

## FEATURES

---

### TRANSNATIONAL BORDERLANDS: METROPOLITAN GROWTH IN THE UNITED STATES, GERMANY, AND JAPAN SINCE WORLD WAR II

*Nineteenth Annual Lecture of the GHI, November 17, 2005*

**Kenneth T. Jackson**  
*Columbia University*

In the spring and summer of 1945, World War II finally ended. The human and economic costs of the conflict were horrendous in many lands, but especially so in Germany and Japan, where dozens of cities—including Berlin, Hamburg, Cologne, Frankfurt, Königsberg, Tokyo, Osaka, Hiroshima, and Nagasaki—were in ruins. Millions of young soldiers would never be coming home, and millions of civilians were without shelter. Factories were quiet, productivity was at a standstill, and the population was hungry. The situation was not promising.

But Germany and Japan rose miraculously after 1945, and by the twenty-first century they stood at the pinnacle of international prestige and success, having produced the world's second and third largest economies with an astonishing array of ideas and products. This achievement has been widely attributed both to the sacrifice and hard work of ordinary citizens and to the acceptance by those same people of western ideals of democracy, freedom, and capitalism. As early as 1970, the Germans and the Japanese were buying a disproportionate share of the planet's luxury goods. Their cities featured thriving central business districts, desirable residential neighborhoods, low crime rates, and efficient public transportation systems.

The United States followed a different trajectory. In 1950, it stood astride the earth like a colossus. Its diverse industries were marvels of efficiency and productivity; its people were richer than those of any other nation in history; its laboratories and universities set a standard of excellence rarely matched; and its air, naval, and ground forces were superior to any possible combination of rivals. America had vast natural resources, unspoiled lakes and forests, and bustling consumer emporiums. Indeed, by 1960, the majority of American families had a private car, an air-conditioned house, a large refrigerator, a television set, a private tele-

phone, a clothes washer and dryer, and multiple bathrooms. And many households had much more than that.

By many measures, the United States remains in an enviable position in 2006. Its standard of living is high; its technological achievements are unmatched; its military forces retain their international dominance; and its economy is twice as large as that of Germany and Japan combined. Every day, thousands of newcomers, both legal and otherwise, fight desperately to cross over from Mexico to the land of opportunity, all hoping to follow the American dream to prosperity and a suburban house.

But the great republic has stumbled in recent decades as it has gone from a creditor to a debtor nation. Its balance of payments deficit is annually reckoned in the hundreds of billions of dollars. Its once humming industries have either closed entirely or relocated to other parts of the world. Its citizens suffer from high rates of incarceration, homelessness, drug abuse, and chronic disease, and the wage gap between the rich and the poor continues to widen. With the exception of New York, Chicago, San Francisco, and Boston, most old American cities have been abandoned by the middle class. Detroit, St. Louis, Cleveland, Buffalo, Newark, New Orleans, and Baltimore, for example, have been on life support for decades. Their central business districts are forlorn, their crime rates are high, and their public schools are dysfunctional. Their once thriving neighborhoods are now characterized by abandoned buildings, littered streets, and an eerie silence.

What happened? Why did the cities of the United States decline after 1945? Why did those of Germany and Japan, at least in a relative sense, thrive during those same years?

Such questions are obviously beyond the limitations of a brief paper. But I do want to probe transnational comparisons of urban and suburban growth in all three countries and to make two large points. The first is that patterns of residential development are often counterintuitive, or not what one might have expected given relative population density and wealth. From the perspective of Germany, for example, it might seem natural that America, with its continental size and vast open spaces, would follow a low-density residential pattern. But Sweden, Norway, and Spain, which have low population densities, do not feature the sprawling metropolitan areas characteristic of the United States.

And how do we explain the residential circumstances of Japan? Greater Tokyo, for example, is in 2006 the world's most populous urbanized region, with a population exceeding 30 million. Yet aside from a few commercial or office towers, the area is remarkable for its low-rise residential structures, most of them three stories in height. There are exceptions, such as Roppongi Hills, a mixed-used complex that includes the 54-story Mori Tower, a five-star Grand Hyatt Hotel, and four high-rise

residential buildings. But Tokyo would never be confused with New York City, where multi-story apartment structures predominate.

Japan as a whole is not so different from its capital city. Its 127 million citizens occupy less space than the one million residents of Montana. And much of the land that the Japanese do have is mountainous or otherwise unsuitable for settlement. So we might expect that they would build high-rise apartment buildings to preserve open spaces for leisure and recreation. But this is not the case. Rather than live in tall structures along the lines of New York, Hong Kong, or Shanghai, the Japanese avoid apartment living altogether, preferring instead to commute several hours back and forth to work every day in order to live on the ground on residential lots that are miniscule by American standards. The result is that the hundreds of miles between Tokyo and Hiroshima represent an unbroken urban corridor of crowded houses. No doubt this has something to do with earthquakes, but well-constructed big buildings are as safe as small house in such disasters.

Similarly, the Russians, who reside in the world's most spacious landscape, might be expected to live in secluded cottages on large individual plots. Instead, whether in St. Petersburg or Khabarovsk, Moscow or Irkutsk, Kaliningrad or Magadan, they live in cheaply constructed eight- or ten-story apartment buildings that seem to stretch forever on the edges of every city.

Germans have made the intelligent choice. With their high disposable incomes and their beautiful forests, lakes, and farms, they live in both apartments and houses and in both rental and owner-occupied units. More than most other peoples, they have preserved their towns and cities and kept enough parks and open space to satisfy almost any critic.

This paper suggests that the transfer of ideas and practices among the World War II adversaries should have worked both ways. The Germans and the Japanese learned from Americans how to sustain democratic government, build skyscrapers, and create multi-national businesses. But Americans rarely looked to Germany or Japan for ideas or advice. At the least, those nations could have taught the United States how to conserve resources, maintain attractive cities, and construct efficient public transportation systems. In other words, the German and Japanese people prospered by learning from American experience, while Americans did not bother to learn from European and Asian experience. Quite simply, the economic and social problems of the United States might have been mitigated if Washington had been as attentive to German and Japanese experience as Bonn and Tokyo had been to the American example. My assumption is that the pattern of metropolitan growth was not inevitable in any country, and that geography was not, by itself, destiny.

## The American Residential Experience

By 2000, the United States was an overwhelmingly suburban nation. Well over half the population lived outside cities and in places that were obviously not rural, up from a quarter in 1950 and a third in 1960. No other country on earth, not even Australia and Canada, both of which share many spatial characteristics with the American republic, had de-concentrated so relentlessly, so overwhelmingly, so ubiquitously. And the process accelerated in the twenty-first century, so that residential development was eating up 2.1 million acres per year by 2005, a 50 percent increase over the 1980s.

The term suburb is imprecise, however. As even casual reflection reveals, American “suburbs” come in all shapes and sizes, so much so that some suburbs like Hoboken, New Jersey are more like cities than the spacious enclaves for the comfortable that fit the stereotype. And some sections of cities, like River Oaks in Houston, or Fieldston in the Bronx, or Bel-Air in Los Angeles, are more like suburbs than the suburbs themselves.

What then does it mean to say that the United States is a suburban nation? Essentially, the uniqueness of the American residential pattern becomes clear when we shift to an international perspective. The American nation has thus far been unique in four important respects that can be summed up in the following sentence: Affluent and middle-class citizens live in suburban areas that are far from their work places, in homes that they own, and in the center of yards that by urban standards elsewhere are enormous. This uniqueness thus involves population destiny, homeownership, residential status, and journey to work.

The first distinguishing element of metropolitan living in the United States is low residential density and the absence of sharp distinctions between city and country. With wide streets and expansive lawns, the population is typically scattered at average residential densities of fewer than ten persons per acre. The situation in the Denver area is instructive. That fast-growing metropolis, which in 2006 has perhaps three million residents, stretches over hundreds of square miles, and has been absorbing into its orbit such distant communities as Golden, Littleton, and Boulder. Such sprawl results from the privatization of American life and the tendency to live in fully detached homes. For example, of the 100 million dwelling units in the United States in 2000, about two-thirds consisted of a single family living in its own house surrounded by an ornamental yard.

More crowded urban conditions, sharply differentiated from the countryside, are typical of other nations. The outer boundaries of Berlin, Hamburg, Cologne, and Vienna abruptly terminate with apartment buildings, and a thirty-minute train ride will take the passenger well into the countryside. Similarly, open fields surround the narrow streets and

crowded houses of Lübeck and Koblenz. Metropolitan Tokyo has swallowed up thousands of tiny farms since World War II, but private building lots rarely exceed one-twentieth of an acre. Unlike Western cities, Shanghai legally includes thousands of acres of productive farmland, but its population is concentrated at the center, where the average density reaches almost a quarter-million people per square mile.

The example of Sweden, which has a standard of living comparable to that of the United States, is particularly revealing. Since 1950 new towns have sprouted around Stockholm, but the high-rise, high-density, low-amenity Swedish suburbs, such as Vällingby, nine miles west of the city center, and Farsta, six miles to the south, with their immigrant concentrations and strong dependence upon public transportation, are the physical antithesis of the low-density, automobile-dependent suburbs of the United States.

The higher densities and different experiences elsewhere in the world can be illustrated by an experience of Professor Bruce Stave of the University of Connecticut. As a visiting professor at Beijing University fifteen years ago, he assigned my book, *Crabgrass Frontier: The Suburbanization of the United States*, in one of his classes. After a week of effort the students came to him with a quizzical look. "What is crabgrass?" they asked. Quite simply, there seems to be no Japanese or Chinese equivalent of a yard with ornamental grass that performs no useful or productive function.

The second distinguishing residential feature of metropolitan living in the United States is home ownership. This characteristic can best be expressed statistically. In 2006, about two-thirds of American families own their dwellings, a proportion which rises to three-fourths of AFL-CIO union members, to 85 percent of all two-person households headed by a 45- to 64-year-old, and to 95 percent of intact white families in small cities. Overall, the American rate is about double that of Germany and Japan, and is many times higher than that of such former Communist nations as Russia, Poland, or Bulgaria, where private ownership was for many years technically illegal. Sweden again serves as an instructive example, for in that wealthy nation only about a third of families own either a mortgaged or a debt-free home. This proportion has remained fairly stable since 1945, a period of unprecedented prosperity. Only New Zealand, Ireland, Australia, and Canada, all with small populations and a British-induced cultural dislike of dense cities, share the American home-owning experience.

The third distinguishing characteristic of metropolitan living in the United States is the length of the average journey to work, whether measured in miles or in minutes. No other people travel so far to employment. According to the 2000 census, the typical American worker traveled ten miles and expended a half hour in each direction. In larger

metropolitan areas in the United States the figures were higher. In metropolitan Tokyo, the average journey to work is even longer in both time and distance than in the United States, but the Japanese people as a whole do not travel such long distances on a daily basis. Precise statistics are unavailable for Europe, but one need only think of the widespread practice in Spain and Italy of going home for lunch, often for a siesta as well, to realize that an easier connection between work and residence has been more valued and achieved in other countries.

The fourth and final distinguishing characteristic of the American pattern of metropolitan living is the socioeconomic distinction between the center and the periphery. Although the pattern is not statistically so stark in cities that have essentially annexed their suburbs since 1960, such as Houston, Memphis, Indianapolis, Oklahoma City, and Jacksonville, in the United States as a whole, status and income correlate positively with suburban residence, the area that provides the bedrooms for an overwhelming proportion of those with college educations, of those engaged in professional pursuits, and of those in the upper-income brackets. Despite hopes and claims of a great revival in American cities in recent years, the 2000 census revealed a widening disparity between residents of cities and those of their surrounding suburbs, not only in income, but in employment, housing, living arrangements, and family structure. Even Boston, San Francisco, and New York, all acclaimed for their gentrified neighborhoods and economic resurgence, suffered a relative loss of household income. In fact, because low-income areas, public-housing projects, and minority groups are so concentrated in city centers, economist Richard R. Muth calculated a third of a century ago that median income in American cities tended to rise at about 8 percent per mile as one moved away from the central business district, and that it doubled in ten miles.

The situation in other nations provides a striking contrast. In 1993, for example, a commuter train wreck near Johannesburg killed dozens of persons, virtually all of whom were black. The racial proportions of that tragedy reflected the fact that in the old, white-ruled Union of South Africa, it was the oppressed black population that had a long, rush-hour journey to work, while the inner city was reserved for the gracious homes of the privileged white minority. Only after the end of apartheid did the white population flee to gated suburbs.

## The Past

It was not ever thus. Prior to 1825, American cities were like urban settlements elsewhere in the world. That is, they shared five spatial characteristics common to all pre-industrial “walking cities.”

The first important characteristic of the walking city was congestion. Lot sizes were small (usually less than twenty feet wide), streets were narrow, and houses were close to the curb. Tiny Elfreth's Alley in Philadelphia, virtually a replica of Restoration London with its little, brick-fronted row houses, survives today as an example of the tight spatial arrangement typical two centuries ago. Meanwhile, large areas only a few miles distant from Philadelphia's Delaware River waterfront were rural.

The second important characteristic of the walking city was the clear distinction between city and country. Before the nineteenth century, in every part of the world, there was no blurring of urban-rural boundaries, and there were no signs announcing the entrance of a traveler into a community. Before the age of industrial capitalism a sharp-edged dot on the map was an accurate symbol for a city. It stood for a site of political and economic power inhabited by a small, specialized part of the total population of any region. There was an obvious visual distinction between the closely built-up city and the rural sections surrounding it, and there were no fast-food restaurants, motels, or service stations stretching far along the radial highways.

The third important characteristic of the walking city was its mixture of functions. Except for the waterfront warehousing and red-light districts there were no neighborhoods exclusively given over to commercial, office, or residential functions. Factories were almost non-existent, and production took place in the small shops of artisans. There were no special government or entertainment districts. Public buildings, hotels, churches, warehouses, shops, and homes were interspersed, or often located in the same structure.

The fourth important characteristic of the walking city was the short distance its inhabitants lived from work. Around the globe in 1825, even in the largest cities, only about one person in fifty traveled as much as one mile to his place of employment. Because the business day was long, and because any distance had to be overcome by horse or by foot, there was a significant advantage in living within easy walking distance of the city's stores and businesses. Work and living spaces were often completely integrated, with members of the family, as well as apprentices, literally living above or behind the place of employment.

The final important characteristic of the walking city was the tendency of the most fashionable and respectable addresses to be located close to the center of town. In Germany, this affinity for the city's core represented the continuation of a tradition that dated back thousands of years. To be a resident of a big town was to enjoy the best of life, to have a place in man's true home. To live outside the walls, away from cathedrals, diverse shopping, and elegant homes, was to live in inferior sur-

roundings. In the young American republic, the same tendency was everywhere apparent, and the suburbs were in every way less attractive and prestigious than the core of the city.

Suburbs, then, were socially and economically inferior to cities when wind, muscle, and water were the prime movers of civilization. This basic cultural and social arrangement was essentially the same around the world, and metropolises as different as Edo (Tokyo), Berlin, and New York were remarkably alike. Even the word suburb suggested inferior manners, narrowness of view, and physical squalor.

### **The Transformation of Metropolitan Living in the United States**

Since 1825, America's largest cities have undergone a transformation that has, thus far, not been characteristic of most other nations and cultures. The shift was not sudden, but it was no less profound for its gradual character. Indeed, the phenomenon was one of the most important in history, for it represented the most fundamental realignment of urban structure in the five-thousand-year history of cities on this planet.

Yet most of the world has not changed radically. A map of the German countryside in 2006 shows remarkably little change from a map of the same area a century ago. The farms, castles, villages, and country estates are much the same, and though the twenty-first-century map might include an occasional industrial park or airport, these are relatively slight intrusions on an immemorial landscape. Germans regard age as an asset, not a liability. In the United States, by contrast, the bulldozers are always at work, and a mighty engine of change seems destined to convert every farm into a shopping mall, a subdivision, or a highway.

Why have Americans neglected cities and concentrated so much of their energy, their vitality, and their creativity in the suburbs? Clearly, no single answer can account for such an important phenomenon, but six causes have been fundamental: racial prejudice, inexpensive land, cheap transportation, balloon-frame construction, government subsidies, and weak land-use controls.

No discussion of the settlement patterns of the American people can ignore the overriding significance of race and ethnicity. In comparison with the relative homogeneity of Germany or Japan, the cities of the United States have long been diverse in racial, ethnic, and religious terms. In suburban terms, this has provided an extra incentive for persons to move away from their older domiciles: fear. After the mass migration of blacks from the South gained momentum during World War I, and especially after the United States Supreme Court decision in 1954 that school segregation was unconstitutional, millions of families moved out

of the city “for the kids” and especially for the educational (as measured by standardized tests) and social (as measured by family income) superiority of smaller and more homogeneous suburban school systems. The sprawling, single-story public schools of outlying suburbs, surrounded by playing fields and parking lots and offering superb facilities, new laboratories, and well-paid teachers, became familiar symbols of suburban life.

The second cause of American suburbanization has been inexpensive land. Although purchasers rarely regard real estate as cheap, and although some speculators made millions of dollars on land speculation (Henry Morgenthau in the Bronx and Otis Chandler in Los Angeles are examples), a broader view would reveal that American real estate has been affordable and available whereas in Germany and Japan it has been expensive and scarce. Over the course of the twentieth century, building lots in North America have typically been priced at one quarter to one half of comparably sized and located parcels in Germany and Japan. And even after the decline of real estate values in Japan since 1990, land there remains expensive by the standards of the United States.

The third cause of American suburbanization has been subsidized and convenient transport, which has brought those home sites within easy commuting range of workplaces. Although the omnibus (France, 1826), the steam railroad (England), the subway (England, 1864), and the automobile (Germany) were all developed first in Europe, it was in the United States that they were most enthusiastically adopted and where they most immediately affected the lives of ordinary citizens. Especially before World War I, the subways, commuter railroads, elevated trains, and electric trolleys of American cities were faster, more frequent, more efficient, and more cost-effective than transportation options elsewhere in the world. In 1900, for example, Berlin, which had the best transit operation in Europe, would have ranked no higher than twenty-second in the United States. And Tokyo, which in 2006 has the most extensive public transportation system on earth, had virtually nothing at the beginning of the twentieth century.

If we include interstate highways and private automobiles, the transportation system of the United States probably remains the best anywhere early in the current century. This is because the American pattern has been to subsidize private automobiles rather than buses and subways. Moreover, the real price of both cars and fuel in the United States has fallen since 1910. With the price of pumping crude oil from prolific wells in the Middle East or Texas usually less than 25 cents a barrel until World War I, American gasoline consumption and automobile ownership led the world after 1910. Meanwhile, the cost of operating an automobile has remained cheaper in the United States than in other advanced na-

tions. This is a subject of surpassing national significance because it virtually dictates the type of residential pattern that will follow. As Homer Hoyt, the nation's most distinguished demographer before World War II, noted fifty-five years ago: "The location, size and shape of our cities has thus been a function of the transportation system prevailing during its main period of growth."

The fourth cause of suburbanization has been the balloon-frame house. Before 1840, the building of an American house was a complicated matter, requiring specialized carpentry skills and several workers. Post and beam construction, for example, involved notching the ends of every piece of lumber. Few people could do it properly. The development of an inexpensive and peculiarly American method of building houses with two-by-four-inch wooden studs was therefore revolutionary. It simplified construction and brought the price of a private dwelling within the reach of most citizens. Each region of the United States has a favored exterior material for new single-family houses—wood clapboard in the Northeast and North Central states, brick in the South, and stucco in the West—just as the British prefer brick and the French choose stucco. But in the United States, more than 90 percent of all single-family houses are of the balloon-frame type, regardless of exterior sheathing. Such structures are uncommon in other countries, in part because their citizens regard the balloon-frame as flimsy, and in part because they lack the timber resources of the heavily forested United States. In Germany, for example, nineteenth-century walls were typically load bearing, meaning that if the wall were weakened, the structure would collapse. In the United States, by contrast, the exterior sheathing has no structural function other than to keep out the wind and the rain. In contemporary Germany, even interior rooms are divided by building blocks, not by fiberboard and two-by-fours as in the United States.

A fifth cause of American suburbanization has been the role of government, particularly at the federal level. The prevailing myth is that suburbs blossomed because of the preference of consumers who made free choices in an open environment. Actually, because of public policies favoring the suburbs, only one possibility was economically feasible. The result, if not the intent, of Washington programs has been to encourage decentralization. Federal Highway Administration and Veterans Administration mortgage insurance, the highway system, the financing of sewers, and the placement of military bases, to name only the most obvious examples, have encouraged scattered development in the open countryside. While it was a national purpose to build subsidized highways and utilities outside of cities, it was not national policy to help cities repair and rebuild aging transit systems, bridges, streets, and water and sewer lines.

Moreover, beginning in 1937 with the passage of the United States Housing Act, this nation adopted a policy, unique in the world, of making the provision of public housing a voluntary act, so that communities across the land had to apply for public housing. The practical result of this policy was that central cities applied for public housing while affluent suburbs simply avoided the opportunity. Thus, American central cities became the concentrated homes of the poor and of various kinds of urban pathologies, while the suburbs became places of escape. By contrast, the Germans and the Japanese have a higher percentage of public housing dwellers, and they spread their public housing units across metropolitan regions. Indeed, in those countries, a demonstrably higher proportion of the public housing units go to the periphery than to central cities.

The most important federal inducements to single-family residences have been contained in the murky provisions of the Internal Revenue Code and especially in the unusual American practice of allowing taxpayers to deduct mortgage interest and property taxes from their total taxable income. The size of this subsidy to homeownership is staggering and exceeds by four or five times all the direct expenditures Congress grants to housing. Moreover, tax benefits make it increasingly likely, as taxable income rises, that homeownership will be preferred to renting. Indeed, while Germany does not allow the owner-occupant to deduct the mortgage interest from even a single dwelling, the United States allows for both a first and a second home, up to a maximum deduction of a \$1 million mortgage.

Finally, federal, state, and local governments in the United States have been influential through what they have not done. In Germany, land is regarded as a scarce resource to be controlled in the public interest rather than exploited for private gain. There, government has traditionally exercised stringent controls over land development and has operated on the theory that the preservation of farms and open space is an appropriate national goal and that suburban sprawl is undesirable. In Germany, by 1900, most municipal governments not only had extensive restrictions on the use of private land but they also had large land holdings of their own that they used to control development on the city's periphery. The residue of this policy can be seen in 2006, when truck farmers tend crops within one mile of the skyscrapers of Düsseldorf, not because alternative land uses would not yield a higher return, but because the government rejects the very possibility of development.

In the United States, by contrast, millions of acres since 1960 have been converted into subdivisions, office parks, and highway strips. One result is that the vitality of central business districts has been drained away in favor of enclosed shopping malls on the metropolitan periphery.

Indeed, Russell Baker once remarked, only partially in jest, that either America is a shopping center or the one shopping center in existence is moving around the country at the speed of light.

Decisions about spatial location are more significant in the United States than in Germany and Japan because America is decentralized, and its schools and the protection provided by police, firefighters, and public health professionals are financed and controlled at the local level. For example, Japan has only sixty-four school districts, and all essentially follow the same curriculum and the same national educational objectives. The United States, by contrast, has more than 15,000 independent school systems, each with its own board of education, its own taxing arrangements, and its own objectives and goals. Washington has little authority about zoning, land use, education, fire protection, police, and all manner of issues that in Germany or Japan are handled by regional or central governments.

The situation in Australia is similar. In this lightly populated nation, where suburbanization is the rule, there are only seven school districts, seven police departments, and seven fire brigades in the entire country. There is no Melbourne Fire Department or Sydney Police Department or Adelaide School System. Instead, there is a Victoria Fire Brigade, a New South Wales police force, and a South Australia school system. Thus, when a person moves from one municipal jurisdiction to another in Australia, that move has few consequences. In the United States, by contrast, every residential change from one suburb to another has important financial, educational, and legal ramifications.

## The Future

These six factors, along with a pervasive fondness for grass and solitude, have made private and detached houses affordable and desirable to most Americans, and they have produced a spread-out environment of work, residence, and consumption that has thus far been more pronounced in the United States than elsewhere. By many measures, this result has been ideal. Not only has it been in accord with the wishes of the American people, but they have remained the most mobile and the best housed people in the history of the planet. The German people, for example, have matched Americans in per capita output, but their residential options are limited and expensive. An average American house and yard would be luxurious by German standards. German homes tend to be more substantial than their American counterparts, but are less spacious and more expensive.

Moreover, the metropolitan pattern of the United States seems to be in accord with the technological demands and possibilities of the future.

In the 1980s and 1990s, such prominent authors as Paul Hawkin, John Naisbitt, and Alvin Toffler, among others, created a cottage industry out of the prediction that cities are doomed and that a new science of telecommunications will make personal human interaction unnecessary. In the future, they suggested, we might expect to have breakfast with our spouse, kiss good-bye, and then return to our separate workstations within the house. In the friendly surrounds of the family room, we will report to work, buy groceries, and converse with friends.

In 1997, Joel Garreau's *Edge Cities: Life on the Frontier* made somewhat the same argument. Focusing on large commercial/office/residential complexes (defined as places with 5,000,000 square feet or more of office space and 600,000 square feet or more of retail space) on the peripheries of large American metropolises, Garreau opined that "when we examine Edge Cities, we're looking at the future we're building for our children and our children's children well into the twenty-second century."

### The Dilemma

What, if anything, is the suburban dilemma? If American highways and houses are the best and most accessible in the world, if the American people are happy with their residential options, and if the American suburb is predicted to be the domicile of choice in the twenty-first century, what is the problem? Why not have a celebration instead of a discussion?

Unfortunately, the suburban pattern of metropolitan living, which worked well for 180 years, is not affordable in an environment in which global competition is a fact of everyday life. Suburbanization is destructive to cities, destructive to the environment, destructive to economic competitiveness, and destructive to personal safety. Suburbanization has also rewarded racial discrimination, inhibited individual economic opportunity, and eaten away the rural landscape.

### The Cost to Cities

In 1968, Spiro Agnew became the first suburban politician to rise to national office. Although he was presented to the Republican National Convention in Miami Beach as an expert on urban problems, an important consideration when deadly riots were regularly tearing apart America's cities, his actual experience was as chief executive officer of suburban Baltimore County, Maryland, a 610-square-mile swatch of green and rolling countryside that surrounds the city of Baltimore like a well-pitched horseshoe on a stake. Between 1950 and 1970, the affluent county doubled its population while its proportion of African-Americans fell from about 7 percent to 3 percent. Thus, Agnew's real claim to expertise,

as Gary Wills noted in *Nixon Agonistes*, was that he “early grasped and overcame what white suburbanites take to be their main city problem: ‘how to escape the city.’ ”

Escape Americans did. Eighteen of the nation’s twenty-five largest cities in 1950, including Chicago, Detroit, Philadelphia, Buffalo, Cleveland, Pittsburgh, and St. Louis, lost population over the next five decades, a circumstance which many observers have taken as the most compelling evidence that American cities are dying. By contrast, during the same half-century, the independent suburbs of the United States *gained* more than 80 million residents. Between 1950 and 1970, the suburban population doubled from 36 to 74 million, and 83 percent of the nation’s growth took place in the suburbs. In 1970, for the first time in the history of the world, a nation-state counted more suburbanites than city dwellers or farmers. In 1990, also for the first time in history, a nation-state counted more suburbanites than city dwellers and rural dwellers *combined*. Remarkably, each of the fifteen largest metropolitan areas in the United States in 2000 had a majority of residents living in the suburbs. In New York City, for example, the municipality had eight million inhabitants. But the surrounding suburbs had almost twice that many people. And New York has always been more centralized than other American cities.

## The Cost to the Economy

Inexpensive energy is necessary for almost every convenience in American life, from lawn care to electric lights, from air-conditioning to central heating, from air travel to cheap clothing. But ground transportation is the big guzzler, consuming about half of America’s per capita consumption of oil. And that number has been increasing steadily—from four barrels per person per year in 1920, to eight barrels in 1930, to ten barrels in 1940, to sixteen barrels in 1950, to twenty barrels in 1960, to twenty-six barrels in 1970, to thirty-three barrels in 1980, to forty barrels in 2005. Meanwhile, the population has almost tripled, meaning that national consumption increased by almost thirty times in less than a century.

Automobile and trucking interests often make the case that the transportation system of the United States contributes to its international competitiveness. They suggest that the price of moving goods from place to place is lower in North America than in other countries, and that American businesses would be at a disadvantage if gasoline taxes or highway tolls were raised significantly.

Indeed, transport costs to individual manufacturers are lower in the United States than in Germany and Japan. But this is because the general taxpayer picks up many of the expenses attributable to automobility (or truckability). Historically, cities have been the most efficient of human

spatial arrangements, and all indications are that this remains true in 2006. Berlin and Tokyo discourage suburbanization because sprawl has a negative effect on their international competitiveness.

In the United States, where the residential, manufacturing, and commercial pattern is dispersed, the average citizen must use a private car to perform virtually every one of life's mundane tasks. In metropolitan areas with poor mass transit options, which of course describes most of the nation, the plague of gridlock creates inefficiencies on a massive scale. Thus, the five urban areas in 2003 where the time lost per traveler to congestion was highest were Los Angeles, San Francisco, Washington, Atlanta, and Houston. This tendency is further exacerbated by low energy prices. The cost of gasoline in the United States has been low for more than a century. In July 1991, for example, a study by the Cambridge Energy Research Associates concluded that the pretax price of gasoline at the pump, adjusted for inflation, was as low as it had been since 1947. As Professor David Lewis of the University of Michigan Business School has observed: "Our prices of gasoline represent a dream world."

Compared to competitor nations, gasoline is essentially not taxed in the United States. In 2005, Americans did pay more than \$60 billion in direct taxes on gasoline. But the twelve-nation European Community, for example, which has fewer vehicles on the road than the United States, took in about five times the American sum in the same period. The total tax in most American states in 2006 averages less than 60 cents per gallon. Germany, by contrast, increased its gasoline taxes by 46 cents just to pay for its Gulf War obligations. Ross Perot's modest 1992 plan for a 50-cents-a-gallon tax on gasoline in the United States died with his candidacy. In 1993, President Clinton aimed for a modest 9-cent rise in the levy; the compromise figure was 4.3 cents, a number laughably small in German or Japanese terms.

The result, of course, is that Americans consume energy at prodigious rates. At the pump, they do not pay prices that average about \$6 a gallon in Japan and Germany. Meanwhile, fuel in Colorado is so inexpensive that families buy houses in Boulder and travel sixty miles and more daily to their offices in Denver. In no other country would ordinary citizens even consider such nonsense.

Far from hobbling the American economy, higher gasoline taxes would make the United States more competitive with nations that have already responded to the long-term need for energy efficiency. This is because a low per-mile cost does not translate into a low per-person cost. For example, in the United States, the average family spends between 15 and 18 percent of its gross income on transportation. In Japan, where gasoline is expensive, families spend on average only 10 percent for transportation. Japanese citizens, encouraged by government policy, often

walk to the store, ride a bicycle to the train station, use a commuter railroad to get to work, and drive an automobile for a family excursion. By contrast, Americans typically do not even think about transportation options: they simply start their engines and drive several miles for a Pepsi or a package of cigarettes.

The perception is that the American motorist is paying for his roadways; in fact the general taxpayer subsidizes motorists. The exact sum is in dispute, with estimates ranging from \$24 billion to \$300 billion per year. The costs of snow removal, of traffic control, of roadway repair, of accident investigations, of air pollution, and of uninsured victims, among others, are typically borne by society. In other words, automobile use creates externality costs that are not charged to the motorist. In New York State, for example, the Tri-State Transportation Campaign, a coalition of environmental planning and transportation groups, reported in March 1994 that general tax revenues contributed \$2.4 billion annually to road and bridge maintenance, traffic patrols, and related expenses, and that motorists paid only 65 cents of every dollar of state expense. In California, the state government concluded even more dramatically that car taxes and tolls paid only about 10 percent of vehicular costs. The rest of the tab was funded out of general revenues. As Elliott D. Sclar and Walter Hook have noted, "In recent years, some businesses have chosen to relocate to office parks or freestanding corporate headquarters in suburban and ex-urban locations accessible by interstate highways. This has not happened because these locations are inherently more efficient, but because the costs of these locations have been underwritten by public subsidies."

Four arguments might be made in answer to such an assertion. The first is that because the overwhelming majority of adult Americans own automobiles, it does not matter where the taxes are collected. The motorist is not subsidized because the motorist is also the general taxpayer who does the subsidizing. My analogy is to the student away at college. The tuition fee includes nineteen meals per week. The student is free to eat off campus, but they have already paid for cafeteria fare. Essentially, Americans do the same thing. Having already paid for roads through property, sales, or income taxes, they would be foolish not to use them. The only cost remaining is the cost of gasoline, which is negligible.

A second objection to the gasoline tax argument is that public transportation also receives subsidies in the United States. This is true: Federal subsidies to the New York City subway system alone amount to more than \$1 billion per year. But that sum is trivial compared to the grants that national governments make to the Paris, Berlin, or Mexico City underground systems. And that sum is also trivial compared to the much larger amounts that are regularly made to highway transport in every American state.

A third objection to higher gasoline taxes is that such levies would affect various regions of the nation in disproportionate ways. Because people in the West use 10 percent more fuel per capita than residents in the more congested East, some argue that higher gasoline taxes are unfair. Yet if the United States were to follow the German model, Washington would reward the inhabitants of Brooklyn for being more energy efficient than their counterparts in Montana.

A fourth objection to higher gasoline taxes is that they are regressive, meaning that they impact the poor more than the rich. Yet by every measure—average number of vehicles per household, number of miles driven per household, and motor fuel expenditures per household—data show that car usage rises steeply with income.

By every measure, the United States is less energy efficient than either Germany or Japan. In America, the road has been defined as a public good and thus worthy of public support. Meanwhile, public transportation has been defined as a private business unworthy of government aid. This is the opposite of the policy of the rest of the developed world, which essentially taxes the automobile to subsidize subways, buses, and streetcars. Not surprisingly, 64 percent of total passenger miles in Asian cities are via public transport, 25 percent in Europe, and 4 percent in the United States.

The experience of Australia is instructive. With a much lower population density than the United States and with land in limitless supply, the Canberra government has nevertheless chosen to tax gasoline at about twice the American rate. It also manages to put twice as many persons onto public conveyances as the United States. So much for the argument that American transport policy is the inevitable result of a continental nation that has nothing to learn from tiny countries.

The result of a favorable Washington policy toward automobility is that American cities have the lowest population density and highest energy use of any metropolises on earth. The United States reached its oil production peak—11 million barrels per day—in 1970. In 2006, its daily output was down to about 5 million barrels. Meanwhile, the nation is increasingly dependent on foreign oil. In 2004, the United States imported about 60 percent of its oil, at a cost of about a half a billion dollars per *day*. By 2010, that figure is projected to rise to 70 percent.

Why is this number significant? In World War II, the Allied powers had a monopoly of the world's oil supplies. Germany, Japan, and Italy together had hardly a drop of oil. Germany attacked the Soviet Union on June 22, 1941, because of Hitler's nervousness about the presence of the Red Army within one hundred miles of the Rumanian oil fields. And Japan attacked Pearl Harbor, not because of an ambition to take over the United States, but because it needed a secure source of raw materials,

primarily oil, from the south. Later in the war, Wehrmacht tanks literally ran out of gas at the Battle of the Bulge, while the Japanese navy was unable properly to train its carrier pilots after 1942 because its oil supply was shut off by American submarines.

Yet a half-century after the end of World War II, the United States is more dependent upon foreign oil than the Axis ever was. America now *imports* eleven million barrels of oil per *day*, more than the Imperial Japanese Navy used per *year* at the height of World War II. By some estimates, the cost of America's current oil profligacy is well over \$100 billion per year, which represents a substantial part of the annual United States trade deficit.

In somewhat oversimplified terms, the American lifestyle, organized around single-family houses, shopping malls, and corporate office parks, requires its citizens to import energy, thus handicapping the national economy in competition with more energy-efficient countries. Germany and Japan, for example, the world's other economic superpowers, generated in 2004 approximately the same per capita gross national product as the United States, but they did it by consuming *less than half* as much energy per person. Their relative advantage only increases with every additional gallon of gasoline used. American commentators wondered aloud why Japan was less enthusiastic about the first Gulf War than the United States. Yet why should Japan be as concerned about the price of gasoline as Americans are? More expensive energy simply increased the relative advantage of Japanese producers over their American competitors. Meanwhile, every dollar the United States spends on imported oil is a dollar added to its balance of payments deficit.

This analysis does not take military expenditures to protect the oil supply into account. Few could doubt that, without oil, the invasion of Kuwait by Iraq would not have elicited such a strong American response in 1991. In fact, Earl Ravenal, a former Pentagon official, estimated before the attack on Iraq began that if American military expenditures chargeable to the invasion were added to the price of a barrel of Middle East oil, the cost of the barrel would be between \$180 and \$280, or more than ten times the price at the time. But the cost of the Gulf War was not charged to the suburbs or to the automobile. The situation was essentially the same when the United States invaded Iraq itself in 2003. Once again, the impulse was more about oil than Saddam Hussein, more about shopping malls than freedom.

The larger problem for Germany, the United States, and the world is that the international oil demand is already pressing against the available supply, and as the standard of living in China begins to rise, oil consumption in Asia will grow by millions of barrels every day. Although a few skeptics, Daniel Yergin prominent among them, dispute the idea that

oil is in short supply, the weight of expert opinion is that the world is in an energy crisis that the economic development of China and India will only exacerbate.

### The Cost to the Environment

The cost of America's suburban living style involves more than the price of gasoline. In the summer of 1992, a United Nations Earth Summit in Rio de Janeiro concluded that the United States was second only to East Germany in per capita carbon dioxide emissions. It further estimated that 17.8 percent of the world's total greenhouse gases came from America, although it accounted for only 4 percent of the population of the planet. More recent estimates are that, by itself, the United States accounts for 34 percent of the world's carbon dioxide emissions.

The chief culprit is the private automobile, which consumes 45 percent of the petroleum used in America. Although internal combustion engines are more efficient in the United States than they were twenty years ago, they produce oxide gases of carbon and nitrogen, plus water vapor. It is fair to say that Washington subsidizes deforestation with its energy policy. Several scholars now say it is hotter in the tropics and colder at the poles, thus magnifying the pressure differences and increasing tornadoes and hurricanes.

Help seemed to be on the way in 1997. An eleven-day conference at the Kyoto International Conference Hall hammered out an agreement that required industrial nations, with varying targets, to cut greenhouse gases to 1990 levels by 2012. The European Union fell quickly into line and even established a kind of carbon market through which more efficient companies could sell their unused credits at a profit. But the United States refused to go along, and in 2001 even formally rejected the Kyoto Protocol, arguing that the pact exempted emerging industrial powers like China and India or undeveloped countries like Sudan.

Consider other tangible debris of America's metropolitan lifestyle. Americans throw away 300 million tires each year, only 20 percent of which are recycled or retreaded. For reasons not entirely clear, mosquitoes multiply at hundreds of times their normal rate when they can procreate inside old tires. In February 1990, the largest used-tire dump in North America burned for seventeen days in Ontario, Canada. It contained 14 million tires, cost \$14 million to clean up, and befouled the air in eight states. Not surprisingly, the National Association of Counties has recently determined that used tires represent the largest solid waste problem in the United States. Motor oil is almost as serious an environmental hazard. At least 200 million gallons of used motor oil are annually dumped into the ground of the United States by do-it-yourself oil chang-

ers, and another 60 million gallons of motor oil are thrown away with household trash.

Later in the twenty-first century, President George W. Bush will likely be blamed for his arrogance regarding this critical environmental issue, but the larger truth is that the American people have reached a consensus "to bear any burden, to pay any price" in order to keep the gasoline spigots open and to secure whatever petroleum supplies are necessary to support their spread-out, automobile-based lifestyle. It is a revealing commentary about the United States that Governor Arnold Schwarzenegger of California, arguably the most environmentally correct of states, drives a Hummer, a vehicle more akin to a tank than a car.

The Germans and the Japanese, by contrast, have always known that buses and trains can reduce environmental pollution, conserve open space, and move people about quickly and efficiently. Similarly, they have conserved waste of every description and recycled it, thus reducing pressure on the planet itself.

### The Cost in Personal Safety

Americans are comfortable in their suburban homes and in the automobiles that make their private residences convenient. Bucolic detached dwellings give the appearance of serenity and peace. Similarly, the private motorcar seems clean, quiet, controlled, modern, safe, and responsive, especially in contrast to public transportation, which is considered dangerous, ugly, inconvenient, and low-status. In fact, in most large cities, a person riding a bus might just as well hang a sign around his or her neck proclaiming, "I am a loser."

The actuality of safety is rather different. The biggest bloodbath in American history has not been on a battlefield but on a highway. Since the bicentennial in 1976, more Americans have died on the road than in all the wars in the history of the United States combined. In 1990, for example, few parents were anxious to see their sons in the military deployed to the Persian Gulf. Yet those 500,000 young men on the desert sand, about 100 of whom died in pushing the Iraqi Army back to its own boundaries, were actually safer than if they had been at home, where a statistically larger number of them would have died accidental deaths, mostly in automobile crashes.

Too often, American cars become coffins. Little understood in the United States is the probability that high-density city living, supported by efficient public transportation, is safer than the automobile-focused suburban lifestyle that is so common. Private automobiles are six times as dangerous as subways per 100 million miles traveled. Between 1928 and 1970, for example, during which time hundreds of thousands of people

died on American roads, there was not a single fatal accident on New York's subways, which carried more than 50 *billion* riders in those years. Gotham's underground record has not been quite as spotless since that time, but even so, the dozen or so persons killed on mass transit in the course of thirty years are exceeded every day on the nation's highways.

Another way of measuring the impact of population density and automobile travel is to compare the states of New York and Texas, each of which had virtually the same size population in 2000. Accidental death statistics for the two jurisdictions, which include motor vehicle deaths, homicides, and all forms of accidents (drowning, accidental shootings, falls, etc.) reveal that the Lone Star State has 50 percent more automobile-related deaths and twice as many homicides as the Empire State. Quite simply, low-density metropolitan living patterns are themselves more costly in terms of human lives than higher density patterns. In suburban situations, people have to drive farther to accomplish life's daily tasks. This pattern is not well understood because automobile safety statistics in the United States are typically reported per 100 million miles driven, not per capita.

Homicides have traditionally been more common in big cities than in suburbs. But this is because American policy has been to concentrate the pathologies of modern life—homelessness, public housing, illegal drugs, illegitimacy, AIDS, and poverty—in central areas. Americans then regard inner cities as dangerous. In actuality, if concentrated populations had a predisposition to violence, then Japan would not have fewer murders each year than Houston. And Germany, with a higher population density than the United States, would not have a lower homicide rate than America.

## Conclusion

Subsidized private transportation and low-density housing represent the most fundamental characteristics of American life. They represent the crowning physical achievement of the United States and are more representative of the national culture than big cars, tall buildings, or professional sports. The single-family house represents the domestic ideal; it is a manifestation of such fundamental characteristics of American society as conspicuous consumption, upward mobility, the widening gap between rich and poor, the primacy of the automobile, and a tendency toward racial and economic exclusivity. And the aspiration to home ownership, the belief that somehow, someday, one can purchase a detached colonial-style home on a large lot with a three-car garage, is as important in drawing newcomers to American shores as freedom, democracy, and capitalism.

But the metropolitan living pattern of the United States imposes costs as well as benefits. We need not go so far as James Howard Kunstler, who

argues that America's advanced civilization will soon collapse into a kind of subsistence farming and that "suburbia will come to be regarded as the greatest misallocation of resources in the history of the world," to conclude that the nation has moved so far in support of one particular lifestyle that it has become dangerously dependent upon foreign oil and is compromising its economic future. Because of suburbanization, American cities have often fallen into disrepute and disrepair, and thousands of citizens unnecessarily die on the highways each year. Moreover, automobile is putting a strain on the urban environment as well as the biosphere.

Unfortunately, neither President George W. Bush nor the Congress has done anything to reduce American oil consumption. Instead, the House and Senate both approved in the summer of 2005 a broad energy bill that granted billions of dollars in tax breaks to oil companies to encourage more production. Although the legislation included small inducements to produce energy from wind, ethanol, and other renewable sources, Republican lawmakers specifically rejected a provision that would have required the president to reduce American oil consumption by one million barrels per day, or 5 percent.

German and Japanese responses to similar residential challenges and transportation options have been more successful and more responsive to the needs of a global economy and a global environment than those of the United States. Meanwhile, this nation's chief executive has been too busy trying to privatize social security, repeal the estate tax, and fight a global war against "terrorism" to concern himself with the energy crisis. As Thomas L. Friedman has noted, "We are, quite simply, witnessing one of the greatest examples of misplaced priorities in the history of the U.S. presidency."

### Suggested Reading:

Gary D. Allinson, *Japan's Postwar History* (Ithaca: Cornell University Press, second edition, 2004).

Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York: Oxford University Press, 1985).

Walter K. Kamphoefner, "Urbanisierung in den USA und Deutschland—Parallelen und Kontraste," *Institut für Migrationsforschung und Interkulturelle Studien, Universität Osnabrück*, Heft 1 (1995), 5–22.

James Howard Kunstler, *The Long Emergency* (New York: Grove/Atlantic, Inc., 2005).

Donald C. Shoup, *The High Cost of Free Parking* (Chicago: American Planners Press, 2005).

Ted Steinberg, "Lawn and Landscape in World Context, 1945–2000," *OAH Magazine of History* (November 2005), 62–68.

William Sweet, *Kicking the Carbon Habit: Global Warming and the Case for Renewable and Nuclear Energy* (New York: Columbia University Press, 2006).