Disruptive Demographics, Design, and the Future of Everyday Environments

by Joseph F. Coughlin

The aging of 80 million baby boomers is shifting the design agenda for many businesses. As Joseph Coughlin points out, the implications of this statistic go far beyond ergonomics. The home, automobiles, communities, and retailing are in for dramatic metamorphoses. This new demographic will demand a new focus on wellness, simplicity, personalized service, and connected convenience—and that will benefit everyone.

Although older products and historic communities are often the inspiration for “vintage” designs, few designers have looked to the older consumer as insight into what’s next. The baby boomers—nearly 80 million Americans born between 1946 and 1964—have been the focus of private and public design of everyday environments for more than 60 years. Over those six decades, business has profited from responding to a seemingly endless supply of young consumers. From Levittowns to shopping malls and movie megaplexes, the baby boomers have defined private and commercial environments. Similarly, such public spaces as hospitals, schools, and libraries, not to mention the nation’s transportation infrastructure, have both reflected and reinforced a generation’s way of life that became today’s American lifestyle.

Today’s baby boomers are youthful, but no longer young. They did not have as many children as their World War II-era parents—forcing business to take a new look at older consumers simply to maintain current sales, let alone to achieve growth. Aging boomers are more likely to be planning reunions and retirements than using schools and playgrounds. As they enter older age, they will place more and different demands on public environments—reinventing everything from the town center to the senior center.
Older consumers and new design values
While the baby boomers are not the first to age, they are the first generation of adults to be so numerous and to benefit from record high levels of health, wealth, and education. The focus of attention in youth, they will expect to be the target of design innovation in older age—enabling them to remain healthy, productive, and independent. Welcome to the marketplace of disruptive demographics, where the next generation of older people will define what's new. Sixty years of successful product innovation around the needs of a younger consumer will no longer be sufficient expertise for future market success. The disruptive demographics of an aging society will compel designers to imagine products, services, and environments that have appeal stretching beyond young, novice consumers to buyers across the whole lifespan.

Despite the baby boomer generation's incredible diversity, there are several user values that can be inferred from their changing physical needs as older people, as well as from their life experiences as consumers. These include:

- **Useful simplicity**: that responds to diminished physical capacity as part of the natural aging process and the desire for easy-to-use products and environments
- **Health and wellness**: for baby boomers who are now at a prime time for chronic diseases and are likely to be providing care to elderly parents
- **Connected convenience**: as a lifestyle that has been built upon an "on-demand" society supported by continuous technological innovation
- **The personal as premium**: as a "me-generation" consumer demand, as well as a strategy for responding to the needs of aging without designing for the old

The successful integration of these values will be greatly influenced by the promise of brand and enabled by the power of technology in everyday environments such as the home, car, community, and store.

Health and wellness at home
Our home is more than where we live. As we age, it becomes a testament to our continued independence. Although some may choose to move to a retirement destination or to downsize, most are likely to "age in place" and stay where they have collected a lifetime of memories, built a marriage, and paid down a mortgage. It is difficult to envision a part of the house that will not be touched by aging. Physical accessibility and mobility will drive many changes in the house; the pursuit of wellness and wellbeing will introduce new services and spaces to the home.

The kitchen will become more than the place where meals are prepared and served; it will also be the home's health and wellness center. While many point to the obvious need for better lighting, lower counters, and accessible cabinets, the real changes may be in how the smart kitchen will help monitor, motivate, and manage the health of the household.

Now managing a host of chronic diseases, such as diabetes, boomers will find that appliances that once simply cooled and cooked are watching what they eat. Radio frequency identification (RFID) tags will soon be on every product that enters the home. These smart tags will contain and share information about the product's expiration date, ingredients, number of servings, and perhaps even preparation suggestions. As a product is taken from Internet-enabled cabinets or refrigerator and used, information will be collected to support diet habits, and a virtual shopping list will be created to enable a home delivery—all as a branded service provided by a large pharmacy or grocery chain.

Telemedicine, the use of telecommunications to provide information and care between a clinician and a patient separated by distance, is becoming commonplace in managing diseases such as congestive heart failure. Boomer demand to manage disease and promote wellness will force the integration of individual medical
devices to monitor body weight, blood pressure, glucose levels, medication compliance, and so on into a single appliance interface that will form a health station. This health station is likely to be a new place in the kitchen or bathroom inviting consumer electronics manufacturers, such as Philips or Samsung, to produce high-design, user-friendly systems that will serve as portals to branded clinical services—for instance, Harvard Medical School/Partners Telemedicine—enabling disease managers to monitor and motivate patients and family caregivers to consult with clinicians.

Physical health may characterize one dimension of wellness, but wellbeing requires continued engagement. The boomers may be entering their retirement years, but they are not withdrawing from life. A recent AARP report indicates that one in five people past the age of 50 are now self-employed. Barclays Bank has identified a new entrepreneurial class of people over 50 starting their own businesses for the first time and requiring special banking services. A new creative space will emerge in the home to support a new business start-up, organize volunteer activities, go back to school, start a new hobby, or simply provide a place to collect a family’s memories to pass along to the next generation. While their children and grandchildren may be in a virtual MySpace, an older adult will develop a "studio of the self" in his or her home to reinvent rather than to retire. Branded office supply providers such as Staples, retail banks such as Bank of America, and even craft retailers like A.C. Moore will develop products, technologies, and services for the new cottage industries of an older creative class.

Connected cars
If the home symbolizes our independence, the car represents our freedom. The capacity to come and go where and when we wish is reflected and reinforced by the automobile. More than 70 percent of the baby boomers live in areas where transportation alternatives do not exist or are in short supply. The car is likely to remain a primary part of American life throughout the lives of aging boomers. From cradle to car, the boomers are America’s automobile generation.

Beginning with the wood-paneled wagons of the 1950s and continuing to the 1980s minivan, boomers have defined the automobile as much as it has shaped their lives.

To accommodate the new older driver, the car is becoming more user-friendly. It is now easier to get into and out of several models. Well-placed handles help sore knees mount a high SUV. Larger mirrors and windows now accommodate visibility for stiffer necks to assess blind spots, while innovative glass coatings and dash design have reduced glare for older eyes. However, it is how information technology and design converge to create a car that connects with the driver, the environment, and everyday living that will characterize the boomer's next ride.

Like the home, the car is getting smarter. Multiple intelligent systems have been introduced to luxury cars, primarily purchased by those 50 and older, to help drivers become more aware of traffic conditions, a possible collision, or the need to self-regulate conversation on a cell phone. Although more information is being added, more may be too much for some. Older drivers who need to be accommodated in this way will be able to personalize their dashboards and displays to dim out some information. Technology will transform the dash into a glass cockpit, enabling drivers of any age to choose which information and in which color and size will be displayed, and where it will be displayed, allowing the driver to reduce clutter and confusion on demand.

In the name of convenience, the car is now increasingly connected to its environment and related services. For premium boomer buyers, in-vehicle navigation systems will be transformed into powerful web-enabled channels of branded content. Affinity groups and loyalty programs—American Express, Visa, Saga, AARP, and the like—will provide in-vehicle channels to boomers using their consumer relationship management systems to personalize information to the car, advising drivers about relevant and preferred restaurants, hotels, retail...
destinations, maintenance shops, and so on based upon the consumer’s previous purchase behaviors and revealed preferences.

Health and driving, rather than age and driving, will become a more important design consideration. One concept, illustrated in Figure 1, shows how information to help the driver self-regulate his or her own driving behavior, such as speed and driver pulse rate, might be displayed on the windshield. Aging boomers will also spur the development of next-generation advanced collision notification systems that will connect the car to local emergency services at the time of an accident, transmitting not only the location of the incident but also personal emergency data, such as blood type, medications, insurance, and so on, to a responding hospital to reduce confusion and treatment time in the emergency room.

These future technologies will be introduced to the car with the older driver in mind, but real design success has often been by surprise. The Honda Element, the boxy utility vehicle designed for Gen-somethings with dogs and surfboards in tow, has been a hit with older buyers. Superior accessibility and capacity for pets, grandchildren, and elderly parents, as well as golf clubs, garden tools, and groceries, has made the Element popular with boomers. The Element has shown that cars designed for ease of use and multiple activities may be designed for younger generations, but they also connect with active, multitasking older people who will not be happy with their “father’s” automobile.

Livable communities
As society ages, a new premium is likely to be put on livability and quality of life. A well-designed community will include easy navigation and connectivity with a rich variety of activities, including health services, education, fitness centers, libraries, and work. Clear and well-placed signage, coupled with lighting that improves visibility, as well as the perception of security, will be prominent features. In highly wired and high-tech communities, residents may someday use augmented reality glasses to navigate their environments. The glasses would wirelessly provide virtual information to the user, describing local cultural interests, shops, restaurants, and transportation near the wearer’s location, while also functioning as regular optics.

Accessibility will be facilitated with improved

Figure 1. MIT AgeLab’s Miss Daisy driving simulator explores the idea of helping drivers self-regulate their own behavior as they adopt the use of new technologies and information systems in the car. Details such as speed, favorite destinations, warnings, and the status of the driver’s physical well-being could be displayed on a heads-up display on the operator’s windshield.
building design, sidewalks, curb cuts, and benches that may provide a rest between destinations. Planners will make greater use of traffic calming techniques to make movement easier and safer for all modes of travel, either by foot or by a wide variety of wheeled options.

Although the car is likely to remain a dominant part of the American landscape for years to come, alternative transportation will gain greater prominence. To provide options for those who choose not to drive or are no longer able, demand-response services will help people of all ages make trips they need to make, as well as the trips they simply desire. Future systems will make use of low-floor, comfortable vehicles with large inviting windows to connect with both the community and users. Creative use of information technology will be used to provide seamless customer service. Instead of booking a ride a day or more in advance as is done today, vehicles and people will be "visible" to each other by cell phone, community television, personal computer, and other systems, enabling people to "Google" a ride in real time to see where a vehicle may be and enabling providers to maximize their capacity.

The shape of future communities might be envisioned by looking at today's naturally occurring retirement communities (NORCs). NORCs embody characteristics that naturally attract retirees. Urban NORCs include areas such as parts of Manhattan and the South End of Boston, which are home to some of the more trendy city activities, from cafes to chic shopping. While these urban enclaves are not within the reach of everyone, some NORCs include smaller communities that include easy access to transportation, healthcare, shopping, or simply the ability to take a walk to get an ice-cream cone.

Many older people are going back to college—that is, college towns. College communities typically provide entertainment—a strip of restaurants and shops—as well as healthcare. For example, the Kendal Corporation operates a number of residential retirement communities located in college towns across the northeast, including properties near Oberlin College, Dartmouth College, and Cornell University. Kendal has successfully built a brand that integrates the desire of many older adults for lifelong learning in a dynamic, livable community.

It's unclear how many aging boomers will choose or even be able to move from their empty nests to a new community. For some, however, a community environment may be at their front door. Beacon Hill Village, located in the section of Boston that bears that name, has emerged as a model of a virtual community that supports "aging in place." Begun by a group of older Beacon Hill residents, the Village includes nearly 800 members who formed an association to contract for a wide range of services to support their independence, safety, health, and engagement. The Village partners with trusted providers to perform home maintenance, cleaning, food shopping, transportation services, health services, and social activities for its members.

Livable communities may emerge from a new baby boomer activism coupled with a desire to age in place. Across the United States, countless residents are now engaging town, city, and regional planners to influence the shape of their communities. Some changes will occur quickly, such as the addition of lighting and alternative transportation, while other improvements that require new zoning and infrastructure will take years. If the boomers are to have an impact, action and urgency today is necessary for them to change the form of their communities tomorrow.

Shopping through the clutter
The baby boomers defined shopping. From the open plazas and strips of the 1950s to the enclosed malls of the 1960s to the present, retail has responded to the changing fashions and fancies of the boomers. What's next?

As with other environments, stores will require proper lighting and simple signage, and presenting products in a way that enables shoppers to envision the store's value will be more critical as the population ages. In contrast to retailers such as Abercrombie & Fitch or Hollister Co., which court younger buyers by emphasizing a closed-club atmosphere with
shuttered storefronts absent of displays and dimly lit but loud interiors, stores that appeal to older consumers will have clear, open pathways, highly visible, and understandable (almost educational) displays under clean crisp lighting. The primary design features for future retail environments will be those that help older consumers sort through the clutter of choice to find solutions, not simply products.

The Home Depot and Lowes offer different environments that may explain their relative success in attracting older shoppers. According to one retail analyst, while The Home Depot continues to grow, its edge with the fastest-growing market segment—older adults and women—is hampered by its crowded aisles, ominous and ever-present forklifts, and lack of creative displays. In contrast, Lowes is said to do better with the older segment and with women because it provides a bright environment with wide, easily navigated aisles that place products and appliances into displays that clearly show how one might transform a kitchen, washroom, or closet.

An easily navigable environment is only part of the new retail experience for older shoppers. The use of technology and branding will be key to guiding product choice. For example, Germany’s Metro AG stores are fully leveraging information technologies to enable smart shopping carts to steer people to new products, promotions, price comparisons, and so on. The MIT AgeLab has developed a Smart Personal Advisor (Figure 2) that uses a personal diet provided on a smart card as a guideline to help the individual choose appropriate foods. The consumer swipes a product’s bar code (or RFID tag, in the future) under the Advisor, and the device displays information indicating whether this is an appropriate choice given diet restrictions. If not, it recommends another product. Future environments will seek to provide consumers with personalized information at the point of decision—in the aisle—to make a smart choice from the countless alternatives.

Shopping for products is now converging with services to produce environments designed to provide “solutions.” For example, pharmacy chain giant CVS recently purchased Minute Clinic. Minute Clinic offers walk-in medical services for common illnesses—for instance, allergies and minor infections—bringing the nearly round-the-clock convenience of a retail store to healthcare. After a visit to a nurse practitioner or physician, the patient can fill a prescription only a few steps away.

For decades, it has appeared that retail stores can only get bigger. However, there may be limits. As the population ages, the desire to have a super-size retail experience may be outweighed by the difficulty of crossing acres of parking lot and thousands of retail square feet. “More” under one roof may only add to the confusion rather than help consumers make a purchase. Retail environments may find that super-size malls will work better for baby boomer consumers if they are designed as village centers rather than as shopping centers. “Village retail” integrates residential, commercial, and even some social services all under one roof, catering to active boomers who see living with retail and restaurants as their kind of community. For example, Natick Mall, located in Natick, Massachusetts, is now building a condominium community to attract empty

Figure 2. MIT’s AgeLab’s Smart Personal Advisor downloads a consumer’s personal diet on a smart card and uses it as a guideline to help him or her choose appropriate foods at the point of decision in the store aisle. The user swipes a product’s bar code (or RFID tag, in the future) under the Advisor to receive information indicating whether it is an appropriate choice given diet restrictions. If not, the Advisor recommends another product.
nesters. The condominium complex will be part of the existing mall, which will also include a new Nordstroms, a Neiman Marcus, and 80 other retailers and restaurants, thus creating one of the nation's largest and most profitable shopping destinations catering to more affluent boomers. Other older shoppers may opt out of large retail of any design and provide a new market for smaller boutique shops that offer less choice but greater simplicity and authenticity—perhaps creating a resurgence of both life and retail on America's Main Streets in small and mid-size communities.

The home, car, community, and store are only some of the everyday environments that will be influenced by our aging society. Clearly, the workplace, restaurants, lifelong learning centers, hospitals, long-term care, and every other public and private space or service will be subject to boomer makeover and redesign. However, rather than think we are designing a society for the old, designers and planners should see this as an inflection point from which to innovate. Disruptive demographics will demand a new focus on usability and accessibility, wellness, convenience, and personal responsiveness. Environments that reflect these values are not for the old—they are better for everyone.

**Further Reading**


About the authors

George Allen, after 20 years in the creative services industry, including 3 years in the US as a creative director at Capital One Financial Services, George Allen returned to the west coast of Canada, where he now serves as principal of Design|Strategy|Research|Inc, a design and brand management consultancy. As part of an MBA in design management, completed through the University of Westminster (London) in 2003, Allen’s dissertation examined the Super, Natural British Columbia tourism brand in the province of British Columbia, Canada. Subsequently, a significant part of his practice has involved him in issues of infrastructure development and urban planning as they relate to place branding in the City of Victoria, including work as a municipal advisory committee member, involvement in cycle tourism promotion, greenways development, and the development of cycling and walking infrastructure in the city. In 2005, his firm designed a new walking map for the city, which became a cornerstone of downtown revitalization.

In 2006, Allen served as creative director on the award-winning Musqueam Culture Guide, a brand tool to guide the planning and design of Vancouver’s new subway line, a key infrastructure project of the 2010 Winter Olympics. Since then, he has also been involved in the development of a new design management curriculum at University Canada West.

Eduardo Alvarez is executive vice president and managing director, strategy and marketing, for BrandPartners, a Rochester, New Hampshire-based integrated provider of customer environments from concept and design through implementation and training. BrandPartners installations are in more than 1,800 companies at more than 28,000 retail locations. Alvarez oversees all strategic and design disciplines at BrandPartners, working with clients such as SunTrust, JP Morgan Chase, AmSouth Bank, and many other financial institutions. Alvarez is a frequent speaker at international financial and service industry conferences and a contributor to retail banking publications.

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Cooper has a master of architecture degree from Rice University and a joint undergraduate degree from Pace University and the Pratt Institute, and he also studied at the Georgia Institute of Technology. He is one of the founding principals of Ziegler Cooper Architects.

Joseph F. Coughlin, PhD, is founder and director of the Massachusetts Institute of Technology AgeLab. A frequent speaker and consultant to businesses and governments worldwide, his
research addresses consumer-driven innovation across markets. He was appointed by President George W. Bush to serve on the White House Conference on Aging Advisory Committee, where he contributed to the technology and market innovation subcommittee. Coughlin serves on a variety of strategy and product development teams for several companies, including BT, DaimlerChrysler, the Fidelity Retirement Research Institute, and Healthways. He was a member of the National Research Council’s Steering Committee on Technology for Adaptive Aging and is currently contributing to the Council’s Panel on the Social Determinants of Adult Health and Mortality. A fellow of Switzerland’s World Demographic Association, Coughlin teaches strategic management and public policy in MIT’s Engineering Systems Division.

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Jessica Gilsdorf is vice president, retail communications strategy, for BrandPartners. She has more than 18 years of experience in marketing and design in the retail industry. At BrandPartners, Gilsdorf works with a number of corporate marketing departments to organize their multi-disciplined creative programs by bridging strategic branding initiatives and implementation challenges with larger creative clients, including SunTrust, J.P. Morgan Chase, Wells Fargo, Independence Community Bank, and AmSouth Bank.

Stephen Hoch is an advisor for Proteus, a premier marketing and design consultancy that specializes in helping clients use visual solutions to solve marketing problems. In addition, he is the John J. Pomerantz Professor of Marketing and director of the Jay Baker Retailing Initiative at the Wharton School, University of Pennsylvania, and current chairperson of the marketing department. Hoch has a keen understanding of retail strategy, branding, marketing channel management, and consumer retail behavior developed through years of work consulting to blue-chip organizations. At Proteus, he provides research direction and analysis, as well as design strategies and recommendations for action on client branding issues. His areas of expertise range from architecting a brand to compete with private labels to integrating design as a solution to a product’s marketing needs at point of purchase.

He holds a BA in human biology from Stanford University, an MBA from UCLA, and a PhD from Northwestern University. Before joining Wharton, he taught at the University of Chicago, where he headed the Micro-Marketing Project, a joint research effort involving a leading Chicago grocery chain and 20 packaged-goods manufacturers. He also has had the opportunity to work at Walt Disney Productions in various marketing positions, including its consumer products division.

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