



SUPERSTITION VISTAS:
FUTURE URBAN DEVELOPMENT:
POSSIBLE CHANGES IN STRUCTURE AND LIFESTYLES

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Future Urban Development: Possible Changes in Structure and Lifestyles

The purpose of this paper is to provide background information on trends and possible future changes in urban structure and lifestyles important for planning the development of a parcel of Arizona state trust land known as Superstition Vistas (SV). This parcel, which is located just south of the Superstition Mountains in Pinal County, has an area of 275 square miles—enough land to provide housing for 900,000 new Phoenix metro-area residents at current population densities.

The aspects of future urban living discussed in this paper are those important for land-use planning—density, neighborhood design, transportation demand, etc. Very little attention will be given to the interior of homes. Also, since the SV parcel is currently undeveloped, emphasis will be placed on changes in urban structure that can be accomplished in greenfield developments rather than the in-fill of urban cores.

While any long-term forecasting exercise involves speculation, this paper tries to keep the speculation to a minimum by focusing on changes in urban lifestyles that will be driven by trends and factors which are already occurring or about which there is much agreement. The specific drivers of lifestyle changes to be reviewed here include: projected changes in the demographic mix of the U.S. population, likely changes in the costs of auto transportation (e.g., those based on consensus oil price forecasts), technological trends (e.g., IT and telecommuting), changes in homeowner preferences as identified in current surveys, and recent trends in architecture and real estate development, including New Urbanism. Much of the growth in the Phoenix metro area over the next few decades likely will be driven by the location decisions of retiring baby boomers. So, a large amount of space in this paper will be devoted to the lifestyle preferences of baby boomers.

1. Demographics: The Baby Boomers

Changes in the demographic composition of the U.S. population over the next several decades will be driven by two factors: (1) the aging of the baby boom generation and (2) rapid growth in the new immigrant population. These demographic shifts will have important implications for housing preferences, transportation needs and the form of new urban development.

Demographic projections

Table 1 shows the latest Census projections of changes in the U.S. adult population by age group for the first four decades of the new century. The largest numerical changes are associated with the early baby boomers — those born between the years 1946 and 1955. The aging of this cohort serves to swell the age group 55-64 over

the period 2000-2010, the age group 65-74 from 2010-2020, and the group 75+ from 2020-2030.

Table 1
Population Changes by Age Group

(in thousands)

Age Group	Change Over the Period:			
	2000-2010	2010-2020	2020-2030	2030-2040
25-34	1,826,967	3,419,157	-130,841	4,819,501
35-44	-4,018,239	1,694,954	3,860,098	331,679
45-54	6,810,693	-3,905,453	1,980,961	4,079,599
55-64	11,761,851	6,545,969	-3,353,678	2,251,477
65-74	2,885,608	10,509,650	6,168,774	-2,478,025
75+	2,296,858	3,878,528	10,652,806	11,074,188

Source: U.S. Census Bureau (2004), "U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin," www.census.gov/ipc/www/usinterimproj.

Among those 65 and over, the group that is considered most desirable by economic developers are those aged 65-74 — the group referred to by demographer William Frey as the “yuppie elderly.” More than half of this group will still be in married-couple households; they will be in good health; and many will have high disposable income. Growth in the number of yuppie elderly will be especially strong during the period 2010-2030.

Having less of an impact on housing and consumer demand will be those aged 75 and over — those Frey refers to as the “needy elderly.” This group consists primarily of surviving spouse households (mostly widows) that have low incomes and are dependent upon social programs and family assistance. The number of needy elderly will grow rapidly from 2020-2040.

Upon retirement, members of the World War II generation typically stayed in the homes they had lived in during middle age and did not move unless forced to by failing health or poor finances. The highly-publicized Sunbelt retirement communities attracted fewer than 10 percent of these retirees. Surveys by Del Webb and the AARP indicate that a much larger percentage of baby boomers will move upon retirement. Many will remain in the local area and simply move into a smaller house with lower maintenance. But 30 percent of baby boomers are expected to make a long-distance move by the time they reach retirement age.

Recent patterns of retirement community development and new home purchases by seniors suggest that the state destinations of migrant retirees will become more diverse. Arizona, Nevada and Florida are likely to absorb a smaller percentage of long-distance retirees than they did in the 1970s and 1980s. Nevertheless, given the physical

comfort provided by warm weather climates and strong job creation in warm-weather states (for baby boomers who wish to relocate near their children and grandchildren), the Sunbelt is certain to be a popular destination for a very large number of new retirees. According to estimates prepared by Parker Associates, a Florida real estate consulting firm, the potential demand for Sunbelt retirement housing is expected to increase from 32,000 per year in the mid 1990s to more than 200,000 by 2005. The annual number of retiree households making a long-distance move is projected to increase to 500,00 by 2015 (Parker 2002).

Implications for average home size

Data from the 2001 American Housing Survey show no significant difference in the size of homes occupied by elderly householders and those in the general population. Seventy-five percent of elderly householders live in single detached housing units, as compared with a figure of 70 percent across all households. The mean size of single detached housing units is approximately 1,860 square feet for elderly householders and 1,920 square feet for all single housing units. The fact that the housing choices of today's elderly are highly similar to those made by the general population is not surprising given that the great majority (over 80 percent) of current retirees never moved out of the homes they occupied in middle age.

There are several reasons, however, for thinking that the housing choices of the elderly will change over the next several decades and that they may well involve a move toward smaller units. First, the baby boom generation has been much more mobile than earlier generations and, as suggested in surveys, is more willing to move to secure a housing arrangement that better suits their needs late in life. Second, the lifestyle preferences of retiring baby boomers (to be discussed further below), which are expected to require close proximity to services and amenities, may be best supported by community developments that are more dense and have smaller homes.

Finally, the baby boom generation may not have the wealth or financial resources to be able to afford the luxury of a large retirement home. Baby boomers have not shown the same propensity for saving over their working lives that their parents did. Baby boomers seem certain to face a public pension and health care system that is less generous. Financial analysts also are increasingly skeptical about the prospect of baby boomers receiving large inheritances from their parents. Baby boomers are too numerous, and the bequeathable wealth of the World War II generation has been significantly reduced by the correction in stock prices following the bubble of the late 1990s and may be eroded further by health care costs as technology continues to make it possible for wealthy Americans to live longer. In the words of Laurence Kotlikoff, an economist at Boston University who is an authority on intergenerational wealth transfers, "there's no economic justification for any bonanza inheritance" (Weiss 2003).

Baby boomers are nervous about their financial future. A survey conducted by American Demographics showed that while 65 percent of respondents of the World War II generation felt "somewhat confident" about their financial security, 45 percent of

respondents between the ages 40 and 58 were “less than confident” that their funds would last them through retirement (Reynolds 2004). A poll of baby boomers conducted by the Chicago-based Spectrem Group found that 63 percent of affluent, non-retired baby boomers intend to fund their retirement by selling their primary residence (The San Diego Union-Tribune 2004). Surveys repeatedly find that most baby boomers expect to work at least part time beyond the age of 65. For example, in a Del Webb survey, more than 60 percent of baby boomers plan to work at least 20 hours a week after retirement (Burrough 2000). According to John Gist of the AARP Public Policy Institute, only one quarter of baby boomers will be comfortably set in retirement, while another quarter will end their years in poverty (Weiss 2003).

Baby boomers may continue to insist on living in homes of high quality. But a combination of limited financial resources and a desire for easy access to services and amenities may lead them to choose homes of smaller size.

Implications for transportation

People travel less when they reach retirement age. Fewer days are worked, so there is less of a need to commute to work. Because of diminished eyesight and reaction time, the elderly are also more nervous about driving, especially at night and over long distances. According to the 2001 National Household Travel Survey, people over 65 years of age make 20 percent fewer trips and travel 40 percent fewer miles per day than do people between the ages of 21 and 65. Even though many baby boomers are expected to delay full retirement and may continue to travel some for work purposes, it is likely that the aging of the baby boom will serve to reduce transportation demands over the next several decades. Baby boomers are expected to be very active in retirement — going out to dinner, shopping, and attending social and cultural events. But many of these needs can be met by designing communities with pedestrian access to services or with local bus systems.

Lifestyle preferences of baby boomers during retirement

Because of their unique life experiences and values, baby boomers will have preferences for retirement living that differ from those of their parents. Whatever these preferences are, developers will be in a better position to satisfy them simply because there are so many baby boomers. Developers will also have had more time to learn how to best configure homes and communities for retirement living. The building of retirement communities is a relatively new activity, with the World War II generation being the first to live comfortably and for a long time after they stopped working.

What will baby boomers want in retirement living? It is hard to know until that day arrives. But based on surveys and the opinions of developers, architects and marketing consultants, here is a list of some likely priorities in the lifestyle preferences of baby boomers.

Aging in place: One of the highest priorities identified in a 2003 AARP study entitled “These Four Walls...Americans 45+ Talk About Home and Community” was that people want to be able to grow old without having to move from place to place. To help people achieve this goal, communities must be planned so that residents have easy access to consumer services, health care facilities and social events. The living units themselves must be designed to meet the particular and changing needs of the elderly. Homes should be single story or multiunit with elevator access. The master bedroom may have a small adjacent suite that can be converted to nursing quarters. Secondary bedrooms should be built so that they can be turned into offices. Homes must have nonslip floors and wide hallways and doors to accommodate a wheelchair. There must be lots of natural light, because old people have a hard time seeing.

Activities and amenities: Medical advances have made it possible for people to remain healthy and to lead active lives well beyond the retirement age. Baby boomers are expected to want retirement communities that make it easy to stay active and socially engaged. They will want access to traditional urban amenities such as shopping, dining, entertainment, and culture. Baby boomers have long shown a particular interest in physical fitness and will want a variety of outlets for physical activity, including trails for walking and biking, swimming pools, tennis courts, and golf courses. The baby boom generation is the most educated generation in the history of the world and is expected to be intellectually active. A 1999 Del Webb study found that 27 percent of baby boomers plan on taking adult education courses after they retire.

Access to transportation: A critical component in the design of retirement communities will be to provide residents with easy access to work, social activities, and consumer services. This can be accomplished partly by siting residential facilities next to other uses, such as retail and health care. Residents can simply walk to libraries, stores, and places of worship. Otherwise, communities may develop economical ways of moving people, such as community-operated bus systems or on-site car rentals for those who only need a car occasionally. Transportation is key if the elderly are to avoid isolation and maintain a presence in the community.

Multi-generational neighborhoods: There are repeated warnings from surveys that many baby boomers do not want to live in large age-restricted retirement communities. Many want to live in mixed-age communities. The 2004 Del Webb Baby Boomer Survey found that baby boomers are more than twice as likely as those aged 59-70 to prefer an adult community that is part of a multi-generational neighborhood. Some empty nesters and early retirees are now choosing to live in downtown urban areas partly for the ease of access to services and amenities, but also for the sense of vitality on the streets and the chance to interact with people of different age and ethnic groups.

How will baby boomers want to live when they retire? It’s a guess; but if he had to put money on it, Bill Parks, the former architecture director for Del Webb, says that baby boomers “are going to want top-quality, scaled down homes in smaller communities with a wide variety of activities and proximity to world-class dining and the arts or sports. A golf course is probably no longer the draw it once was. You can probably skip

the country club. Boomers are apt to be more interested in high-speed Internet connections, concierge service, and their own community coffee shop” (Macdonald 2005).

Recent trends in building retirement communities

One way to get a glimpse into the future of new urban development oriented to retiring baby boomers is to look at where adult and retirement communities are currently being located, what activities they offer, and how they are being planned and built.

Retirement communities are increasingly being built away from the Sunbelt, some even in Snowbelt areas. Most are located within 100 miles of a major metropolitan area. Del Webb first moved outside of the Sunbelt in 1994 when it opened a retirement community near Sacramento and another in Hilton Head, South Carolina. In a daring move that has proved highly successful, Del Webb in 1998 opened a new community 45 miles northwest of Chicago. U.S. Home has built retirement communities in North Carolina and Michigan.

Activities and amenities of retirement communities have expanded. When Del Webb first opened Sun City in 1960, there was an outdoor pool, a small community center, some shuffleboard courts, but no fitness center. Del Webb's new community, Sun City Grand, features a 9,100 square-foot ballroom, a \$14 million spa and fitness center, tennis courts, a fishing pier, and computer and reading rooms. Del Webb's Sun City Anthem, located outside of Las Vegas, offers a 74,000 square-foot community center that houses a fitness center, ballroom, pool-side café, and beauty salon.

Most active retirement communities are focused around golf and fitness, but a few are being designed around intellectual themes. U.S. Home has built performing arts theaters in some of its retirement communities to provide residents with top quality live entertainment. Academy Village outside of Tucson, Arizona has a 13,500 square-foot cultural center that offers a variety of cultural and intellectual activities. Monthly lectures cover such topics as "Goethe and the New Century" and "Whatever Happened to Tolstoy?" A bus allows residents to commute daily to the University of Arizona.

The most radical experiments in the design of senior living arrangements are based on the principles of New Urbanism (discussed further below). The goal is to increase independence among the elderly by locating senior housing within walking distance of stores, medical facilities, libraries, and churches. To help reduce social isolation, age-restricted housing is incorporated within a larger planned development that includes housing for younger generations. The new urbanist community Meadowmont, located in Chapel Hill, North Carolina, is a mixed-use development with 1,200 residential units and 125,000 square feet of commercial space. Meadowmont contains an age-

restricted section with housing options that include one-story cottages and several three- and four-story multiunit buildings surrounding a large common area that has a croquet lawn, clubhouse, and an on-site health center. The age-restricted section is part of a larger

community that includes a town with a grocery store and shops. Housing units are available above the retail. Vertical mixing of uses, such as condominiums above stores, provides easy access to services. By living with people of all ages and having access to a variety of urban amenities, seniors who live in Meadowmont feel like they are part of a real community. (Salvesen and Hervey 2005)

2. Demographics: Growth in the New Immigrant Population

Projected changes in the racial composition of the U.S. population are every bit as dramatic as the expected changes in age distribution. In the year 2000, non-Hispanic whites accounted for 73.7 percent of the population age 25 and over. However, this group is projected to account for only 29.6 percent of the change in the 25+ population over the period 2000-2020 and an even smaller 9.1 percent of the change from 2020-2040 (see Table 2). The fastest growing segments of the population will be Hispanics and Asians. Hispanics represented 10.1 percent of the adult population in 2000 but will account for 36.1 percent of the numeric growth over the first two decades of the new century and 47.6 percent of the growth in the third and fourth decades. Asians represented 3.8 percent of the 25+ population in 2000, but they will claim 13.2 percent of the growth from 2000-2020 and 18.8 percent of the growth from 2020-2040. The share of the population represented by Blacks is also projected to rise. Blacks accounted for 11.3 percent of the adult population in 2000, but they will account for 18.3 percent of the change in the adult population over the period 2000-2020 and 19.5 percent of the change from 2020-2040.

Table 2
Population Changes by Race
(for persons aged 25 and over, in thousands)

Race	Change Over the Period:			
	2000-2010	2010-2020	2020-2030	2030-2040
White, not Hispanic	6,640,956	6,278,863	2,481,953	1,106,670
Hispanic	7,841,185	7,928,510	8,845,088	9,844,554
Black	3,703,107	4,314,718	3,601,508	4,060,546
Asian	2,864,357	2,906,974	3,403,504	3,971,851
Other	514,133	713,740	846,067	1,094,798
Total	21,563,738	22,142,805	19,178,120	20,078,419

Source: U.S. Census Bureau (2004), "U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin," www.census.gov/ipc/www/usinterimproj.

Phoenix has not traditionally been among the top metro-area destinations for new immigrant arrivals. It has, however, been a magnet for domestic migrants, especially Hispanics (Frey 2004). From 1995-2000, Phoenix was second to Las Vegas in domestic

net in-migration of Hispanics. Phoenix was the number one metro area in domestic in-migration of whites.

The coming shifts in the racial/ethnic mix of the population could have profound effects on consumer markets. Increasing diversity in the population may create an ever-growing list of market segments. In the Phoenix area, new housing developments oriented to Hispanics will have to consider the fact that because of lower overall incomes, Hispanics typically live in smaller than average homes and more often live in multiunit housing such as apartments. According to the 2001 American Housing Survey, 54.4 percent of Hispanic householders live in single detached dwellings, as compared with a figure of 69.9 percent in the general population. The average size of single detached residences is 1,629 square feet for Hispanic householders while it is 1,916 square feet in the general population. Automobile ownership is also lower among Hispanics, again because of low incomes. If current trends continue, then demand for public transportation may be higher in new Hispanic developments, and residents may prefer mixed-use neighborhoods with smaller, more dispersed retail.

3. Rising Cost of Auto Transportation

The automobile has had more of an impact on urban form than any other invention in history. Cars and trucks have been the root cause of the decentralization of people and jobs in urban areas. The ultimate utility provided by the automobile has been an increase in the size and privacy of family homes and a decline in commuting times for workers. (Glaeser and Kahn 2004)

Conversely, nothing has more potential to reverse urban decentralization (i.e., to promote density) than an increase in the cost of personal auto transportation. Changes in oil prices and public policy toward motor-vehicle use are likely to raise the cost of auto transportation in coming decades. However, automobiles have become so vital to modern spatial patterns of economic and social organization that, even in a high-cost scenario, rising auto transportation costs likely will have only a marginal impact on the form of new urban development.

Oil prices

From the late 1980s through the early part of this decade, oil prices ranged from \$20 to \$30 per barrel. When expressed in constant 2004 dollars, the average annual price of West Texas intermediate crude was \$25 over the period 1988-2002. Then in late 2003, oil prices began to move up. The price of oil rose from \$30 in October 2003 to \$53 by April 2005—an increase of 75 percent over an 18-month period. Oil then jumped to \$66 per barrel by September of 2005 as an unusually intense hurricane season disrupted oil production in the Gulf of Mexico.

Have the last two years been an aberration, or are we in for a prolonged period of high and rising oil prices? Most analysts and industry experts see oil prices softening

considerably over the next five years. Production from existing capacity will be resumed in war-torn Iraq and the Gulf of Mexico. New deepwater oil fields will be brought into production in the Gulf and in West Africa. Most importantly, OPEC and Russia are expected to significantly expand production capacity in coming years. Mid-range forecasts from both the Energy Information Administration and the International Monetary Fund call for constant-dollar oil prices to fall to around \$35 per barrel by 2010.

The longer-term outlook, however, is for oil prices to gradually move back to a level more consistent with the last two years and to be much higher than what we have been used to over the past two decades. A combination of growing demands from developing countries (especially China and India) and inelastic supplies outside of OPEC countries will tighten oil markets. Long-term forecasts from the International Monetary Fund, which are somewhat higher than those of industry analysts and the Energy Information Administration, call for constant-dollar oil prices to move from around \$35 per barrel in 2010 to as high as \$56 per barrel by 2030 (IMF 2005). Oil prices would then be \$31 higher in 2030 than their average over the period 1988-2002. Gasoline prices would be 74 cents higher (1 barrel of oil = 42 gallons of gasoline).

Public policy toward auto transportation

What may also be important in affecting the cost of auto transportation in coming decades is a change in public policy toward personal automobile use. There are significant external costs associated with driving: travel delays imposed on others in congested traffic, health problems from local air pollution, personal injuries suffered in accidents, and environmental damage from global warming. DeLucchi (1998) has estimated that the external costs drivers impose on others may be as much as 43 percent of the personal monetary and nonmonetary costs of motor-vehicle use. Rational public policy would seek to force drivers to internalize more of the social costs of driving.

The first-best policy would involve a variety of fees and taxes: peak-period fees on congested routes to deal with travel delays, emissions taxes to address local air pollution, a tax on miles driven for accident externalities, and a gasoline tax to limit carbon dioxide emissions that are responsible for global warming. A second-best approach is to simply use gasoline taxes to alter behavior. Gas taxes reduce gasoline consumption and, therefore, would be effective in reducing emissions of CO₂ and harmful particulates. Gas taxes also raise the personal cost of driving and so, by reducing vehicle miles traveled, would serve to reduce traffic congestion and accidents. High gasoline taxes in many European countries can be viewed as a general attempt to force drivers to more completely absorb the full costs of driving.

Parry and Small (2002) have estimated the optimal gasoline tax for both the United States and Britain. They find that the optimal gas tax for the U.S. is \$1.01 per gallon, significantly higher than the average of \$.40 for Federal and state excises. Britain's tax of \$2.80 per gallon of gasoline is more than twice the estimated optimal level, however.

Implications for auto use

How would U.S. households respond to a permanent increase in gasoline prices of \$1.35 per gallon (an additional \$.74 because of higher oil prices and \$.61 more from higher gas taxes)? In their review of econometric studies of the demand for gasoline, Parry and Small (2002) find that estimates of the long-run price elasticity of gasoline demand range from 0.3 to 0.9, with a central tendency of 0.55. They also conclude that more than half of the response in gas consumption takes the form of adjustments in fuel intensity (car size and fuel efficiency) rather than vehicle miles traveled. Their best point estimate of the elasticity of miles traveled with respect to the price of gasoline is 0.22. Based on the Parry and Small elasticities, a rise in gas prices from \$1.35 (the U.S. average in 2002) to \$2.70 (an assumed increase of \$1.35) would be expected to reduce gasoline consumption by 32 percent and miles driven by 14 percent, with improvements in fuel intensity making up the difference.

U.S. households certainly have much discretion in their use of automobiles and, therefore, some capacity to reduce motor-vehicle use in the face of rising transportation costs. According to the 2001 National Household Travel Survey, only 30 percent of trips and miles traveled in a private vehicle are for work-related reasons or to travel to/from school or church. The great majority of vehicle trips are for shopping, recreation and social activities. But while an increase from \$1.35 to \$2.70 represents a doubling of the price of gasoline, it implies only a moderate percentage increase in the cost of auto transportation. Fuel accounts for only 15-20 percent of the monetary cost of operating a motor vehicle.

It is quite likely that gasoline prices will be much higher over the next two decades than they have been over the last two decades. This will have major implications for the size and fuel efficiency of the vehicles people choose to purchase. It may also affect lifestyles in a noticeable way—causing people to make fewer/shorter trips for shopping and entertainment, encouraging more carpooling, and providing an additional incentive for people to live in pedestrian-oriented neighborhoods. But given the enormity of the effect the automobile has had on urban form throughout the world over the past century, it is hard to imagine an increase in the cost of auto transportation of any realistic size that would have more than a marginal effect on the basic pattern of low density suburban development. Personal transportation vehicles are sure to remain a central part of urban living.

4. IT and Telecommuting

Expansion of digital information networks (e.g., the Internet) during the 1990s prompted many urban theorists to forecast a diminished need for face-to-face contact in a variety of urban activities including work, shopping, education, and entertainment. Information technology (IT) was predicted to make distance increasingly irrelevant, and it would represent yet another powerful force promoting sprawl and the dispersal of people and jobs. Public transportation agencies saw telecommuting as a key element in

their plans to deal with urban traffic congestion. Telecommuting even held promise as a means of improving air quality in large cities.

Realistic assessments of the impact of IT and telecommuting on urban living, however, conclude that the impacts to date have been modest at best. There is little evidence that telecommuting has led to changes in residential living patterns (Ellen and Hempstead 2002). Most occupations are still location dependent. While improvements in telecommunications have served to regionally and internationally decentralize many routine manufacturing and service functions, other activities such as high-tech production (e.g., Silicon Valley) and advanced producer services (e.g., legal and financial services) depend on face-to-face contact and seem unlikely to decentralize (Audirac 2002). Overall, urban economists conclude that IT and telecommuting have not yet had any significant effect on city structure (Bertaud 2004).

There is also no evidence that telecommuting has significantly reduced vehicle travel. An analysis during the late 1990s suggested that perhaps 6.1 percent of the population was telecommuting an average of 1.2 days per week. As a result, 1.5 percent of the workforce might be telecommuting on any given workday. After factoring in the possible travel-generating consequences of telecommuting, the net reduction in vehicle miles traveled was no more than 1 percent of total household travel (Mokhtarian 1998). The general consensus is that telecommuting adoption and travel substitution forecasts have been overstated (Audirac 2003).

Digital information networks may someday play an important role in determining where people live and work. History provides many examples of technologies (such as electricity and the car) whose full impacts on productivity and lifestyles were not realized until decades after their initial introduction. But the facts to date provide little basis for thinking that IT will soon transform urban structure and the demand for transportation.

5. What People Want in a Community: Results from Surveys

One approach to identifying future changes in urban form and lifestyles is to use surveys to determine what is most important to homebuyers and whether there are gaps between what people want in a community and what is available to them in the market. Recent surveys find that most households (1) prefer single-family residences with large lots (i.e., don't want high density); (2) are interested in having more pedestrian access to stores and parks but are unwilling to compromise on their use of automobiles; and (3) want neighborhoods with sidewalks, walking and biking paths, and natural open space.

1998 American LIVES Survey

This survey involved 2,000 recent buyers of new and used homes. The survey sampled homebuyers of various ages located throughout the United States. Some of the major findings were summarized by Alexander (2000).

1. Respondents had a strong preference for low-density neighborhoods with wide streets and large lots. Homebuyers generally rejected high-density living arrangements because of noise and a lack of visual privacy.
2. The complete package of new urbanist designs (to be discussed further below) appeals to only a small group of homebuyers, although a majority of respondents liked certain aspects of New Urbanism. Features such as a town center and community gathering places were appealing to most homebuyers. Respondents also liked the idea of having more pedestrian-oriented neighborhoods, with the option of being able to walk to stores and parks. However, most people were not willing to compromise on their use of the automobile and wanted convenient parking and large front yards. The new urbanist principles that were most concerning to respondents were narrow streets and high density.
3. At the top of a list of neighborhood amenities were natural open space, walking and biking paths, and sidewalks. Homebuyers preferred numerous smaller parks and green spaces to one centralized park. Golf courses were near the bottom of the amenity list and appealed to a small, specialized group of homebuyers. What people really want is usable green space where their children can play, their dogs can run, and their families can gather.

2004 American Community Survey

In a survey conducted for Smart Growth America and the National Association of Realtors, 1,130 adults were asked about where they would like to live. The results were weighted by age and race to match the U.S. population. Some of the major findings are summarized below.

1. Respondents were asked to choose between two stylized communities: (1) a “smart growth” community in which there is a mix of residential options (single-family detached homes, townhouses, apartments, etc.), where all streets have sidewalks, where shopping, restaurants and schools are within walking distance of your home, where a one-way commute to work is less than 45 minutes, and with public transportation nearby; and (2) a “sprawl” community in which there are only single-family homes on one-acre lots, no sidewalks, where you have to drive to most shopping, restaurants and schools, where a one-way commute is 45 minutes or more, and where public transportation is distant or unavailable. Given these choices, 55 percent of Americans select the smart growth community and 45 percent choose the sprawl community. Caucasians are equally divided in their preferences. African-Americans strongly prefer the smart growth community.
2. When people are forced to make a trade-off between living in homes built far apart and being able to walk to stores and places of interest, a large majority of Americans (70 percent) would select a community with dispersed housing,

even if it meant having to drive to stores and restaurants. Americans are divided when asked to choose between short commutes and larger lot size.

3. Among factors that were most important in deciding where to live were being within a 45-minute commute to work, having easy access to a highway, and having sidewalks and places to take walks.
4. Two-thirds of Americans want to live in communities with people at different stages of life (single adults, families with children, and older people). Seventy-four percent of African Americans and 64 percent of Hispanics feel it is important to live in a community with a mix of ethnic and racial backgrounds. Only 41 percent of Caucasians consider racial and ethnic diversity to be important.

6. New Urbanism

New Urbanism (NU) is a school of thought that serves to collect and unify principles of urban design that were developed by architects and urban planners during the 1980s in an effort to address perceived shortcomings in American-style sprawl and low-density suburban development. NU has been judged by Herbert Muschamp, architectural critic for the *New York Times*, to be the “most important phenomenon to emerge in American architecture in the post-Cold War era” (Muschamp 1996). The ideas of NU have resonated with the agendas of many organizations advocating such diverse goals as mass transit, environmental protection, sustainable development, main street revival, historic preservation, and mixed-income housing. NU has its own charter (see the NU website at www.newurbanism.org), hosts annual conferences, and has a membership that has grown steadily for two decades. While considered by some to be a passing real estate fad, New Urbanism has enough substance to warrant serious attention when thinking about the form of urban development in the new century.

Goals and principles of New Urbanism

The overarching goals of NU are: (1) to reduce auto dependence which is seen as the root cause of sprawl with costs that include time wasted in traffic, public funds spent on highways and parking garages, harmful local air pollution, and global warming; (2) to build neighborhoods that are diverse in population, promote social interaction, and provide a sense of community; and (3) to reduce the rate of consumption of open space and wilderness areas.

NU principles call for new urban areas to be developed along the lines of historic villages and cities — to be compact, walkable, mixed-use, and transit-friendly and to provide a diverse range of housing. Specific features of NU communities include town centers, pedestrian-oriented design, smaller lots and higher density, grid street patterns, homes with porches in front and garages behind the home, and community gathering places.

One of the most important principles of New Urbanism is to build places for the comfort and enjoyment of the pedestrian. NU neighborhoods and cities are designed to allow people to walk to shops, restaurants, coffee houses and open-air markets within car-free areas. New Urbanists consider pedestrian cities such as Venice and Copenhagen to be among the most desirable cities in the world.

The critics

Many economists see New Urbanism as an attempt at social engineering that has too little regard for costs, trade-offs, or what people really want (for example, see the writings of Gordon and Richardson). Sprawl is not the result of government policies or bad urban planning, but a natural consequence of the technological dominance of the automobile (Glaeser and Kahn 2004). The decentralization of people and jobs made possible by the automobile has allowed families to live in larger homes while reducing travel times.

The image of the American worker commonly offered up by anti-sprawl groups is someone who spends hours each day stuck in traffic while trying to commute from a distant suburb to the inner city. The reality of American living is very different. The automobile has allowed people to live further away from the central city, but it has also decentralized employment. New American cities are polycentric, not monocentric. Traditional downtowns contain only a small fraction of metro-area employment. In Maricopa County, for example, the central and midtown primary cores together account for 11 percent of total county employment (Rex 2002). Commuting times in older, dense cities are almost always much longer than they are in newer, sprawling cities.

Transportation economists generally consider mass transit — a feature of many NU models — to be uneconomical and inappropriate for American cities. Minimum recommended built-up densities are 12 people per acre for intermittent bus service, 15 for light rail, and 20 for rapid transit (Bertaud 2004). Phoenix, which ranked as the 11th most densely populated U.S. metro area in 1997, has a built-up density of only 7.2 people per acre (Fulton, et al. 2001). The existing housing stock and employment areas of American cities are too sparsely developed for public transportation to substitute widely for private automobile use. However, public transit systems such as buses and light rail that are offered to selective densely populated employment centers may well be effective in managing increased transportation demands in cities with rapidly growing populations.

Another criticism of New Urbanism is that while the NU lifestyle may represent a viable niche market, it does not appeal to the majority of Americans. Surveys show that Americans generally prefer single-family homes with large lots and privacy. The mobility provided by the automobile allows people to choose social relationships on the basis of common hobbies and interests rather than who your neighbors are.

Finally, with regard to the issue of rapid consumption of open space and wilderness areas, the U.S. would seem to have enough land to accommodate any reasonable level of development. Ninety-five percent of U.S. land is undeveloped. Even

if every family of four lived on an acre of land, the resulting developed area would amount to less than half of the state of Texas.

The commercial viability of New Urbanism

Statistics on new urbanist developments are collected by *New Urban News*. To be counted as a NU community, a project has to cover at least 15 acres, be organized around a central gathering place, feature a mixture of housing types, and have a pedestrian-friendly design that makes it possible for residents to walk to shops and other businesses. Based on this definition, the great majority of current real estate development remains conventionally suburban. A study in 2000 found that the ratio of real estate investment in current typical development versus NU development was 474-to-1.

New urbanist developments have been growing rapidly, however. Since 1997, the number of NU projects completed or in some stage of construction has increased at an average annual rate of 28 percent. NU advocates are encouraged by this growth and argue that growth would be even more rapid were it not for land-use regulations that inadvertently impede NU development (Bohl 2003). Due to a variety of reasons such as emergency access and protection of residential neighborhoods, many local building codes and regulations prohibit features such as vertical mixes of uses, live/work buildings, squares and plazas, interconnected grid networks, narrow streets, and tree-lined street — all important elements of NU's "traditional neighborhood design." Homebuyer surveys show that while not all elements of new urbanist design appeal to consumers, many do — especially the idea of a town center and pedestrian-oriented neighborhoods that make it possible for people to walk to stores and parks. Consistent with the preferences identified in these surveys is the recent trend toward "lifestyle retail," where developers are turning shopping centers into vibrant retail destinations where people can live and work as well as shop (Mattson-Tieg 2004).

Looking further ahead, trends in demographics and the cost of auto transportation are likely to strengthen the demand for mixed-use, pedestrian-oriented neighborhoods. Some NU proponents see baby boomers as playing a key role in bringing about higher density in suburban development (Hudnut III 2005). Despite the limited significance of New Urbanism in today's real estate market, there may be much to learn about future urban form by studying the principles and designs now offered by New Urbanists.

7. Conclusions

- The aging of the baby boom generation will cause the age group 65 and over to grow rapidly from 2010-2040. Thirty percent of baby boomers are expected to make long-distance moves upon reaching retirement age, and many are likely to move to Sunbelt states.
- There is no significant difference in the size of homes between present retirees and the general population. The housing choices of seniors are likely to

change over the next several decades, however, both because baby boomers may not have the financial resources to be able to afford large retirement homes, and because they are expected to want to be close to services and amenities. Thus, baby boomers' retirement lifestyle may best be supported by community developments that are more dense and have smaller residential units.

- People travel less when they reach retirement age, hence the aging of the baby boom is likely to reduce transportation demand. While baby boomers are expected to be active in retirement, many of their mobility needs can be met by communities with pedestrian access to services or locally-operated bus systems.
- One of the highest priorities of seniors is to be able to grow old without having to move from place to place. To help people achieve this goal, communities must be planned so that residents have easy access to health care facilities, consumer services, and social events. The living units themselves must be designed to meet the particular and changing needs of the elderly.
- Baby boomers are expected to want retirement communities that make it easy to stay active and socially engaged. They will want access to traditional urban amenities such as shopping, dining, entertainment and culture. Baby boomers have long shown an interest in physical fitness and will want a variety of outlets for physical activity including fitness centers, trails for walking and biking, swimming pools, tennis courts and golf courses.
- There are repeated warnings from surveys that many baby boomers do not want to live in large age-restricted communities. They want to live in multigenerational communities.
- Projected changes in the racial composition of the U.S. population are every bit as dramatic as the expected changes in age distribution. The fastest growing segments of the population will be Hispanics and Asians. Phoenix has not traditionally been among the top metro-area destinations for new immigrant arrivals. It has, however, been a magnet for domestic migrants, especially Hispanics.
- New housing developments oriented to Hispanics will have to consider the fact that because of overall lower incomes, Hispanics currently live in smaller than average homes and more often live in multiunit housing such as apartments. Automobile ownership is also lower among Hispanics. If current trends continue, then demand for public transportation may be higher in Hispanic communities. Residents may also prefer mixed-use neighborhoods with smaller, more dispersed retail.
- Increasing diversity in the population will create an ever-growing list of market segments. Zoning laws need to become more flexible.
- Changes in oil prices and public policy toward motor-vehicle use are likely to raise the cost of auto transportation in coming decades. IMF forecasts suggest that oil prices could be \$31 per barrel higher in 2030 than their average over

the period 1988-2002. If gasoline taxes are used to help address the externalities associated with driving (congestion, pollution, etc.), this could require an increase in fuel taxes of \$.60. Together, these changes would serve to double the retail price of gasoline.

- A doubling of gas prices would have major implications for the size and fuel efficiency of vehicles purchased. It may also affect lifestyles in a noticeable way — causing people to make fewer/shorter trips for shopping and entertainment, encouraging more carpooling, etc. Based on econometric evidence, a doubling of fuel prices would be expected to reduce vehicle miles traveled by approximately 15 percent. Even if the costs of auto transportation do rise significantly, however, automobiles are sure to remain a central part of urban living.
- In theory, information technology has the potential to radically alter urban structure and transportation demand. To date, however, IT has not had any noticeable effect on city structure. There is also no evidence that telecommuting has significantly reduced vehicle travel. The general consensus is that telecommuting adoption and travel substitution forecasts have been overstated.
- Information from general surveys of homebuyers indicate that Americans (1) prefer single-family residences with large lots and are concerned about the lack of privacy in high-density living; (2) are interested in having more pedestrian access to stores and parks but are unwilling to compromise on their use of the automobile; and (3) want neighborhoods with sidewalks, walking and biking paths, and natural open space.
- New Urbanism is the most important movement in architecture and urban planning of the last thirty years. So far, new urbanist projects have had only limited commercial success. But homebuyer surveys show that many elements of new urbanist design appeal to consumers, especially the idea of a town center and pedestrian-oriented neighborhoods. Looking ahead, trends in demographics and the cost of auto transportation are likely to strengthen the demand for mixed-use, pedestrian-oriented neighborhoods. There may then be much to learn about future urban form by studying the principles and designs now offered by New Urbanists.

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