplace strategies and her willingness to participate in potential future research by the author.

Erikson, E. (personal communication, April 22, 2010)

Emily, a 2007 Purdue University graduate in interior design, is a contract employee at KDI Designs and the VP of Membership for the IL Chapter of the International Interior Design Association (IIDA). An "old soul," she is wise for her years and is tragically underemployed, awaiting an economic turnaround. She is concerned about generational generalizing and completely understands the concept of an online presence.

Fik, D. (personal communication, April 21, 2010 and April 23, 2010)

A workplace strategist at Haworth Furniture's IDEATION group, David, is trained as an illustrator. Our discussions centered on the competing values framework, organizational culture, the importance of place and how generations are impacted by corporate culture. His area of expertise is "place, the locus of work," as he asserts that employees no longer "go to work to get work done." Fik and the IDEATION group work closely with Cameron & Quinn and their "Competing Values Framework," associating place to that model. His work addresses current issues in the architecture and design community, with contributions to Haworth white papers and frequent presentations to the industry. Ongoing access to Fik and his group's research will provide a network for further study.

Flynn, B. (personal communication, May 16, 2010)

Barbara's spiritual direction clientele are aged 25 to 85. She observes a cross-generational desire to bring meaning to one's life. When we discussed the communication vs. understanding question, she quickly responded that understanding often comes with life experiences. Empathy and compassion are the basis for any relationship and come with time or when one walks in the shoes of others. As for her Millennial clients, she sees them asking deeper and more nuanced questions than those generations who came before in her practice.

Gibson, S. (personal communication, February 24, 2010 and April 2, 2010)

Sarah is the author of *The Zoom Guide to the Generations*, founder of Accent Communications and frequent lecturer and trainer on the generations in the workplace. Her master's thesis in communications researched the differences among generations in advertising and marketing. Her teaching at the University of Wisconsin-White Water, provides a ready pool of survey respondents for customized research commissioned by her clients. We discussed the generations at work, the zen of presentations, literature for my research and making a living at this.

Grantham, C. (personal communication, May 14, 2010)

The co-founder of the Work Design Collaborative, lecturer, educator, author of 11 books and numerous articles, Charlie is an applied researcher on the future of work. As my Professional Advisor, he has informed my research by making numerous e-introductions, suggesting books as well as other valuable and fun resources. In addition to the Future of Work's web site, blog, online articles, speaking, consulting, writing and traveling, Charlie has made space for my multi-generational office project in his world. This most recent phone conversation outlined synthesis of data, Strength Finders, literature reviews, personal interview with thought leaders and the weak signals report.

Hill, G. (personal communication, May 5, 2010)

A long time Steelcase Dealer salesperson, Gordon arranged a tour of the Steelcase Workspring conference center on Chicago's near north side. Workspring offers technology rich meeting spaces with a variety of furniture options, utilizing Steelcase's state of the art products. Hill, recently returned from client meetings in Grand Rapids with Steelcase's research team, offered introductions to key players in their Applied Research and Consulting team.

King, H. (personal communication, April 20, 2010)

Henry is an information technology and innovation specialist at Doblin Group, the renowned innovation strategy firm. Our discussion centered on his experience with alternative workplace projects, cloud computing, the proliferation of data and looking for patterns in contextual research. Translating aspects of nature into the business world is the subject of his April 2010 article, *Learning from Nature: The Innovative Invader* (retrieved from; [http://www.businessweek.com/innovate/content/mar2010/id20100328\\_962752.htm](http://www.businessweek.com/innovate/content/mar2010/id20100328_962752.htm)). King's blog, Man of String, <http://www.manofstring.typepad.com/> most recent posting is entitled, *Is it a home? Is it a phone? No, it's the Dodge Grand Caravan*. A deep thinker, King is approachable and most generous with his time and insights.

Lee, B. (personal communication, January 22, 2010)

Brandon, is a 2009 graduate of Cornell University's College of Human Ecology with a degree in interior design. He works at IA Interior Architects in Washington DC. He is in the Millennial generation, but warns of generational stereotyping. He participated in one of the conference calls on the multi-generational office with Kay Sargent.

Lester-Brown, K. (personal communication, February 2, 2010)

Kelly is the Director of Diversity and Inclusion at SaraLee. We discussed the workplace's implication on diversity, attracting and retaining talent. SaraLee is expanding their workplace flexibility policies as they develop the training and "mind-set shifts" required for success. Her team is implementing "returnships", where workers can re-enter the workforce strategically. Most significantly, she spoke of the office's hierarchical environment at SaraLee and the message it sent to potential recruits. Their Downers Grove, IL offices are conventional in layout with enclosed perimeter private offices and 65" systems furniture panels in the interior.

Lukken, A. (personal communication April 21, 2010)

As InterfaceFLOR's Director of Market Research & Educational Learning, Amy was tasked with educating the sales staff on selling carpet to the various generations of customers. These efforts have evolved into an expansive data collecting project. It was Amy who first introduced to me the difference between communication and understanding between generations. Lukken is a frequent national speaker on generations in the workplace, continues to conduct interviews on generations in the workplace and is a certified Strength's Coach through Gallup.

Marienau, C. (personal communication, April 23, 2010)

A professor and my faculty mentor at DePaul University's School for New Learning (SNL), Catherine is a subject matter expert on adult learning. She has authored books and numerous articles; is a frequent speaker and facilitator; has served on innumerable professional organizations and committees; has been the faculty mentor for hundreds of students and yet promptly responds insightfully to every rookie grad student email question. In 1983, Catherine was part of the small group that developed what is today the SNL's Master of Arts in Applied Professional Studies (MAAPS) degree. After meeting with her weekly during our first quarter, the twenty of us in the Cluster 84 cohort will now convene quarterly to assess our progress likely with a self-reflecting tool. Without Catherine, none of this would be happening for me. The April 23<sup>rd</sup> meeting was my first graduate committee meeting to present my Learning Plan for approval.

Mirrielees, M. (personal communication, April 21, 2010)

Michelle currently works as a resources specialist at DeStefano & Partners (DP), the planning/architecture/interiors firm. Michelle is a noted expert on sustainable products, methods, suppliers and on conventional finish materials. We first met during the 1980's when she was the Associate in charge of Resources at SOM/Chicago. On this visit, we toured the new DP offices in the IBM Building. Their new workstation type pushes the concept of benching to new heights, with a wedge shaped work-surface. When at capacity the density will be extreme, however at their current 60% occupancy, employees have the space to spread out. A large circulation factor, full height windows and expansive views mitigate some of the workstation issues, for now. Michelle serves as sounding board for all people-places-things interiors in Chicago. She has continued to work in some capacity at various large architectural firms and thus can offer that perspective.

Nelson, M. (personal communication, April 2, 2010)

Mark has been a devoted mentor and advisor on my graduate education since October 2009. We were colleagues at Skidmore, Owings & Merrill in the 1980's. He is an assistant professor in the School of Human Ecology-Design Studies Department at the University of Wisconsin-Madison. In this conversation we discussed research methods, the process of researching, the cross-disciplinary aspects of interiors, and theoretical issues on hierarchy and aging. Mark warns that there are many pitfalls when working with age data and good researchers must acknowledge them in their analysis.

Pitt-Catsouphe, M. (personal communication, March 21, 2010)

Pitt-Catsouphe is the director of Boston College's Sloan Center on Aging and Work. Marcie was invited to the 2005 White House Conference on Aging as an issue expert and has authored numerous publications on aging and work. Pitt-Catsouphe is leading the "2010 Generations of Talent" study, the Sloan Center's current global research project. We discussed the 10 dimensions of physical and cognitive age. She warns that the focus on older workers is "less on ability and much more on bias." She admonishes researchers to beware of reinforcing negative stereotypes, that "when you go to work it matters," and that design issues in the workplace are a very public, "no one wants to be out of the main stream." Her insights are current and will inform my future research.

Rendin, E. (personal communication, April 28, 2010)

With a thirty-year history at IBM working on assignments at headquarters, overseas and now in Chicago, Elaine is a finance executive in the real estate division, responsible for US leasing. She is irreverent, insightful and quick to spot the elephant in the room. She toured me through the IBM offices in the Hyatt Center. We discussed the challenges for various generations, multiple religions and the many cultures working together in 6x8 cubicles. In addition her perspective on mobile work and its impact on the culture, critically re-formed my thinking.

Sargent, K. (personal communication, January 13, 2010 and January 22, 2010)

Kay is a principal with IA Interior Architects in Washington, DC. Her interests include workplace strategies and generations in the office. Introduced by a mutual friend, in addition to the two interviews listed, Kay has supplied numerous articles and information key to my early research. She teaches at the university level, has served on the international boards of major interior design organizations and is active in project work.

Walsh, M.B. (personal communication, May 20, 2010)

Mary is an assistant professor of political science at Elmhurst College. Her honest insights, realistic assessments, quick wit and willingness to be involved in the minutia of my work make her my academic safety net. On this call we discussed how to succinctly introduce themes in the first paragraph of a literature review. With a PhD in women's studies from Loyola, she understands about writing, researching, publishing, conferences, tenure and teaching. She lectures, researches and writes on the American political philosopher, John Rawls.

Weiner, M. (personal communication, May 8, 2010)

Michelle is a mentor. Her official job is VP Marketing/Business Development at the Interior Investments, LLC, the second largest Herman Miller dealership in the country. Interior Investments has that distinction largely due to her efforts. But what Michelle really does is put people together. It is not an understatement to say that she knows everyone in the Chicago interiors community and many have been assisted by her connections. At this meeting we discussed research that would be applicable to practitioners and video as method to transmit information and brand.