

The Moral of The Element and The Scion: A Cautionary Tale of Generation-Based Design

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The Honda Element and Toyota Scion debuted to much fanfare several years ago. Both were designed to be irresistible to Generation Y car shoppers. Who actually purchases them? Mostly Baby Boomers. These two families of cars can teach workplace designers an important lesson – good design is generation - blind and apparent to the general market, no matter how you promote it. Good design also is appropriate for users – both cars and workplaces must meet not only users’ functional needs, but their psychological requirements, as well. In addition, these car models teach designers that crafting nonverbal messages is complicated.

To make our conversation more concrete, let’s consider two professional employees:

Bob (born in 1956, a Baby Boomer) worked for years as a tax accountant. At the age of 50 he decided enough was enough – he would give up his practical job and become a graphic designer, something he had dreamed of doing for years. After retraining, Bob worked for several employers within a couple of years, getting a feel for what it’s like to be a graphic designer. Through his graphics training, Bob has become familiar with the latest technology and can IM as fluidly as his teenage kids.

Today’s older and younger workers have grown up in more different worlds than their ancestors. These differences in life experiences influence nonverbal messages that employees want workplaces to communicate.

Jason (born 1986, a member of Generation Y) trained as a graphic designer in college and entered the design job market in 2007. He is also a fledgling graphic designer.

Besides an ergonomically sophisticated desk chair (and this paper ignores the important influences of ergonomics on user experience), how should Bob’s workspace be different from Jason’s? The answer to this question will soon be apparent.

INTRODUCTION

Human beings of multiple generations have always worked together. Throughout history, the formative experiences and resulting worldviews of these colleagues have been more or less similar. People from several generations working on the same European farm during the Dark Ages all had, with rare exceptions, the same sorts of childhood experiences. A Renaissance guild master and his apprentice were likely to share similar seminal encounters, albeit different from those of the Dark Age farmers.

Today’s older and younger workers have grown up in more different worlds than their ancestors. These differences in life experiences influence nonverbal messages that employees want workplaces to communicate. We will address the ramifications those differences should have on workplace design.

Some designers have decided that members of Generation Y require very different workplaces than their older colleagues: “In the high-tech world, where employers put a premium on attracting the brightest Net Geners (members of Generation Y) they can find, some work sites look like playgrounds. You can play foosball at Microsoft’s Redmond campus - or baseball on the company diamond or soccer or volleyball. There’s even a private lake. You can take your pick of the 25 cafeterias on campus, along with the requisite Starbucks stands. Xbox consoles are stashed in alcoves. Nearly 3,000 works of art hang on the walls. You can even go on whale-watching excursions. Over at Google, there’s a rock-climbing wall on the premises, along with a company pool, a beach volleyball pit, a gym, plus pool tables. You’ll feel like you’re right back in college. You can even bring your pet” (Tapscott, 2009). These environments attempt to send a nonverbal “fun” message to Generation Y employees – but do they say “fun at work” or “fun at summer camp?” What messages do they communicate to employees from other generations? And is fun the right sentiment to be conveying, anyway?

Sundstrom (1986) has shown the importance of nonverbal workplace communication. Workplaces are shared spaces, which should present nonverbal information that can be universally and positively interpreted across generations. Multiple generations are present in any workplace environment, regularly with the same professional status, particularly as career changing becomes more common (as, for example, when retiring Baby Boomers decide to re-enter the work world after retirement in new professions that they find meaningful). In addition, the highly-involved parents of members of Generation Y help them make major life decisions such as which employment offers to accept. To the extent that workplace design enters into the job selection decision, parents of one generation will be reading the same environment as their children from another generation.

GENERATIONS: SIMILARITIES AND DIFFERENCES

GENERATIONAL WORLDVIEWS

There are three primary generations in the workforce today, and any workplace must simultaneously accommodate members of all three.

Different researchers categorize recent birth years into generational groups in different ways. Generally, however, members of Generation Y were born between 1980 and 2000 (approximately 12% of the workforce in 2007), members of Generation X between 1965 and 1979 (approximately 34% of the workforce in 2007), and Baby Boomers between 1946 and 1964 (approximately 44% of the workforce in 2007). All discussion will focus on these three age groups. Although some individuals currently in the workforce were born earlier than 1946, their influence in the workplace will decline as they retire or assume significantly different roles in the years ahead.

Baby Boomers are currently the largest age group in the workforce. They are interested in personal gratification and see little reason to postpone a desirable experience (Harkin & Lockwood, 2007). Boomers want their expertise to be recognized socially and physically (think workplace features that differentiate their workplaces while facilitating continued high-caliber

work) (Gibson, Greenwood, & Murphy, 2008). They are team players (Gibson et al., 2008). In the workforce, Boomers are also generally competitive and optimistic (Generation Yers are also optimistic) (Harkin & Lockwood, 2007). Since Boomers prize their independence, they do not require much management attention to do their jobs well, but members of Generation Y require lots of management feedback on their work (Jones, 2008). Boomers' knowledge bases are more structured and formal, while those of Generation Y are the reverse – Boomers can learn well in classroom settings, while members of Generation Y learn best in short just-in-time classes (Reeves, 2006).

Design Implications: How should these aspects of Baby Boomers' worldview influence workplace design? Baby Boomers feel that their hard work should be rewarded with workplace amenities, such as enhanced workplaces and onsite fitness facilities – they also want to continue to do a good job and feel their workplace and workspace (as all aspects of their work life) should facilitate that. They do not necessarily expect to be provided with a private office with floor-to-ceiling walls and a true door, but they are the last generation in the workforce that remembers when those sorts of workspaces were standard for professionals, and those offices are the benchmark against which they compare all current workspaces. Since they work well independently, they can toil effectively in onsite and distributed workspaces.

Generation X is sandwiched between the larger Baby Boomer and Generation Y groups. Generation Xers are fiercely attentive to their work-life balance and treasure their off-duty lives (Conger, 2001). Members of Generation X do not seem as accepting of information that they are provided as Baby Boomers; generally, they distrust authority figures and established hierarchies and processes (Conger, 2001). Members of Generation X are often entrepreneurial, pragmatic, self-reliant, and informal (Gibson et al., 2008). They feel little loyalty to any employer (this is also true of Generation Y, although they do feel loyalty to particular managers). Members of Generation X also do not like ambiguity (Reeves, 2006).

Design Implications: Members of Generation X work well in a space that is designed to be efficient – that is the message their workplace should send. They particularly welcome workplace attributes that maintain their work-life balance, although these are useful to members of all generations. If spaces are created for

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express use of this group, they should also not attempt to communicate directly a psychological bond between the employer and employees – members of this generation scoff all such attempts to “buddy up.”

Members of Generation Y are the most recent age cohort to enter the workforce. American members of Generation Y were raised in an atmosphere designed to boost self-esteem (Twenge, 2006), but the workplace remains a competitive place – and the global business climate is becoming increasingly cutthroat. Generation Y’s parents encouraged the development of their children’s inflated self-esteem. They continue to interact significantly in their children’s lives even after they become adults – as human resource managers can attest (Twenge, 2006). Since they participated actively in family decision making, Generation Yers seem to expect to be involved in decisions made by their employers (Gibson et al., 2008). They are often quite direct in voicing their opinions and have less need for social approval than members of previous generations (Sweeney, 2005). Members of Generation Y are ambitious, value diversity, and are technologically sophisticated (Sweeney, 2005). They are also more apt to want to work in groups than members of older generations (Tapscott, 2009). They are used to working in teams even before they reach the workplace, because educators (who are Baby Boomers or Gen Xers) now frequently teach using group projects (Sweeney, 2005).

Members of Generation Y have expressed an interest in working offsite (Tapscott, 2009), but it is unclear if that indicates a clear difference between their approach to the workplace and those of earlier generations who merely lacked the technology to work effectively outside the office. As Tapscott reports in his discussion of a survey he conducted among 1,750 young North Americans, “More than half of Net Geners (members of Generation Y) said they liked working offsite. They enjoyed the change of scenery, they said, and their ability to work outside the office showed their employer they could be trusted to get

the job done. They may even want to customize their job descriptions, although they still welcome some structure and want to know what is expected of them.”

Although popular wisdom touts members of Generation Y as entrepreneurial, Palfrey and Gasser (2008) state, “There is no real evidence that Digital Natives (members of Generation Y) are more entrepreneurial than those who toiled in bygone days. But while a kid thirty years ago might have been able to invent a new whirligig, the Internet era has given rise to something new: a cadre of really young kids whose innovations have a global impact.” Palfrey and Gasser continue, “Digital Natives are becoming entrepreneurs at a time when the conditions make it cheaper and easier than ever to start a business. The economic conditions of starting a business that offers a service in cyberspace – low upfront costs, minimal capital requirements, and scalability – are important prerequisites of the larger trend toward the democratization of innovation. A cool idea, coding skills, a few friends, and enough start-up capital to pay your Web-hosting bills are the basic ingredients needed to create a new business in the new economy.” Older entrepreneurs use the same high-tech tools as young folks, however.

Members of Generation Y are less likely to be focused on their careers than Baby Boomers. Baby Boomers, in general, seem compelled to excel both at home and at work, while members of later generations, particularly female members, are more likely to focus on success in one or the other sphere (Reeves, 2006).

Generation Yers are idealistic and very interested in working for a firm that shares their altruistic interests, which has implications for workplace design (think green), while Generation Xers are interested in workplace self-improvement (think training centers) (Zemke, Raines, and Filipczak, 2000).

Design Implication: Although interest in sustainable construction is spreading throughout the entire population, green construction is particularly important to members of Generation Y. Additional ways in which the physical plant serves altruistic goals would also be viewed with favor by Generation Yers. People in this generation are interested in participating in the workplace programming process. They expect that their workplace will accommodate group work – as their schools have done – but Baby Boomers are also

team players. Members of Generation Y want to be closely supervised by their managers, and workplace design can facilitate this. Since they are very ambitious, and popular wisdom holds that people need to be very visible (literally and figuratively) to be promoted, this group would relish sitting so that they are readily seen by supervisors. These sorts of public placements are not appropriate, however, if the employee is doing work that requires concentration.

“The research shows that generations’ values do not differ significantly – individuals of all generations differ much more from each other than any generation does from the others”

Deal, J. (2006)

If we review the nonverbal messages that are particularly valued by members of different generations, it is clear that they either reflect inherent human motivations (such as the interest in display of relative status dear to Baby Boomers) or a relatively vocal commitment to a society-wide movement (Generation Y and sustainability, for example). Generation Y is interested in participating in decision making, and no doubt space programming, and processes – but user involvement is found in optimal space design processes. It is possible to craft a place soliloquy that delivers the various messages valued by different generations, but this, like many design tasks, is not easy. Generational differences in stressed opinions and nonverbal communication should not influence the considerations that good place designers have recognized for some time.

COMMON ATTITUDES ACROSS GENERATIONS

All of the current worker generations share certain attitudes and these similarities are closely tied to ultimate professional performance. The consistent communication of these values throughout any workplace is key.

As Deal reported in a study completed for the Center for Creative Leadership, “The research shows that generations’ values do not differ significantly – individuals of all generations differ much more from each other than any generation does from the others” (2006). For example, the study that Deal conducted indicated that workers of all ages share similar values related to respect and trust.

Research by the Society for Human Resource Management indicates that the same sorts of factors – access to benefits, job security, opportunities to use skills and abilities – contribute to the job satisfactions of all employees, regardless of generation (2008).

TECHNOLOGY CHANGE AND WORKPLACE DESIGN CHANGE

The various generations in the workplace today became familiar with different sorts of technologies as they were growing up. Those differences are reflected in preferred ways of working. They also have repercussions for effective and efficient ways of working that cross generations.

Many of the apparent workplace design-related differences between members of Generation Y and previous generations may be due to technologies available to this generation that were not available before. As discussed earlier, effective and efficient distributed work is becoming more feasible as technology develops. Generation Y has an interest in distributed work that has repercussions for workplace design – but members of other generations are also interested in distributed work to increase sustainability. Employers favor distributed work because it saves money on corporate rents, etc. All three of these motivations result in a workplace with the same physical form.

The rate of technological innovation is currently rapid enough so that every new generation in the workplace can be anticipated to start work with its own favorite toys. For example, Generation Y’s were Facebook and instant messaging, which spread quickly through all generations in the work world since they are indeed useful workplace tools. The physical design of the workplace will continue to need to evolve to support these tools and toys.

Design Implications: Although Generation Y has a reputation for being the age group most familiar with technology, new and useful technologies quickly spread through the entire working population. It has become common for people to check their email during meetings and to look up meeting-pertinent information using laptops and handheld devices. Designing meeting-area furniture and architecture to streamline use of technology is appropriate. Other uses of technology can be encouraged or discouraged through space and furniture design, depending on the work in progress.

GENERATIONAL DIFFERENCES IN COMMUNICATION STYLES

Members of the different generational cohorts prefer to communicate in different ways (Glass, 2007). Baby Boomers and Generation Xers communicate in the workplace using whatever tool they think is most efficient (which includes walking to a co-worker's desk), while Generation Yers prefer to communicate digitally instead of face to face or via the telephone. Members of Generation Y are also accustomed to being in nearly continuous digital contact with each other, so their thoughts spread quickly – which can have both positive and negative ramifications depending on the nature of what they have to say.

Design Implication: Workplace environments must encourage physical interaction to compensate for Generation Yers propensity for digital communication, which may preclude the development of a collegial atmosphere. Open workplace designs, which incorporate informal interaction zones, are common practice. If workers need to concentrate, more closed environments with dedicated informal interaction areas are appropriate.

Workplaces and workspaces 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.

LEVELS OF EXPERTISE AND WORKPLACE DESIGN

People with different amounts of workplace experience (which often means they are members of different generations) perform different tasks. Generally, people with less experience perform more routine tasks and people with the most experience have managerial responsibilities. Individuals at intermediary levels may have a wide range of duties, depending on their general career track (engineering versus customer service, for example). These differences in job responsibilities have a relationship to effective workplace design.

Design Implications: Workplaces and workspaces 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. For example, managers need the capability to speak with subordinates and people need vocationally appropriate physical support.

GLOBALIZATION AND GENERATIONAL CULTURES

Generational cultures are becoming more global over time, although national culture still has a stronger influence on worldviews (Egri & Ralston, 2004). It is crucial to recognize this situation when places are being designed: local and national culture has more of an influence on worldview than generational differences do (Hofstede & Hofstede, 2005). As Palfrey and Gasser state in Born Digital, "Parallel to their digital universe, Digital Natives (members of Generation Y) are embedded in regional and local customs, habits, and values. These factors, among others – together with the social and economic context and the local laws – are likely to shape the ways in which Digital Natives use digital technology, how they can realize its opportunities, and how they will address the challenges it poses" (2008, p. 13). Rapoport (2005) and Nisbett (2003) have illustrated the important influences of national culture on optimal place design.

Design Implications: National (and organizational) culture influence workers' interactions with their physical environments, and workplace design must recognize those culture specific differences.

EVOLVING PERSONALITY DIFFERENCES

The personality of any human being changes subtly over their lifespan and there are similarly subtle variations in personality patterns in the general population over time (McCrae & Costa, 2003; Twenge, 2006). These lifespan changes are independent of year of birth (McCrae & Costa, 2003) and the patterns of population personality variation can be expected to continue into the future. These differences in personality influence how workers interact with their physical environments. Individuals with different personality profiles thrive in different sorts of physical environments (Little, 1987).

CHANGES IN SOCIETY

Twenge's analyses have shown that members of younger generations of Americans, when compared to members of older generations at the same age, are generally more narcissistic (defined as having an inappropriately positive view of the self, and engaging in efforts to enhance that self through activities such as attention seeking and public glorification) (Twenge & Campbell, 2008). College students in the early years of this century scored significantly higher on measures of narcissism than college students in the early 1980s. Twenge's findings are consistent with a general rise in individualism in the population (Twenge, 2009).

Twenge has also found that younger Americans are more extraverted (more energized by material external to the self such as other people or sensory experiences than internal material, such as their own thoughts) than previous generations of Americans were at the same age (Twenge, 2001a), have higher levels of self-esteem (Twenge, 2008) and higher perceptions of their personal agency and assertiveness (Twenge, 2001b). They are also more anxious and neurotic (Twenge, 2000). Younger people are also less likely to feel a need for social approval and be more likely to have an external locus of control (feeling that what happens to them is closely tied to factors outside their control, such as fate or luck) than older generations did at the same age (Twenge, Zhang, & Im, 2004). As Twenge and Campbell state, "Managers should expect to see more employees with unrealistically high expectations, a high need for praise, difficulty with criticism, an increase in creativity demands, job-hopping, ethics scandals, casual dress, and shifting workplace norms for women" (2008).

Design Implications: Personality influences human beings' interactions with their physical environments in predictable ways. Extraverts enjoy environments that are more sensorially rich than those favored by introverts, for example. Extraverts also have difficulty refraining from speaking to other people with whom they can make eye contact – whether workplaces allow eye contact among extraverts should depend on the work being done. People who feel that their lives are controlled by fate favor more curvilinear design elements than people who feel in control of their own fate; and people who feel in control of their own destiny are more apt to modify a space so that it meets their needs than others. People who are more neurotic and anxious want to maintain larger interpersonal distances than people who are not anxious or neurotic.

Members of younger generations are more materialistic than older generations (Twenge, 2006). In the early part of this century, significantly more American college students (Generation Yers) were motivated to become well off financially than college students responding to a similar poll in the mid-1960s (Baby Boomers). Becoming famous was also very important to the majority of college students in the mid-part of this decade (members of Generation Y) than to earlier groups of college students. These changes may develop into negative attempts for workplace self-aggrandizement that must be thwarted by policies regarding use of physical environments.

PATTERNS IN INDIVIDUAL PERSONALITY EVOLUTION

We form our basic personalities before age 30. Although people maintain the same fundamental personality after the age of 30, there are subtle modifications of personality after that time, most probably responses to life experiences (all changes discussed are during the span of normal work life and seen cross culturally) (McCrae & Costa, 2003). As Robert and his colleagues report, "Young adulthood, the period of life in which people transition from their family of origin to their family of destination, from compulsory education to a career and to being active members of their community, is the time during which we see the most personality trait change and a uniformly positive pattern of change at that" (2006).

All people show consistent patterns of personality evolution during their lifetimes. Between the ages of 20 and 40 people become increasingly socially dominant, conscientious, and stable emotionally (Sigelman & Rider, 2009). As people become older, they generally become more agreeable and conscientious and less extraverted, neurotic, and open to new experience (openness to new experiences increases from 18 to 21) (McCrae & Costa, 2003). Gregariousness, positive mood, and general energy level decreases from 22 to 30 (McCrae & Costa, 2003). Until the age of 40, independence and self-confidence increase consistently, although they do not change appreciably after that (McCrae & Costa, 2003). As Sigelman and Rider state, "From adolescence to middle adulthood, then, we become less in need of stimulation and less open to new experiences but more psychologically mature – more emotionally stable, more cooperative and easy to get along with, and more disciplined and responsible" (2009).

Design Implications: Many of these aspects of personality have been discussed above. The changing levels of openness to new experience indicate probable responses to atypical workplace and workspace design suggestions or to modifications of the current workplace.

STAGES OF CAREER DEVELOPMENT

Savickas outlines and amplifies Super's stages of career development (2002; see also Levinson, 1986; Ng & Feldman, 2008). People who change careers will cycle through these stages several times. Until the age of 24, people explore career options that seem consistent (to them) with their vocational self-concepts. During this exploratory phase, they may regularly change jobs. In the process, people learn more about themselves and the world of work. From ages 25 to 44 people find some way to publicly manifest their self-concept – either vocationally or via a hobby, family role, or similar interest. If the manifestation is vocational, people begin to accept additional responsibilities at work.

Around 45, workers may reassess their career, to determine if they wish to continue to pursue it. Individuals then move into a phase of career maintenance that lasts until retirement. Ideally, during this phase, job responsibilities continue to be consistent with an individual's self-concept and people remain committed to their employer and enhancing their job performance (as opposed to stagnating). This maintenance phase seems to be less frequent now than it used to be as jobs are continually "redefined" by employers and the psychological contract between employer and employee disappears.

People around 30 years old regularly experience what psychologists call a "quarter-life crisis" (Panchal & Jackson, 2007). This crisis is partially related to career development. At around this time, individuals transition from the discovery period of young adulthood, when people first establish adult jobs and relationships, to thinking about the future, generally becoming more committed to work or career and interpersonal relationships. Thirty year olds review how satisfied they are with their current careers, make appropriate changes, and assess their work-life balance. Individuals older than 30 generally apply all of the information that they have learned about themselves during their earlier periods of self-exploration.

Design Implications: At any time in any workplace, there are individuals who are at different stages of career development. Workers at earlier points may not be as committed to their jobs as workers at later stages – they may still be exploring to determine which career is correct for them. The workplace must help them to focus on the responsibilities of their job. To prevent mature workers from stagnating professionally, the environment should provide information and impetus for professional development.

BRAIN DEVELOPMENT AFTER ENTERING THE WORKFORCE

The human brain is not fully developed until the mid-20s because cognitive-control mechanisms mature long after puberty (Sigelman & Rider, 2009). Since puberty motivates people to engage in thrill-seeking behavior (hormonal changes make people more sensitive to social and emotional stimuli), this developmental gap leads people in their teens and early twenties to do many things that older individuals would not seriously contemplate (Steinberg, 2007). People of this age "Take more risks than children or adults do, as indicated by statistics on automobile crashes, binge drinking, contraceptive use, and crime" (Steinberg, 2007). As Steinberg states, "Unlike logical-reasoning abilities, which appear to be more or less fully developed by age 15, psychosocial capacities that improve decision making and moderate risk taking – such as impulse control, emotion regulation, delay of gratification, and resistance to peer influence – continue to mature well into young adulthood" (2007). The cognitive-control network is housed in the prefrontal cortex of the brain and it changes in structure and function until the early 20s.

Brain structure also causes young people to think more about some issues than appropriate (Palfrey & Gasser, 2008). This can delay appropriate gut responses (in a classic related study people with less developed brains took longer to indicate that it was a bad idea to light their hair on fire than people with fully developed brains). The same effect is not seen when the topic being discussed is not dangerous.

Palfrey and Gasser (2008) have discussed young people's undeveloped prefrontal cortex in the context of their difficulty in assessing information quality – this is becoming a more significant issue as material can be posted to the Internet without any sort of editing

process. The prefrontal cortex is used in “the selection, interpretation, evaluation, modification, and ordering of semantic information. . . . (young people) are not yet fully hardwired, their ability to select, evaluate, and sort out information is limited compared to the ability they will have once they are fully grown.”

When workplace design recognizes true fundamental human place-based needs, workers perform at the pinnacle of their abilities.

Design Implications: Young adults (of any generation) are more open to new experiences (see personality discussion, above) and also more apt to take risks. Members of Generation Y are not any more daring than Baby Boomers were at the same age. Provide workplace and workspace features to compensate for physically immature brains. Don't create features in workplaces that employees may be dared to jump from, for example, or where they may be cajoled into engaging in risky professional behaviors.

WELL-DESIGNED PLACES TO WORK

When workplace design recognizes true fundamental human place-based needs, workers perform at the pinnacle of their abilities. Well-designed workplaces support (physically and psychologically) the workers who toil in them (Sundstrom, 1986). People doing similar jobs require similar support. Some knowledge workers need to concentrate to do their jobs, and some do not, they can be repeatedly distracted and still accomplish needed tasks. People who need to concentrate need true acoustic shielding and probably some visual screening, as well, while they work. It is difficult for people of any age who need to concentrate to do so in an open sea of workers or in different places at different times. If they try to do that, their thought processes are disrupted and they lose the connections that they inevitably form between aspects of their physical environment and the work that they are attempting to accomplish.

Workers of all ages share other basic place-based needs, beyond those related to concentration and the other task-related issues, such as those profiled in the last paragraph. Research by generations of environmental psychologists has shown that they need to feel that they exercise control over ambient and other features in their physical environments, for example. They also need to have privacy, when required, and to socialize with others, when desired. People of all

ages also need a territory. Workers should be able to customize their territory so that it represents the portions of their self-concept that they want to share with others. Workplaces should reflect important aspects of national and organizational culture. Workers of every age need to be able to rest and restock their mental energy levels somewhere at their worksite. At a fundamental level, the sorts of environments in which professional workers thrive remain consistent – human beings and their psychological and physical needs evolve over the course of eons, not decades.

Design Implications: All successful workplaces share some features, regardless of the birth year of the person who will use them (we're ignoring physical ergonomics here). A well-designed workplace provides people with tools they need to do their jobs (such as the ability to concentrate), control, privacy, territories, and options to restock their mental energy.

INFORMATION SYNTHESIS

So, what factors should influence workplace design?

- Concerns for personalization, privacy, and more, as described in the last section
- Type of work to be done in the space
- Life and career stages of the users, as well as their personalities
- Generation-specific nonverbal messages

In the modern workforce, careers evolve in generalizable patterns, regardless of workers' year of birth (Savickas, 2002). Human personalities also vary in predictable ways across the life course of each generation (Sigelman & Rider, 2009) and personality fundamentally influences the physical environments in which people thrive (Little, 1987). Twenge's work (see 2006) has also shown that across society, personality mixes are changing. These sorts of factors have much more important influences on workplace experience (Macky, Garner, & Forsyth, 2008) than simple year of birth, which means they are of great importance for the physical design of successful workplaces.

As Macky, Gardner, and Forsyth (2008) state, “Contrary to popular hype concerning generational differences at work, managerial time may be better spent considering employee needs relating to age and maturity, and lifecycle and career-stage differences than developing generationally specific management policies and practices.”

Employers must weigh the apparent workplace proclivities of the newest entrants to the workforce against the most effective ways to complete the tasks they are called upon to perform. For example, members of Generation Y seem to value working collaboratively. Collaborative work is more appropriate for some tasks than others, and the usefulness of collaborative work for the actual task to be done should have a significant influence on whether workplace design should facilitate or thwart it. However, another important influence on workplace design related decisions must be the anticipated shortfall of skilled workers in the future. In particular situations, it could be reasonable for employers to create workplace environments that are not necessarily those that would be most effective for work tasks to encourage members of Generation Y to work at their firm.

Members of Generation Y communicate frequently among themselves, and physical workplaces will undoubtedly be discussed if they have an apparent influence (positive or negative) on workplace performance.

It is also important to recognize the relative contribution of workplace design to job satisfaction. Workplace design contributes to job satisfaction, but does not determine it. BOSTI conducted extensive research, across several workforce generations, and found that the average effect of workplace physical design on job satisfaction was 24%, with the remaining 76% related to factors such as salary, advancement opportunities, and work/life balance. (Brill, Weidemann, & The BOSTI Associates, 2001). Research reviewed by Sundstrom (1986) reveals that the design of the physical work environment is not one of the most significant contributors to job satisfaction. These findings indicate that efforts to retain particular workers solely through generation-specific workplace design are inefficient.

As the research profiled has illustrated, knowledge workers, regardless of their year of birth, value similar workplace experiences (Deal, 2006; Society for Human Resource Management, 2008). The generations currently working differ in the way that information is conveyed nonverbally – each generation speaks a slightly different nonverbal language. The differences between the generations should not influence the form of well-designed workplaces. Generation Y, for example, may directly discuss the importance of respecting human diversity, but current design practices also respect diversity in the workplace, either for legal reasons (such as ADA compliance), or as a matter of good practices (as in developing local offices so that they respond to local culture).

So, what is the moral of The Element and The Scion? Design for human beings and not members of particular generations. Provide a space in which needed tasks can be accomplished. And don't forget to send the right nonverbal messages.

SIGNIFICANT/CLASSIC REFERENCES

Brill, M., Weidemann, S., & The BOSTI Associates. 2001. *Disproving widespread myths about workplace design*. Jasper, IN: Kimball International.

Conger, J. 2001. How "Gen X" managers manage. In Oseland, J., Kolb, D., and Rubin, I. (Eds.) *The Organizational Behavior Reader, Seventh Edition* (pp. 9-20). Upper Saddle River, NJ: Prentice Hall.

Deal, J. 2006. *Retiring the generation gap: How employees young and old can find common ground*. San Francisco, CA: Jossey-Bass.

Egri, C., & Ralston, D. 2004. Generation cohorts and personal values: A comparison of China and the US." *Organization Science*, 15(2), 210-220.

Gibson, J., Greenwood, R., & Murphy, E. 2008. Generational differences in the workplace: Personal values, behaviors, and popular beliefs. *Eighth Annual IBER & TLC Conference Proceedings*, Las Vegas, NV.

Glass, A. 2007. Understanding generational differences for competitive success. *Industrial and Commercial Training*, 39(2), 98-103.

Harkin, H. & Lockwood, N. 2007. *Managing diversity*. In Oseland, J., Turner, M., Kolb, D., and Rubin, I. (Eds.) *The Organizational Behavior Reader, Eighth Edition* (pp. 430-443). Upper Saddle River, NJ: Pearson Prentice Hall.

Hofstede, G. & Hofstede, G.J. 2005. *Cultures and Organizations: Software of the Mind*. New York: McGraw-Hill.

Jones, G. 2008. How the best of the best get better and better. *Harvard Business Review*, 6, 124-130.

Levinson, D. 1986. A conception of adult development. *American Psychologist*, 41(1), 3-13.

Little, B. 1987. Personality and the environment. In Stokols, D. & Altman, I. (Eds.) *Handbook of Environmental Psychology, Volume One* (pp. 205-244). New York: John Wiley and Sons.

- McCrae, R. & Costa, P. 2003. *Personality in Adulthood: A Five-Factor Theory Perspective, Second Edition*. New York: The Guilford Press.
- Macky K., Gardner, D., & Forsyth, S. 2008. Generational differences at work: Introduction and overview. *Journal of Managerial Psychology*, 23(8), 857-861.
- Ng, T. & Feldman, D. 2008. The relationship of age to ten dimensions of job performance. *Journal of Applied Psychology*, 93(2), 392-423.
- Nisbett, R. 2003. *The Geography of Thought*. New York: Simon and Schuster.
- Palfrey, J. & Gasser, U. 2008. *Born Digital*. New York: Basic Books.
- Panchal, S. & Jackson, E. 2007. "Turing 30" transitions: Generation Y hits quarter-life." *The Consulting Psychologist*, 3(2), 46-51.
- Rapoport, A. 2005. *Culture, Architecture, and Design*. Chicago, IL: Locke Science Publishing Company, Inc.
- Reeves, T. 2006. Do generational differences matter in instructional design? Retrieved March 2, 2009, from Professor Tomas C. Reeves home page: <http://it.coe.uga.edu/~treeves/>
- Roberts, B., Wilson, K., & Viechtbauer, W. 2006. Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin*, 132(1), 1-25.
- Savickas, M. 2002. Career construction: A developmental theory of vocational behavior. In Duane B. and Associates (Eds.) *Career Choice and Development*, Fourth Edition (pp. 149-205). San Francisco, CA: Jossey-Bass.
- Sigelman, C. & Rider, E. 2009. *Life-Span Human Development*, Sixth Edition. Belmont, CA: Wadsworth Cengage Learning.
- Society for Human Resource Management. 2008. *Workplace Forecast*. Retrieved March 2, 2009 from the SHRM Web site: <http://www.shrm.org>.
- Steinberg, L. 2007. Risk taking in adolescence: New perspectives from brain and behavioral science. *Current Directions in Psychological Science*, 16(2), 55-59.
- Sundstrom, E. 1986. *Work Places*. New York: Cambridge University Press.
- Sweeney, R. 2005. Reinventing library buildings and services for the millennial generation. *Library Administration and Management*, 19(4) 165-175.
- Tapscott, D. 2009. *Grown Up Digital*. New York: McGraw-Hill.
- Twenge, J. 2000. The age of anxiety? Birth cohort change in anxiety and neuroticism, 1952-1993. *Journal of Personality and Social Psychology*, 79(6) 1007-1021.
- Twenge, J. 2001a. Birth cohort changes in extraversion: A cross-temporal meta-analysis, 1966-1993. *Personality and Individual Differences*, 30(5), 735-748.
- Twenge, J. 2001b. Changes in assertiveness in response to status and roles: A cross-temporal meta-analysis, 1931-1993. *Journal of Personality and Social Psychology*, 81(1) 133-145.
- Twenge, J. 2006. *Generation me: Why today's young Americans are more confident, assertive, entitled – and more miserable than ever before*. New York: Free Press.
- Twenge, J. 2009. Change over time in obedience: The jury's still out, but it may be decreasing. *American Psychologist*, 64(1) 28-31.
- Twenge, J. & Campbell, S. 2008. Generational differences in psychological traits and their impact on the workforce. *Journal of Managerial Psychology*, 23(8), 862-877.
- Twenge, J., Zhang, L., & Im, C. 2004. It's beyond my control: A cross-temporal meta-analysis of increasing externality in locus of control, 1960-2002. *Personality and Social Psychology Review*, 8(3), 308-319.
- Wong, M., Gardiner, E., Lang, W., & Coulon, L. 2008. Generational differences in personality and motivation: Do they exist and what are the implications for the workplace? *Journal of Managerial Psychology*, 23(8), 878-890.
- Zemke, R., Raines, C., & Filipczak, B. 2000. *Generations at work*. New York: AMACON.