

DEMOGRAPHICS AND MARKET DEFINITION

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INTRODUCTION

Despite substantial efforts to promote ridesharing and mass transit, the proportion of employed Americans who normally commute to work alone rose from 64 percent in 1980 to more than 73 percent in 1990.¹ The persistent trend toward single-occupant vehicle (SOV) travel leaves those who favor mass transit and ride sharing facing two major challenges. The first is to devise transportation alternatives that commuters find more economical and more convenient than driving alone. The second is to use land-use planning and other measures to encourage short, multi-purpose trips and discourage long daily drives.

This paper's intent is to stimulate debate on four related questions. First, what were the commuting trends of the 1980s? Second, what social and demographic forces caused them? Third, what are the most likely commuting trends of the 1990s? And finally, what actions will most effectively promote the objectives of transportation planners?

COMMUTING TRENDS OF THE 1980s

The 1990 census revealed explosive nationwide growth in single-occupant vehicle travel. It showed that the nation's net gain of 19 million jobs between 1980 and 1990 was exceeded by a net gain of 22 million single-occupant commuters. The proportion of commuters who use mass transit remained stable in the 1980s, but the proportion who use rideshare arrangements fell from 20 percent to 13 percent.²

Average commuting time and distances also increased in the 1980s. The proportion of workers who spend less than 30 minutes going to work dropped from 72 percent in 1980 to 68 percent in 1990. The proportion who spend at least 45 minutes on the road each way rose to 14 percent from 12 percent.³

The single-commuter and longer-trip trends of the 1980s were simply extensions of trends that began four decades ago. Between 1960 and 1990, for example, the population of the United States increased 39 percent and the number of workers increased 78 percent. But the number of workers who cross county lines to get to their jobs tripled, from 9 million to more than 27 million. And the proportion of cross-county commuters doubled, from 12 percent of all workers in 1954 to 24 percent in 1990.⁴

The proportion of SOV commuters varies widely according to local conditions. The unique characteristics of local areas can have strong effects on SOV commuting. The two metropolitan counties with the highest rates of SOV work commuting are both in suburban Detroit, where healthy incomes and automotive jobs make personal transportation almost universal (Table 1). But even neighboring counties can have widely varying rates. For example, the ratio in Orange County, California is at least 3 percentage points higher than the rate in neighboring Los Angeles County.

¹1990 Census.

²Ibid.

³Ibid.

⁴Richard Forstall, "Going to Town," *American Demographics*, May 1993, p. 42.

TABLE 1 Where SOV is King

Metropolitan counties with the highest proportion of single-occupant vehicle commuters cluster in the Midwest and South.			
(35 metropolitan counties with the highest proportion of commuters driving to work alone, 1990)			
rank/ county	metro	percent SOV	total commuters
1	Macomb, (Detroit, MI PMSA)	87.4	349,937
2	Oakland, (Detroit, MI PMSA)	87.4	546,636
3	Johnson, (Kansas City, MO-KS MSA)	86.5	193,006
4	Warren (Cincinnati, OH-KY-IN PMSA)	86.3	54,076
5	Midland (Saginaw-Bay City-Midland MI MSA)	85.8	33,634
6	Warrick (Evansville, IN-KY MSA)	85.6	21,566
7	Sullivan (Johnson City-Kingsport-Bristol, TN MSA)	85.5	64,499
8	Trumbull (Youngstown-Warren, OH MSA)	85.5	95,997
9	Lake (Cleveland, OH PMSA)	85.4	107,589
10	Bay (Saginaw-Bay City-Midland, MI MSA)	85.4	47,138
11	Monroe (Detroit, MI PMSA)	85.4	59,492
12	Waukesha (Milwaukee, WI PMSA)	85.3	162,059
13	Howard (Kokomo, IN MSA)	85.3	36,703
14	Hamilton (Indianapolis, IN MSA)	85.2	57,278
15	Mahoning (Youngstown-Warren, OH MSA)	85.1	103,902
16	Greenup (Huntington-Ashland, WV-KY-OH MSA)	85.1	13,920
17	Stark (Canton, OH MSA)	85.0	161,334
18	Genesee (Flint, MI MSA)	85.0	174,589
19	Saginaw (Saginaw-Bay City-Midland, MI MSA)	84.8	85,480
20	Kent (Providence, RI PMSA)	84.8	81,053
21	Lee (Albany, GA MSA)	84.7	7,326
22	Livingston (Detroit, MI PMSA)	84.6	57,448
23	Boyd (Huntington-Ashland, WV-KY-OH MSA)	84.5	19,726
24	DeSota (Memphis, TN-AR-MS MSA)	84.4	32,719
25	Cobb (Atlanta, GA MSA)	84.4	250,985
26	Shelby (Birmingham, AL MSA)	84.4	49,622
27	Randall (Amarillo, TX MSA)	84.3	45,163
28	Medina (Cleveland, OH PMSA)	84.3	59,385
29	St. Louis (St. Louis, MO-IL MSA)	84.3	501,082
30	Gwinnett (Atlanta, GA MSA)	84.1	200,970
31	St. Charles (St. Louis, MO-IL MSA)	84.1	111,051
32	Fayette (Atlanta, GA MSA)	84.0	31,492
33	Summit (Akron, OH PMSA)	83.9	231,292
34	Macon (Decatur, IL MSA)	83.9	51,721
35	Canadian (Oklahoma City, OK MSA)	83.8	35,698
	National Average	73.2	

Source: U.S. Census

A closer look at trends in specific counties reveals the major social and demographic trends that fueled the nationwide increase in solo commuting. During the 1980s, SOV commuting increased fastest where it was already highest: namely, in the eastern half of the country. Among the 40 metropolitan counties that combine the fastest growth rate in solo commuting with a high base rate, 6 are in Minneapolis or St. Cloud, Minnesota; 10 are elsewhere in the Midwest, 8 are in the East, and 15 are in the South (Table 2).

Rapid growth in the proportion of solo commuters is usually a sign of rapid economic change. In Pulaski County, Missouri, the share of solo commuters increased faster than in any other county of 10,000 or more, as non-commuting farm jobs were replaced by jobs at Fort Leonard Wood (Table 3). The solo-commuter population also exploded in outer-ring suburban counties like Loudon, Virginia and St. Charles, Missouri.

Only one metropolitan county actually reduced its proportion of solo commuters in the 1980s. San Joaquin, California (Table 4) has an aggressive ride-sharing program. But the leading reason for the decline is that many residents commute 40 or 50 miles from their homes in Stockton to jobs in the Bay Area. The high cost of extreme long-distance commuting makes ride-sharing easy to sell, according to Andy Chesney of the San Joaquin Council of Governments.

In fact, California is home to 15 of the 35 metro counties with the slowest growth rate in SOV commuting in the 1980s. The slow growth rate of many Western counties may be due to the lengthy commutes of residents. San Joaquin County may show that even if gasoline costs remain stable, commuters will abandon SOV commuting at a point where its financial and time costs are greater than the alternatives.

Local governments have traditionally stressed voluntary efforts to reduce solo commuting. But as the problem worsens, some mandatory measures are being adopted. Last year's amendments to the federal Clean Air Act require some metropolitan areas to improve air quality; in response, local governments are passing commuter laws that may eventually penalize employers and solo commuters.

Yet penalizing solo commuters will not promote alternatives if solo commuters feel that they have no realistic alternatives. Demographic changes have made commuting more complex than it was 30 years ago. Some drivers in 1993 go from a suburban home to a downtown office and back at predictable times, just as their parents did in 1963. But others work sporadically or at off hours, commute from suburb to suburb, or must make multiple stops on their way to and from work. The more complex patterns of commuting in the 1990s reflect a more complex society, where individual demographics and lifestyle choices are far more powerful determinants of behavior than group or institutional affiliations.

Penalizing behavior without understanding its cause makes it likely that the penalties will not have the intended effect. Planners will have more success if they begin by studying commuters' complex transportation needs. The only way for them to compete effectively against the SOV trend is to understand those needs and serve them better than private automobiles do.

COMMUTER TRENDS OF THE 1990s: CAUSES, EFFECTS, AND RESPONSES

Why do commuters choose driving alone, even if alternatives are available to them? The simplest answer is that the alternatives do not meet their needs. Commuters in the 1990s are as diverse as the labor force itself.

To promote their objectives effectively, transportation planners must learn to think as business owners do in a competitive marketplace. They must first understand that there are many different segments of transportation consumers, and each segment has radically different needs. Then they must craft a strategy, rooted in consumer information, that will encourage consumers to choose mass transit and ridesharing over private vehicles.

The most powerful causes of change in commuting have been working parents, the changing nature of employment, the changing habits of "fringe" drivers, and a changing mix of vehicles. This section will consider each cause, explore the effects of each cause, and suggest responses planners might consider.

TABLE 2 Where SOV is Worst

Some metropolitan counties with high proportions of single-occupant vehicle commuters also have high growth rates for SOV commuting.

Many are in outer suburbs with lots of working parents.

(35 metropolitan counties with the fastest growth rates of SOV work commuting that had above-average rates of single-occupant vehicle work commuting in 1990)

rank/ county	metro	percent increase 1980- 1990	percent SOV 1990	total commuters
1	Los Alamos (Sante Fe, NM MSA)	18.6	81.5	9,797
2	Stokes (Greensboro-Winston-Salem-Hig, NC)	18.2	75.9	18,722
3	Herkimer (Utica-Rome, NY MSA)	17.6	75.4	26,906
4	Carver (Minneapolis-St. Paul, MN-WI MSA)	17.1	77.0	25,705
5	Sarpy (Omaha, NE-IA MSA)	17.1	82.4	55,185
6	Woodford (Peoria, IL MSA)	16.9	78.7	15,112
7	New Kent (Richmond-Petersburg, VA MSA)	16.7	76.4	5,265
8	Calumet (Appleton-Oshkosh-Neenah, WI MSA)	16.4	74.9	17,270
9	Bristol (Providence, RI MSA)	16.4	80.7	23,957
10	Loudoun (Washington DC-MD-VA, MSA)	16.1	78.0	50,164
11	Andersen (Knoxville, TN MSA)	16.1	82.7	30,240
12	Grundy (Joliet, IL PMSA)	16.0	81.5	14,899
13	York and Poquoson (Norfolk-Virginia Beach-Newport News, MSA)	16.0	81.8	26,940
14	Goochland (Richmond-Petersburg, VA MSA)	15.9	79.1	6,929
15	St. Charles (St. Louis, MO-IL MSA)	15.9	84.1	111,051
16	Dade (Chattanooga, TN-GA MSA)	15.7	75.1	5,691
17	Harrison (Louisville, KY-IN MSA)	15.7	76.4	13,628
18	Putnam (Charleston, WV MSA)	15.4	81.2	17,731
19	Franklin (St. Louis, MO-IL MSA)	15.3	75.8	36,922
20	St. Charles (New Orleans, LA MSA)	15.2	81.5	17,593
21	Washington (Minneapolis, St. Paul, MN-WI MSA)	15.1	80.2	75,493
22	Wayne (Rochester, NY MSA)	15.1	79.3	41,699
23	Madison (Jackson, MS MSA)	15.1	79.8	23,723
24	Sherburne (St. Cloud, MN MSA)	14.9	77.1	20,178
25	Dallas (Des Moines, IA MSA)	14.9	75.7	14,824
26	Powhatan (Richmond-Petersburg, VA MSA)	14.9	77.3	7,040
27	Cumberland (Portland, ME MSA)	14.8	76.2	122,741
28	Sheboygan (Sheboygan, WI MSA)	14.8	76.1	51,384
29	Benton (St. Cloud, MN MSA)	14.6	75.7	14,774
30	Anoka (Minneapolis-St. Paul, MN-WI MSA)	14.6	79.7	130,912
31	Cabarrus (Charlotte-Gastonia-Rock Hill, NC MSA)	14.6	80.6	51,039
32	Rockingham (Lawrence-Haverhill, MA-NH PMSA)	14.6	81.1	131,576
33	Jefferson (St. Louis, MO-IL MSA)	14.5	80.4	80,695
34	Paulding (Atlanta, GA MSA)	14.5	77.6	20,400
35	Orleans (Rochester, NY MSA)	14.5	75.7	10,760
	National average	8.82	73.2	

Source: U.S. Census

TABLE 3 Centers of Rural SOV

Nonmetropolitan counties with the fastest growth in single-occupant vehicle commuting are on the borders of metro areas, or have undergone rapid economic change.

(counties with 10,000 or more residents with the fastest growth in people who commute to work alone, 1980-1990)

rank/ county	metro	percent increase 1980-1990	percent SOV 1990	total commuters
1	Pulaski, MO	25.9	63.5	20,088
2	Chaffee, CO	25.2	70.5	4,863
3	Hardin, KY	24.0	71.5	42,532
4	Floyd, VA	21.3	70.3	5,509
5	Routt, CO	20.8	71.9	8,165
6	Juneau, AK	20.6	60.7	14,240
7	Elmore, ID	20.5	72.6	10,154
8	Kewaunee, WI	20.1	65.2	9,259
9	Onslow (Jacksonville, NC MSA)	20.1	61.6	86,801
10	Greene (Charlottesville, VA MSA)	19.9	67.1	5,372
11	Liberty, GA	19.8	63.6	26,932
12	Hickman, TN	19.7	70.3	6,884
13	Mariposa, CA	19.7	67.1	5,734
14	Lake, MN	19.6	75.7	4,217
15	Beltrami, MN	19.4	71.3	13,704
16	Door, WI	19.3	72.9	11,661
17	Richlan, MT	19.2	74.0	4,502
18	Rolette, ND	19.1	67.9	3,692
19	Larue, KY	19.0	73.1	4,740
20	Custer, NE	18.9	71.4	5,517
21	Somerset, ME	18.8	74.8	21,105
22	Hood, TX	18.8	77.9	11,628
23	Los Alamos (Sante Fe, NM MSA)	18.6	81.5	9,797
24	Lincoln, WY	18.5	67.9	4,976
25	Fremont, WY	18.5	71.4	13,605
26	Potter, PA	18.5	70.3	6,658
27	Teton, WY	18.2	70.7	6,481
28	Limestone, AL	18.2	80.0	23,975
29	Benton, IA	18.2	69.4	10,139
30	Dickenson, VA	18.2	74.4	4,941
31	Leslie, KY	18.2	69.7	3,591
32	Stokes (Greensboro-Winston-Salem-Hig)	18.2	75.9	18,722
33	Ashe, NC	18.1	68.6	10,174
34	Madison, NC	18.1	71.4	7,493
35	Rockbridge, VA	18.1	77.6	8,544

Source: U.S. Census

TABLE 4 Where SOV is Slowing

Of the 35 metropolitan counties with the slowest growth in single-occupant vehicle commuting in the 1980s, 15 are in California.

(35 metropolitan counties with the slowest growth in single-occupant vehicle work commuting, 1980-1990)

rank/ county	metro	percent increase 1980- 1990	percent SOV 1990	total commuters
1	San Joaquin (Stockton, CA MSA)	-0.0	74.6	191,111
2	Tulare (Visalia-Tulare-Porterville, CA MSA)	0.3	71.3	116,533
3	Sutter (Yuba City, CA MSA)	1.4	76.5	26,137
4	Los Angeles (Los Angeles-Long Beach, CA PMSA)	1.4	70.1	4,115,248
5	New York (New York, NY PMSA)	1.7	7.8	754,148
6	Stanislaus (Modesto, CA MSA)	1.9	76.7	147,406
7	Orange (Anaheim-Santa Ana, CA PMSA)	1.9	76.8	1,278,661
8	Hudson (Jersey City, NJ PMSA)	2.1	42.4	262,745
9	Cameron (Brownsville-Harlingen, TX MSA)	2.3	69.3	84,642
10	Riverside (Riverside-San Bernardino, CA PMSA)	2.3	73.8	482,618
11	Fresno (Fresno, CA MSA)	2.4	75.2	265,397
12	Harrison (Longview-Marshall, TX MSA)	2.4	76.1	22,368
13	Kern (Bakersfield, CA MSA)	3.0	74.7	213,525
14	San Bernardino (Riverside-San Bernardino, CA PMSA)	3.0	75.2	265,397
15	Clark (Las Vegas, NV MSA)	3.2	74.8	371,128
16	District of Columbia (Washington, DC-MD-VA MSA)	3.2	35.0	304,428
17	San Mateo (San Francisco, CA PMSA)	3.6	72.5	346,559
18	Monterey (Salinas-Seaside-Monterey, CA MSA)	3.6	67.5	164,270
19	Ouachita (Monroe, LA MSA)	3.7	81.8	57,021
20	Passaic (Bergen-Passaic, NJ PMSA)	3.7	70.7	220,595
21	Cumberland (Vineland-Millville-Bridgeton, NJ MSA)	3.7	75.2	59,774
22	Philadelphia (Philadelphia, PA-NJ PMSA)	3.9	44.7	640,577
23	Bronx (New York, NY PMSA)	4.0	24.9	429,777
24	Ector (Odessa, TX MSA)	4.0	80.5	48,912
25	Webb (Laredo, TX MSA)	4.0	68.1	44,910
26	Kings (New York, NY PMSA)	4.0	22.5	901,010
27	Terrebonne (Houma-Thibodaux, LA MSA)	4.0	75.4	34,613
28	Santa Cruz (Santa Cruz, CA PMSA)	4.1	70.4	115,199
29	Hidalgo (McAllen-Edinburg-Mission, TX MSA)	4.2	70.6	119,196
30	Smith (Tyler, TX MSA)	4.3	82.1	65,846
31	Merced (Merced, CA MSA)	4.3	72.8	68,697
32	Nueces (Corpus Christi, TX MSA)	4.4	75.5	121,392
33	Liberty (Houston, TX PMSA)	4.4	73.5	19,974
34	McLennan (Waco, TX MSA)	4.4	79.6	81,434
35	Santa Barbara (Santa Barbara-Santa Maria-Lompney MSA)	4.5	70.4	401,173

Source: U.S. Census

Working Parents

Probably the most important reason for the long-term increase in single-passenger commuters is the increasing presence of women in the labor force. Between 1980 and 1990, the proportion of adult women in the labor force increased from 51 percent to 57 percent, while the proportion of men actually declined from 77 percent to 76 percent. Gains were rapid among women with children living at home, and most rapid among women with preschool-aged children.⁵

This trend had a direct effect on commuting. Between 1983 and 1990, the number of miles driven by women grew 49 percent, from an annual average of just 6,400 miles to almost 9,500 miles. The number of miles men drove increased only 19 percent, from 14,000 to 16,600.⁶

The peak driving years for women are also the peak years for child-bearing and errand-running: ages 20 to 34. Women in this age group drove an average of 11,200 miles in 1990, an increase of 4,100 miles or 57 percent since 1983. Men this age drove an average of 18,300 miles in 1990, and increase of 16 percent.⁷

The peak driving years for men are the peak years of labor force participation: ages 35 to 54. Men in this age group travelled an average of 18,900 miles in 1990, compared with just 10,500 miles for women. But while the increase since 1983 was just 6 percent for men, it was a startling 43 percent for women. Once again, this increase was fueled by the growing proportion of women that age who hold jobs outside the home.⁸

The characteristics of women's jobs also changed in the 1980s. In many cases, women are no longer the secondary worker in the household. Their commuting needs are just as great and just as substantial as those of men.

Working parents, and especially working mothers, need to stop at day care centers on their way to and from work. They also need to get to their children in emergencies. They also run errands on way to and from work, so the commute usually has multiple functions. Multiple-function commutes make the most efficient use of time, a crucial concern of working mothers. But they make most current mass transit and ridesharing programs difficult if not impossible to use.

To working parents, grocery stores and day-care centers are daily destinations just as important as their offices. Transportation planners might address this trend by encouraging ride-share arrangements among parents whose children share the same day care or private schooling, rather than the same office. Working parents will eagerly patronize multiple-use developments that combine day care with retail and office functions. And employers might be encouraged to have designated "emergency vehicles" that parents might use to reach their children quickly.

Changing Jobs

It is well-known that most new jobs created since 1960 have been in suburbs. But central cities have held onto their jobs or have seen slow job growth. The result is that most suburbs still export more workers than they import, but the gap is narrowing.

The nature of employment has also changed. As America's economic base shifts from manufacturing jobs to jobs that provide information and services, fewer workers must arrive at large factories to begin work all at the same time.

⁵1990 Census data reported by Samia El-Badry and Peter Nance, "Driving Into the 21st Century," *American Demographics*, September 1992, p. 46.

⁶Ibid.

⁷Ibid.

⁸Ibid.

Today's office workers are more likely to arrive in staggered intervals, leave during the day to run errands, leave for the day at different times, and perhaps even return to work in the evening at their primary job or a second job.

This large-scale economic shift has rewarded workers who have a college education, but it has penalized those with less educational attainment. The real wages of Americans who have not been to college has been declining for twelve years in a row, and most Americans have been to college. One result of this unfortunate trend is that more Americans are working two jobs to make ends meet. Also, less-educated working parents are likely to seek jobs with different work hours so that each spouse takes turns caring for the children. One demographer estimates that "split-shift parents" account for one in six married couples with children living at home.⁹

These trends are dispersing commuter traffic in all directions and at all hours. As metropolitan areas develop multiple job centers with staggered work hours, the notion of "reverse commuting" becomes meaningless. Instead of two rush hours with all cars trying to move in the same direction, planners must cope with rush hours that often last three or four hours, with traffic back up in both directions.

One employment trend that may reduce traffic congestion is an increase in jobs performed at the worker's home. Estimates of the number of telecommuters and other home-based workers vary from 20 million workers to 39 million workers in 1993.¹⁰ The Bureau of Labor Statistics (BLS), which does not count telecommuters as home-based workers, estimates that about 20 million people worked at home part- or full-time in 1991, up from 18 million in 1985. Only 9 percent of home-based workers work entirely at home, and the mean number of work hours for a home-based worker is slightly more than 9. Blacks and Hispanics are underrepresented among home-based workers, and women are overrepresented.

Discussions of home-based work are often reduced to debates about telecommuting, but BLS data show that most home workers are involved with manufacturing or services jobs. Moreover, more than one-quarter of home-based workers are self-employed, and that proportion is growing rapidly. The most effective way to encourage home-based work, therefore, is not by spending vast sums on fiber-optic links or computer networks. Small amounts invested in business incubators, and loans that allow people to start their own businesses, would take far more drivers off the streets at rush hour.

In the next century, America's labor force will be older than it is today, as the huge baby-boom generation moves through middle age. It will also be more ethnically diverse: for every one non-Hispanic white worker added to the labor force between 1990 and 2005, six Hispanic workers and three Asian workers will be added.¹¹

These changes will have mixed effects on commuting trends. Today, recent immigrants to the U.S. tend to live in larger households than do non-Hispanic whites; they have lower household incomes, on average, and they are more likely to live in one-earner families. These trends could retard growth in the number of two-car families. Yet if historical patterns are repeated, recent immigrants will pursue material rewards at least as aggressively as do native-born Americans. And one of the most reliable ways to achieve middle-class status is finding a second job—and a second car—for a spouse.

"Fringe" Drivers

Working-age Americans are by far the biggest consumers of transportation services. But the largest proportional increases in mileage driven between 1983 and 1990 occurred among the youngest drivers, aged 16 to 19. These young

⁹Jennifer McEnro, "Split-Shift Parenting," *American Demographics*, February 1991, p. 50.

¹⁰Patricia Braus, "Homework for Grownups," *American Demographics*, August 1993, p. 38.

¹¹Bureau of Labor Statistics.

drivers averaged about 3,500 more miles in 1990 than in 1983, a 91 percent gain for young women and a 62 percent gain for men.¹²

Older adults are driving more, too. Between 1983 and 1990, men aged 55 to 64 increased their average driving mileage 13 percent, even though their labor force participation rate declined. Driving mileage by women in this age group increased 33 percent, as their labor force participation increased. Among adults aged 65 and older, men registered a gain of 27 percent, and women 44 percent.¹³

Low-income people have been a steady market for buses and other forms of mass transit. But the number of low-income Americans has been growing, and the proportion of transportation claimed by mass transit has not increased. It appears that young and old Americans, who are likely to have lower incomes, are finding ways to join the SOV trend themselves.

Planners can lure low-income people back to mass transit by keeping costs low, and by promoting the low cost relative to the rising cost of using a private automobile every day. But they also must serve the large number of low-income people who are working parents with complex transportation needs, or they will lose more market share to SOV commuters.

Changing Vehicle Mix

After 44 years of steady growth, the number of passenger cars on the road in the United States began to decline in 1990. But the number of minivans, and light trucks increased rapidly. The net result is that the number of vehicles was stable in 1992, for the first time in 46 years.¹⁴

The number of vehicles is not growing because overall population growth in the U.S. has slowed to a snail's pace. The U.S. population is growing at the rate of about 1 percent a year. Moreover, the number of young adults and other first-time consumers of new cars is declining, while the number of middle-aged adults who buy replacement vehicles is increasing. Minivans and light trucks are a popular choice for middle-aged members of the "baby boom" generation because they serve a child-oriented suburban lifestyle.

One other trend in the nation's vehicle mix should be noted. As income growth has slowed or stopped in the 1990s, many families have been keeping cars longer. As a result, the average age of a car in the U.S. is increasing rapidly.

The changing mix of vehicles has negative and positive effects on transportation. Minivans and light trucks get lower gas mileage than most passenger cars, and older cars often cannot match the gas mileage of newer ones. But the increased carrying capacity of minivans may make it attractive for owners to seek ride-sharing partners who could cut their transportation costs. Transportation planners should begin programs that encourage minivan owners to take on riders by offering them tangible rewards.

WHAT PLANNERS MUST DO

Most of the demographic and geographic trends discussed in this paper work against current ridesharing and mass transit programs. A more dispersed population and job base is harder to serve with mass transit. Shift-work, erratic job schedules, smaller offices, and multiple-stop commutes make ridesharing more difficult to coordinate.

¹²El-Badry and Nance, above.

¹³Ibid.

¹⁴R. L. Polk Corporation, Dearborn, MI, Annual Vehicle Census.

Yet there is evidence that the proportion of commuters who choose SOV may be near its peak. Women's labor force participation increased at a slower rate in the 1980s than it did in the 1990s, and actually declined in 1991. Many demographers predict that the rate will increase further, but not at the dramatic pace seen in the 1970s and 1980s.

Overall mobility declines with age, and the 1990s will be a middle-aged decade. Between 1990 and 2000, the number of Americans aged 45 to 54 will increase 46 percent as the baby-boom generation enters this age group. The result will be fewer people changing addresses, longer job tenures, and more predictable daily routines in most places. Studying consumers' transportation needs as they exist now may therefore create programs that could be effective for at least a decade.

In the 1970s and 1980s, the American public ignored public policies that encouraged ridesharing and mass transit. They did this despite significant efforts by the public and private sector to promote ridesharing, and despite rapid growth in public concern about pollution. Their choices show how important private automobiles are to the psychological health and well-being of Americans. Many observers have noted that Americans see their cars as symbols of freedom and independence. But we should also recognize that cars are havens of quiet and solitude in an increasingly hectic world.

A working parent's day often starts at 5:30 A.M. It includes two hours of child care and housekeeping before school, eight hours of work, and four hours of child care and housekeeping after work. For many workers, driving to work alone is a rare opportunity to meditate in solitude, or listen to one's chosen music, or catch up with a book on tape. Rather than feeling aggravated at heavy traffic, some commuters may become more relaxed by gaining a few extra moments of peace and quiet. The truth is that their work and home lives are far more stressful than their lives in their cars.

Many Americans feel profound affection for their automobiles, and their feelings are not likely to change. For example, surveys have shown widespread public concern for environmental degradation. Seven in ten Americans describe themselves as "environmentalists." Yet only half of Americans recycle their garbage, and fewer than one-third contribute to environmental groups. When the Roper Organization asked a sample of Americans which environmentally-friendly actions they would consider taking, changing one's personal driving habits ranks dead last.¹⁵

Yet time and time again, rising public concern over a social problem foreshadows actions taken to solve that problem. Public anger over treatment of blacks built for at least a decade before the Civil Rights Act of 1964 was passed, for example. Earth Day 1970 was the peak of a wave of public concern that made possible many significant environmental reforms in the 1970s.

Rising environmental concerns in the 1990s will probably follow the same pattern, but with a twist. An increasing proportion of Americans may be willing to consider taking actions on behalf of the environment, including ridesharing. But they won't take those actions unless their consumer needs, including the need for solitude and privacy, are taken into account.

Planners who do not recognize this fact will continue to devise promotional campaigns and laws that encourage ridesharing by punishing SOV travel. Their success rates will be similar to those of the 1980s. But planners who do recognize the public's primacy have a chance to do far better. They will begin to see commuters as consumers of transportation services. Moreover, they will recognize that their competitor—SOV travel—is number one in their market, and that they are the consumer's second choice. Instead of forcing or persuading people to do things right, consumer-based transportation planners will find ways to reward people for doing the right things. Their goal will be to erode the market share of SOV travel by analyzing its weaknesses, and by devising transportation services that do a better job of meeting consumers' needs.

¹⁵Joe Schwartz and Thomas Miller, "The Earth's Best Friends," *American Demographics*, February 1991, p. 26, and unpublished data from The Roper Organization, New York, NY.