The American Dream of the single-family house has always been accompanied by the one, two, and increasingly three-car garage. As suburban development spread through the country in the post-World War II period, it also entrenched reliance on private automobiles. Even the more mixed uses typical of recent suburban development, often referred to as Edge Cities, continue the low-density, automobile-oriented, sprawl pattern despite the negative environmental and social consequences.

Due in large part to sprawl’s mandated use of the automobile, transportation accounts for approximately one third of all energy use in the US. Hal Harvey, the executive director of the Energy Foundation, argues that there are principally two ways to reduce this figure. The first is the technofix: improve the fuel efficiency of the car; play with alternative fuels; or utilize various IHVS systems. The technofix has made great strides since the oil crises of the ‘70’s. Unfortunately the gains in efficiency and emissions control have been largely neutralized by the greater numbers of vehicles on the road and the accompanying growth in average vehicle miles traveled per year.¹ Christopher Flavin and Nicholas Lenssen of the Worldwatch Institute write “No matter how much
less polluting automobiles become in the future, one thing is clear: they will not be a
panacea for the world’s transportation problems. Although the new technologies
could greatly reduce many of the energy-related problems caused by cars, they could
exacerbate others, including the suburban sprawl, congestion, and destruction of
neighborhoods that is rampant in so many parts of the world. This suggests that the
redesign of the automobile must be accompanied by efforts to spur an array of new
transportation options and to change regional development patterns so as to reduce
the need for travel and create more livable communities.” Flavin and Lenssen suggest
that in addition to the technofix, we need an urban design fix.

Before embarking on a course of physical therapy however, we need to better
understand the diagnosis. What drives sprawl and how can it be redirected to less
harmful patterns? Joel Garreau’s study of Edge Cities describes them as a result of
three waves of suburban development. The first wave principally provided housing.
Beginning with the streetcar suburbs of the late 19th Century, this wave’s greatest impact
was through the many replications of the post-war Levittown sub-division model. In the
1960’s and 1970’s a second wave of retail joined suburbia in the form of shopping malls
followed closely by the third wave of office and industrial parks. The 1980 U.S. Census
indicated that twice as many American suburbanites commuted from suburb to suburb
than suburb to city. In part, retailers and employers were simply following their clienteles
and labor force. However, the economy’s shift from “dirty” manufacturing to “clean”
service jobs also played a key role in allowing for the work world to enter suburbia.

Burgeoning on urban/rural fringes across the country, Edge Cities are typically
located at suburban spoke-and-hub highway intersections. They are characterized by
regional shopping malls, office pods, and condominium clusters, each isolated on its
own island of asphalt, interspersed with commercial franchises and the occasional
upscale sylvan corporate campus. Edge Cities were initially developed as easily
accessible sites for light manufacturing, retail malls and cheap corporate back-offices.
The interstate beltways initially constructed to allow through traffic to bypass major
cities turned out to also provide easy access to cheap, minimally administered land as
well as a non-unionized, educated labor force.

Tysons Corner, Virginia exemplifies an Edge City. It was farmers’ fields twenty
years ago in quiet countryside about twenty miles outside Washington DC, between the
city and Dulles airport. Today, it has more than five million square feet of leasable office
space and the Main Street is an eight-lane highway. The most densely developed area
of a county with almost 900,000 residents, it has almost no sidewalks. It does however
have two mega malls, and their parking lots are the closest thing that Tysons Corner has
to public space. The social, economic and environmental cost of developments such as this are staggering, and yet, it is what our current legal, economic, and planning systems encourage. By 1986, 60% of all office space was in the suburbs. By 1991, two-thirds of it was in Edge Cities, 80% of which was built since 1970. It is the dominant model of contemporary development, is completely reliant on automobiles and shows no signs of slowing down.

On the contrary, Christopher Leinberger, a real estate analyst who has watched suburban development closely for the past decade recently noted that there is already a fourth tier of leap-frogging occurring to even cheaper land and building out to even lower, semi-rural densities. Each day at least five and a half square miles of rural land in the U.S. are converted to urban, suburban, or other uses. The environmental issues of such land consumption are tragic. It is estimated that we lay enough new blacktop each year to cover Delaware. Those roads promote erosion, delimit and contaminate wild animal habitats while encouraging further sprawl. (The annual runoff just from Washington DC area roads carries more spilled oil than the Exxon Valdez.)

There are also political, social and economic issues to be considered. Suburban sprawl has meant that older suburbs are facing the same declining tax base and problems that cities were subject to and that the inner-city poor are now further isolated from new jobs. New areas targeted for development receive the lion’s share of county improvements budgets while fostering little sense of obligation back to the core city. Leinberger cites the residents around Buckhead Atlanta as being proud of their lack of connection to the city, to the public realm. There is a tendency to build enclaves, gated communities, private “corporate environments”, and isolate activity as much as possible from the city and its perceived problems of crime and congestion. Edge City is overwhelmingly private, lacking in true public space and the kind of communal environments that increase respect for others.

This enclaving and segmenting of territory is literally reflected in the physical pattern of suburban development. Elizabeth Plater-Zyberk and Andres Duany, architects in Miami, have examined the typical pattern of separated uses on cul-de-sacs. This model, legally established by zoning laws across the country, is estimated to generate an average of 13 car trips per day. Why? Because it deliberately defies pedestrian connections between uses. Walking is discouraged as unsafe — which it is — given how things are laid out. They note that the consequences of the required 13 car trips per day are that Mom becomes a chauffeur — or, if she works, as is more and more likely, the kids and the elderly are stranded with only television and, the increasingly popular, home
shopping network to keep them company. It is no surprise why the AARP has begun a Livable Communities Initiative and is begging architects and urban designers to come up with alternatives to this kind of car-reliant suburban planning that does not allow people to age-in-place. While cars are a symbol of freedom and mobility, the communities we have built around the car restrict freedom and mobility for those without wheels.

Immobility is but one of the hidden costs of living in suburbia. It is estimated that the cost of car ownership averages $5-6,000 per year. Translated into home mortgage payments, that is the equivalent of $60,000. Duany points out the difficulty of trying to trim such cost off the purchase price of affordable housing. Yet, locate housing near transit, or within walking distance of jobs, retail, schools, and recreation such that car ownership is no longer required and you have made a huge difference in affordability. In fact in Santa Clara California, housing built adjacent to new light rail stations are being marketed as “trandominiums” and the developers are seeking to get mortgage lenders to recognize that home buyers with proximity to transit who agree to purchase a lifetime transit pass and never buy a car while they own that house, are a good risk at a lower income than might otherwise be considered.

There are alternatives to the current pattern. Duany and Plater-Zyberk recommend a return to a more traditional, gridded street layout which allows multiple routes, crossable streets, and encourages walking and bicycling. Co-founders of a movement called New Urbanism, dedicated to curtailing sprawl, Duany Plater-Zyberk have been trailblazers in promoting “neotraditional town design,” and a return to the form of the small town. Their town designs are compact, mixed use and feature shared social spaces in neighborhoods based on one quarter mile distances - that being about the maximum Americans will walk rather than drive. Streets are not merely treated as right-of-ways, but are designed as public spaces. The goal is to promote pedestrian activity instead of requiring vehicular trips. While the environmental benefits of such a plan are clear, pedestrian activity also promotes sociability and helps to sponsor communal relationships. Towards this end, Duany Plater-Zyberk provide varied public amenities and public places and encourage a mix of housing types to attract a diverse population.

On the West Coast, Doug Kelbaugh and the School of Architecture at the University of Washington have worked with San Francisco architect Peter Calthorpe on the idea of the “pedestrian pocket”. Like Duany Plater-Zyberk’s neotraditional towns, pedestrian pockets are meant to be medium density, mixed-use developments. However, they specifically center on either light rail (street trolleys) or buses as economical, currently feasible means of public transit. These Transit-Oriented-Developments also cluster housing, retail space, and offices within a one quarter mile radius of a transit system.
New Urbanist proposals take the same elements of Edge Cities: retail, commercial, and residential uses, but reconfigure them around a transit stop rather than a highway intersection, into integrated public town centers with diverse uses, populations, and some sense of civic identity. Though light rail systems are not cheap, many cities have begun re-installing the very trolley tracks and overhead lines they tore out only a few decades ago. Portland, San Diego, and Miami are just a few examples. San Diego has adopted Transit-Oriented-Development Guidelines and the state of California signed into law a weak, but nonetheless significant Transit Village Act in 1994.

Critics of New Urbanism generally decry the degree to which the traditional patterns suggest traditional patriarchal hierarchies and ideologies. While the planning addresses ideas of communal sharing, pedestrian movement, and equal access to amenities, the traditional imagery of much of the architecture recalls a time of exclusive and segregated class systems of privilege. From this perspective, the appeals made to bonding a community, smack of a singularly defined imposed agenda of politically conservative “family values”, associating small-town with small-mindedness. This kind of criticism is leveled more at the traditional style of the villages, than at the organizational principles. In fact, New Urbanism’s mix of lot and unit sizes promotes a far more diverse population than existing urban or suburban conditions.

However, given population predictions of half again as many people in the U.S. by 2050, (the United Nations predicts worldwide population will double in the same time period), can we afford not to look at more compact patterns of development integrated with mass transit? Can we afford to continue to socially and economically segregate our society? Can we rely on television and cyberspace to substitute for public space and understanding of otherness? Sprawl is unsustainable, from both an energy and a social perspective. It’s time for the American Dream of the isolated house in the suburb serviced by the personal vehicle — or two or three — to re-discover energy and community in the public realm.