Cities, Suburbs, Dwellings
in the postwar era
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During the spring semester of last year, in a housing seminar, a graduate student asked the question: “What’s so great about a city, anyway?”

At first, the author was taken aback, but then he realized that fifty years separated the student’s first impressions of a city from that of his own. Half a century ago, the city was still a civilized place, rich in culture with a pleasant ambience. It had clean air. It was verdant with tree-lined streets. And, it was safe. Inner city streets were alive with people, because private cars were few, buses outnumbered by streetcars. The milk man still made his rounds, and his horse knew the route by heart, walking ahead and stopping on its own at the next customer’s house.

Cities were more idyllic and smaller then. Of course there were some problems, especially those of social inequity, but by and large they paled in comparison to the hardships of contemporary cities. Overt violent behavior of youth gangs and dope addicts was rare. Vandalism, muggings, robberies, hold-ups, kidnappings, drive-by shootings and murders commonplace in inner cities today were either unknown or mere aberrations.

North American cities and their suburbs have undergone substantial changes during the second half of the 20th century. Many of these changes are in part attributable to the proliferation of the automobile. It was the increasing affordability of private transportation that enabled the dispersal of the urban population, a scattering that brought about an auto-intensive urban society, necessitating the construction of a complex intra-urban network of limited access autoroutes linking various parts of the large urban agglomeration.

More detrimental than the large amount of urban land relinquished for car movement and car storage, is the severe degradation of air quality in cities, which to a considerable degree is the result of automobile exhaust emissions. Cars discharge their own weight in carbon into the atmosphere each year, a shocking revelation made by M.I.T. Professor H. Patricia Hynes in her book Earth Right (1990), a fact corroborated by other scientists. Carbon dioxide, carbon monoxide, nitrogen dioxides, and hydrocarbons generated by cars contribute not only to smog and poor air quality in cities with heavy traffic, but also aggravate conditions that cause acid rain. Even forests in locations far from urban agglomerations are reached by acid rain, killing some trees and making others sick. A study of the
Environment and Forecasting Institute in Heidelberg asserts that each car in its lifetime is responsible for three dead trees and thirty “sick” ones in Germany.

In addition to air pollution, cars are also responsible for tons of rubbish. Large amounts of toxic and other waste materials are disposed during the manufacture of cars and thereafter. Dirty oil and discarded tires are waste materials generated during the useful life of automobiles until the car itself winds up on the junk heap.

Perhaps the most astonishing social data are this century’s demographic changes in the urban population of North America. Large extended families, so common at the turn of the century, have gradually given way to smaller nuclear families with ever fewer children. During the 1980s traditional child-rearing families with a single breadwinner (10%) were almost equal in number to those with two breadwinners (11%). Slightly greater in number were families with children headed by a single parent (13%), a result not only of a high divorce rate, but also of the social acceptability of parenthood outside of marriage. The three above-mentioned child oriented families account for only a third (34%) of all household formations, while childless couples, empty nesters, and two people sharing a dwelling, represent the largest group (43%) of all. The balance of households, almost a quarter (23%), are formed by single persons, male and female, young and old, at present the fastest growing demographic segment of society.

The type of dwelling urbanites idealize and choose to inhabit has a profound influence upon the quality and nature of our cities and suburbs. It stands to reason that the land use efficiency and population density inherent in various dwelling types have social, economic, political and environmental implications that shape our everyday lives. Suburban detached houses with wide street frontages, so popular with the public, cumulatively create great distances between home and workplace, school, shopping center and recreational facilities. Since mass transit systems are uneconomical at low urban population densities, suburbanites have to rely on private transport, often with two cars per household.

About a decade ago, a Canadian middle-aged childless couple of Brantford, Ontario, won $3.9-million in a lottery, a Canadian record at the time. The wife worked at the local shopping centre in a dry cleaning establishment and the husband was a truck driver; they were the owners of a two-story house and, of course, had a car. Both shunned the public spotlight after winning a record sum, but after a while they agreed to be interviewed on a television program. The couple’s generosity in sharing their newly acquired wealth with family members and charity organizations was exemplary. When pressed by the interviewer as to what they would do for themselves, their answer was that they would buy a bungalow, a car this time “loaded,” and a jacuzzi, and all this in Brantford, a relatively small town, where big city problems appear mostly as news reports from somewhere else and are viewed not differently from violent movies on the television screen. The couple’s aspirations were very modest, when one considers that they could have bought a penthouse or mansion anywhere in the world. But, the American dream package was irresistible: a detached bungalow with all the household gadgets, including a whirlpool bath, and an expensive car parked in the driveway in front of the house.

During the 20th century the choice of dwelling accommodation in North America has become polarized, with single family houses at one extreme and high-rise apartment blocks at the other. Yet there are other dwelling options that compare favorably with the bungalow and the high-rise. Several low-rise dwelling types offer similar features to that of the bungalow, and moreover, they have a greater land use efficiency and conserve more energy. Similarly, mid-rise dwellings are viable alternatives to high-rise apartments, and they are also more economical and more environmentally friendly. Being unfamiliar building types or carrying the “stigma” of being inherited from a previous century is the greatest perceived shortcoming of most alternative dwellings with attributes that exceed those of dwellings enjoying an unchallenged popularity.

City and suburban development, as well as alternative dwelling forms, are the subjects of this publication. The first two of the twelve essays address changes during the second half of this century in both the city and suburban environment respectively. The following four essays analyze the positive and negative aspects of low-rise dwelling forms in the single family detached house, the court-garden house, the town house, and the dwelling cluster of communal housing developments. The final six essays analyze high-rise apartments, high-rise tenements, point-blocks, mid-rise housing, collective apartment houses, and mixed use buildings with a housing component.
AT THE END OF THE SECOND WORLD War, North American cities were thriving. Since war industries had attracted millions of workers from rural areas and small towns, city populations grew by leaps and bounds. This increase in population, compounded by the many thousands of immigrants from war-ravaged countries who flocked to America, ensured sustained economic urban growth and vitality throughout the 1950s.

Suburbs existed prior to the war, of course, but their population size was still relatively insignificant and therefore neither threatened the city's socio-economic balance, nor its cultural institutions. Inhabitants of various income groups shared the amenities of the city, using the streetcar or trolley to reach their jobs, or other destinations, such as markets, department stores or cinemas.

A significant characteristic of the postwar city was the fact that residential development was distributed over the entire area of the city, with the exception of a relatively small central business district. Residential densities were usually highest near the city center, and decreased gradually towards the periphery. While it is true that some clustering of similar income groups was identifiable in certain neighborhoods, chances were that citizens with various incomes were nevertheless likely to meet in stores, cinemas, libraries, parks, etc. And, perhaps more significantly, their children often attended the same elementary and high schools. Undeniably, opportunities for university education were not so plentiful for children of low- or moderate-income groups, but many well-paid jobs were available that did not require higher education.

Many cities became crowded after the war, and the baby boom resulting from the newly formed families of returning veterans triggered an acute housing shortage. Hence, an increasing number of families with young children began to leave the city to seek a better home environment in suburbs to rear their children. Government policies aided this exodus, and, thus, what first began as a trickle soon turned into a flood.

Cities were short-changed by this exodus. It is clear now that they could not afford the loss of young and relatively well-to-do families whose income potential was to improve over the years. But, at the time, cities were by and large
complacent, and the mind set was focused on the development of commercial, manufacturing and institutional land uses. Residential land use was relegated to a secondary importance.

The negative consequences of an urban policy of neglecting housing was only realized when commerce and institutions began to follow the suburbanites. First, in the '30s, commercial strip developments with ample parking facilities appeared along major roads leading out of the city, but soon after L-shaped shopping centers fronting a sea of parking spaces were built at major intersections in suburbia, inadvertently draining some of the commercial activities from the inner city. Still later, in the '70s, shopping centers were up-graded to malls, initially mere outdoor pedestrian landscaped havens, but soon afterward malls were transformed into climate-controlled internal “atrium” spaces. These new shopping plazas were later complemented by glistening office buildings until, in the '80s, they emerged as suburban commercial hubs, oasis in a parking desert. In many respects, these centers absorbed commercial activities innate to the central business district of the traditional city, but in one respect they were different. They were inaccessible to pedestrians.

Schools were also built in the new communities drawing teachers away from the city. Student enrolment in old city schools gradually decreased until some of them were forced to merge, others closed. Places of worship, too, followed their congregations to the suburbs with the result that large and beautiful churches and synagogues in cities were either abandoned or faced great economic hardships.

In the '60s, federally subsidized “Urban Renewal” interventions were hailed as a means to rejuvenate cities. City planners took advantage of the urban renewal process to clear land for private construction of new office buildings as well as to make improvements to inner-city traffic. Traffic congestions were eased by inserting new auto routes through former residential neighborhoods, actions that not only divided cohesive communities, but also created grave social anomisies. New highway construction became imperative because major streets of cities became clogged at peak hours as a result of the postwar proliferation of automobiles and increased commuting traffic of suburbanites.

Traditionally, changes in the city have, for the most part, been gradual, and had a tendency to occur piecemeal over a long time span. Hence the impact of ongoing changes in the city were buffered by some continuity, allowing inhabitants time to adapt to changes gradually. However, when radical and mega-scale changes were implemented abruptly, the response was understandably negative. This has been the case when, in the name of urban renewal and progress, large-scale development proposals implied wholesale destruction of existing urban fabrics and a sudden disruption of continuity.

Slum areas were razed and their residents housed in “modern” high-rise buildings. While the physical and sanitary aspects in the new homes were much improved, social conditions were not. The heavy-handed and radical surgical procedures used in urban renewal destroyed the familiarity that existed in former communities and broke the spirit of their people.

Nor did many of the well-built, and very attractive middle-class urban residential neighborhoods, dating from the turn of the century, escape demolition by bulldozers. Initially, tree lined downtown streets were pleasant places to live on, but when trees were cut to widen roadways to provide parking on both sides of the street their original residential charm vanished. Inner-city homeowners now became easy prey to speculators and builders with alluring offers to buy their homes, later to be replaced by office towers or apartment blocks. During the '60s, the transformation of inner-cities was astonishing.

There were, of course, some exceptions during this period. A movement opposing heavy-handed urban renewal was afoot which resulted in the rehabilitation of some old city neighborhoods. Having discovered the charm of old houses built of solid materials by good craftsmen, many young urban families acquired these properties at a reasonable price, and moved in. These “whitewashers,” often young professionals, were also attracted to these old homes because of their proximity to their place of work downtown. This “gentrification” process is responsible for saving many turn-of-the-century town houses from the wrecking ball and contributed to the survival of some intact prewar urban streetscapes. Gentrification exacts penalties, however, in the form of escalating price tags for urban houses, increased tax rates and, most damaging, displacement of

The discovery of the fact that it can be less expensive to reuse existing buildings than to demolish them and start over later led to the rehabilitation of non-residential buildings as well. Since, in general, replacement costs are higher than renovation costs, architects and developers realized the potential of using abandoned warehouses, discontinued schools and factories for housing. Such structures were converted into residential buildings with desirable loft-type dwellings. Mezzanines were easily inserted in these high ceiling spaces where required, resulting in an interesting spatial quality unattainable in standard new construction.

Housing had hitherto been an essential component of the inner city, but, apart from the few gentrified residential pockets, it was eventually crowded out from the inner city by commercial development. In consequence, the liveliness and security of street life in the city center has much diminished, especially in the evening. During business hours, when office workers and downtown shoppers crowd the streets, the presence of downtown dwellers is less significant to street life, but after hours - when shops are closed and office buildings are deserted - the 24-hour use of dwellings not only adds life to the city core, but also a sense of street safety. Residential land use appears to be a prerequisite for urban vitality in the city core area.

Instead of a simplistic single land use zoning pattern in the name of efficiency, cities with reputations as attractive and livable have a more sophisticated multi-land use pattern in their downtown area. Shops, restaurants and banks at sidewalk level with professional office space and dwelling accommodation above, is a workable layering of functions in inner-city buildings. Since they are elevated well above the noisy street, dwellings in the upper floors of a building have the advantage of a greater abundance of sunshine, cleaner air and less noise. Residential land used in this layered fashion blankets the core of livable cities, such as Paris, a city that has maintained its popularity throughout the 20th century without high-rise buildings in the inner city. Typical mixed-use development, as exemplified in Paris, has increased pedestrian traffic and correspondingly decreased vehicular traffic, not to mention a more efficient use of urban mass transit systems.

Mixed land use was viewed as anathema by protagonists of the modern movement. Siegfried Giedion, an eloquent spokesman of this movement, admonished in his book Space, Time and Architecture, that "it is absurd in an age of industrial production to permit residence, labor, and traffic to intermingling," and later on continued, "if in an industrial age the various functions of daily life cannot be clearly separated, that fast alone spells the death sentence of the great city" (1954, 670). Giedion's admonishment and prediction proved to be wrong. Quite the contrary, it is the very compartmentalization and separation of urban activities that bring the death sentence for cities, a thesis so convincingly advocated by Jane Jacobs in her book The Death and Life of Great American Cities.

It is spine-chilling how accurate Jane Jacobs was when she pointed out, more than three decades ago, how wasteful we were with public funds, and what we built: "Low-income projects that become worse centers of delinquency, vandalism and general social hopelessness than the slums they were supposed to replace. Middle-income housing projects which are truly marvels of dullness and regimentation, sealed against any buoyancy or vitality of city life. Luxury housing projects that mitigate their inanity, or try to, with rapid vulgarity. Cultural centers that are unable to support a good bookstore... Commercial centers that are lack-luster imitations of standardized suburban chain-store shopping. Promenades that go from no place to nowhere and have no promenaders. Expressways that eviscerate great cities. This is not the rebuilding of cities. This is the sacking of cities" (1961, 4).

It is always imprudent to ignore time-proven urban land use traditions, such as mixed use or perimeter block developments, that have proven to be functional for thousands of years. Perimeter block development provided a clear definition of street boundaries of the public realm and prevented the ambiguity between public and private turf so prevalent in "modern" housing designed in accordance with the "tower-in-the-park" design concept. In spite of good intentions, the provision of unprotected and undefined large open spaces adjacent to urban housing proved to be a disappointment. Anomalous and ambiguous no-man's-land is not taken care of by anybody, hence, such places have a tendency
to be both untidy and unsafe. Definition of territory within which authority may be exercised is a necessary prerequisite to establish jurisdiction and responsibility. Large no-man's-land outdoor spaces are expensive to landscape and to care for properly, therefore it is advisable to divide them into private, semi-private, and public parcels and thereby define the responsibility for maintenance. Allotments, or small plots of land, traditionally assigned to residents of housing estates in England and Germany, may be another way to reduce the burden of their public maintenance and, at the same time, improve the verdancy of the open space.

Traditional postwar cities, as we knew them, are in the process of being suburbanized. A generation of baby boomers raised in suburbs demand spatial standards in cities similar to those they were accustomed to as children. Suburban values have already exerted a considerable influence upon cities. Shops with mini parking lots wedged between the facade and the sidewalk have made an appearance in several city locations. Other telling signs of suburbanization are the numerous newly-built downtown malls, with their marble and glass-faced atria, palm trees and fountains. Most shops in these malls turn their back towards the street and by doing so they deprive the street of animation previously generated by shoppers. Worse still, public streets, the traditional lifelines of cities, are upstaged by shopping plazas. Their semi-public malls function as climate and security controlled oases, and with shoppers siphoned off the street, public safety in streets is much diminished. When shops and offices in shopping plazas close, the atria become odd, and in their hollow acoustic spaces only the footsteps of guards reverberate, and they become overt private property with no public access allowed. In many cities even former fashionable streets are being degraded by shopping plazas into streets with third rate commercial activities replacing former high profile stores.

Today, the greatest concern of inner-city dwellers is security in the home and safety on the streets. With ever increasing crime rates, city living is losing its attraction. Only those residents remain who have no choice, and those who can afford to pay for their security. A prediction made in 1877 by the New York Herald came to pass not only for Manhattan Island but all too many other cities: "New York is gradually, year by year, becoming the home of the very rich and very poor." Indeed, in the late 20th century, the very rich and very poor inherited the inner city.

Well-to-do city dwellers seek security in luxury high-rise buildings, others in "gated" communities. The latter consist of dwellings on private streets, typically built along cul-de-sacs, with their street entrances guarded by gates. Like city gates during the Middle Ages, these gates are often manned and are closed at nightfall. In the past gated communities emulated large estates; far from being recent inventions, they were used during the last century for exclusive suburbs, such as Llewellyn Park in West Orange, New Jersey, and around the turn of the century, for clusters of city mansions still extant in St. Louis, Missouri. While teaching Architecture in the 60s at Washington University in St. Louis, Oscar Newman observed that homes in these gated communities had an air of inviolability.

In his book, *Defensible Space*, Newman convincingly expounded the role design plays in the provision of security in buildings and their immediate environment. More recently, he applied, through street closures and strategic barriers, the concept of gated mini-neighborhoods to a residential area of Five Oaks, Dayton, Ohio. Only a few minutes from downtown, this mixed neighborhood had been plagued by drive-through vice, prostitutes and drug dealers, but after the establishment of mini-neighborhoods defined by a maze of closed streets, anonymous crimes were harder to commit and outsiders were more reluctant to wander into the area. Vehicular traffic decreased by 67%, violent crime by 50%, and total crime by 26%. To the amazement of the local police force, the reduction of crime in Five Oaks did not mean an increase of crime elsewhere.

The concept of mini-neighborhoods is not new either. For millennia gated residential precincts formed an intrinsic part of ancient cities. These gated communities were also defensive in nature, providing their inhabitants with security during revolts, raids and invasions, as well as during the dreaded onslaught of pestilence. But, in contrast to the mini-neighborhoods of Five Oaks, gated communities, called *mahallahs* in the Near East and India, were self-sufficient, self-administered, and self-policing neighborhoods, resembling small towns with their own places of worship, schools, workshops and markets. In their totality, several *mahallahs* formed a mosaic-like city, and can still be seen in old cities throughout the urban world of Islam and India.
The flight to the suburbs by the majority of city dwellers seeking the realization of the "American dream" of homeownership can create a "nightmare" for the parent city. There is no better way to illustrate the nightmare, than with the decline of Detroit, a city which coincidentally based its economic future on the auto industry.

A mere three decades ago, in the '60s, Motown, as Detroit was affectionately known, was the motor and music capital of North America. After the race riots in the summer of 1967 and the economic downturn of the '80s, the exodus of mainly white citizens to the suburbs was of such magnitude that the city's population decreased from 1,849,568 in 1950 to 1,027,924 in 1990, a loss of over 46% (Rusk 1993, 4). Gradually, the city became devastated, a ghost town with abandoned buildings, empty skyscrapers, garbage-strewn demolition sites, and the worst example of racial segregation in the United States. All the while, however, the suburbs of Detroit flourished as everywhere else in America, but in this case in the shadow of a desolate city.

Detroit is a textbook example of failing inner-cities. John Portman's high-rise Renaissance Centre, completed in 1977 at a cost of over a billion dollars, only accentuated the massive concentration of power and wealth into a cluster of gleaming towers with tinted glass shades. Charles Jencks' misgivings of this hi-tech building complex with an exaggerated program and geometry are justified: "What was once dispersed in the fabric of the city has now been hoarded into one point, and, to use a metaphor, inspired by the shape, stacked like black coins at the gaming table" (1982, 25). This modern bastion in the inner-city of Detroit is the antithesis of the phenomenon, where concentrated poverty, welfare dependency, and crime compound each other, a theory advanced by the urbanologist David Rusk. Cities like Detroit may be past the point of no return.

Fortunately, only a few cities were subjected to changes as drastic as those in Detroit, but many other inner cities also experienced a severe economic downturn accompanied by a decrease in population. While in 1950 almost 70% of the population of metropolitan areas in the United States lived in their respective parent cities, by 1990 it had decreased to less than 40%. This population shift to the suburbs brought about a complementary exodus of former city-based commercial, service, and even manufacturing jobs. Thus, for example, industrial employment in 1981 became 66% suburban based, to some extent motivated by the presence of an eager and available work force residing in suburbs.

Ideally, a city and its suburbs form an economic and harmonious urban entity, with each component part complementing the other. Regrettably, this is seldom the case. More frequently the parent city and its suburbs compete with each other for the same human activities and resources. This competition is reflected in the paradox that while the city is being suburbanized, its suburbs strive for urban features and infrastructure standards intrinsic to cities. Just as suburban low-rise housing projects and 5 acre (2.02 hectare) elementary school sites are indefensible in the inner city, so are high-rise buildings in the suburbs. Both the city and its suburbs have their respective innate attributes, and, similarly, various dwelling prototypes have their inherent characteristics as well as their ideal settings, with some performing best in the city, others in the suburbs.

Cities are in crisis, and if some economic and political unity is not brought about in metropolitan areas, the suburban noose formed around parent cities will eventually choke them. Should this happen, the quality of life in suburbs will inevitably be adversely affected.

References
After the second world war, suburban development gained an unprecedented momentum in North America. The relative abundance of land, widespread automobile ownership, high family income, a veterans housing and mortgage insurance program, a government policy favoring home-ownership of houses, and, above all, a rosy outlook with respect to the future, resulted in a mass purchasing of “dream houses,” entailing an exodus from the parent city to the surrounding suburbs. Max Lerner, the Russian-born American writer and educator, rightly suggest that in a nation founded by immigrants, who arrived homeless, home ownership was and continues to be a lyrical symbol of success.

In North America, home ownership versus rental increased steadily during the last century. Home ownership increased by 11.2%, from 36.9% to 41.1%, between 1890 and 1910. Thereafter growth in home ownership of non-farm dwelling units accelerated to 12.3% in a single decade (1940-1950). By far the greatest strides in homeownership, however, were made in the postwar period, reaching 55% in 1950, 60% in 1957, and 66% in 1970, and most new homes were built in suburbs, sprawling over the countryside near large cities.

Automobile ownership, an obvious corollary to suburban homeownership, also rose in the postwar years. Three out of every four American families owned a car in the early ‘50s, but already by 1955 the ratio of one car per family was reached. Today, two cars per suburban family no longer seems a luxury, but rather a necessity. This is not only true for households that have two earners, but also with traditional families, since, in the absence of mass
transit systems, spouses left behind without a car feel marooned.

The automobile was not the only change that contributed to suburban sprawl. The remarkable technological advances made in the field of electronics and telecommunications also facilitated suburban sprawl. Telephones, faxes and E-mail enable instant communication with distant locations. Similarly, radio and television bring us not only the latest news, but also provide a large choice of entertainment. Hence, physical isolation no longer implies seclusion as it once did. Paradoxically, however, telecommunication devices have also enabled “cocooning,” the phenomenon of individual withdrawal from physical social contact, but continuing social interaction by electronic means.

No doubt, one of the most compelling attractions of the suburbs has been the lure of owning a house on a verdant plot of land in a quiet neighborhood, and only suburbs could offer such homes at a bargain price. Suburban land was generally less expensive than city land, and construction costs were lower because building codes were usually less stringent than in cities.

At the outset of suburban development farm land was usually acquired by speculators in anticipation of financial gain. Land was sold and resold until a point was reached where “wholesale” land disposal no longer was as profitable as subdividing it and selling building lots. Ignoring existing hedgerows and field verges, the subdivision plan imprinted upon the land to be developed a new physical pattern which became the framework of the future community. Since subdivision plans were conceived primarily as lotting devices, they were designed to cater to particular house type norms. Thus, individual house design had to fit predetermined lot sizes, a common practice of the pioneering stage of suburban development when houses were built individually. This practice continued for some time even after builders began constructing scores of houses in one operation. The ideal approach where houses and lots were designed simultaneously, was an exception rather than the rule.

While most suburbs grew by accretion after the war ended, a few were conceived and built as planned communities employing a mass production home building technology perfected during the war years for the construction of housing for a wartime labor force engaged in the manufacture of ships, tanks, and airplanes.

One of the most successful postwar builder of "instant suburbia" in the late '40s was Abraham Levitt, who with his sons William and Alfred embarked upon the construction of a new town on Long Island now known as Levittown. The Levitts' expertise for large-scale development derived from their wartime activities in building residential quarters for U.S. Navy personnel at Norfolk, Virginia.

With a planned gross density of about three dwelling units to the acre (7.7 d. u. per hectare), rows of near identical detached Cape Cod-style or Ranch-style houses, mostly on 60 by 100 ft. (18.28 by 30.48 m) lots, Levittown attracted families by the thousands who queued up in front of the sales offices and vied to become owners of homes built on former potato fields. Homes fronted on wide curvilinear streets, a pattern not derived from any contours on the site.
but designed to be picturesque. Sites for schools and a “village green” shopping center, as well as land for parks and public swimming pools were donated by the builders to the community, marketing features that ensured this suburb’s population growth to more than 80,000 in a few years, not to mention Levitt and Sons financial success.

Although relatively small (800 sq. ft. or 74.32 sq. m. for the Cape Cod style, and 900 sq. ft. or 83.61 sq. m. for the Ranch-type house) and conservative in their design, each detached house, however, was equipped with basic household appliances, including a washing machine, as part of the standard equipment; later, the list of appliances was extended to include a television set as well and in order to qualify for inclusion in the mortgage the T.V. was built into one of the walls of the living room. The attic space in these asbestos-clad homes was half finished and was envisioned as an expansion space for a growing family.

An added attraction of Levittown was the provision of a municipal infrastructure including paved roads and sidewalks, features associated hitherto with urban rather than suburban development. The landscaping of the outdoor areas consisted originally of sodded lawns, saplings and bushes, but during the following decades Levittowners nurtured this sparse landscape and expanded and personalized many homes, with the result that their community today does not project the starkness that confronted the pioneering homemakers. Critics of Levittown, who predicted slum conditions in a few years, were wrong.

Prior to pseudo-urban Levittown, suburbanites fully accepted the trade off of urban amenities for a new but rustic lifestyle close to nature, which frequently meant an absence of sidewalks, street lighting, municipal sewage systems and water lines, the presence of overhead electrical and telephone wiring, and at times even unpaved roadways. Without municipal infrastructure in suburbs, many homes, in the '50s and '60s, had septic tanks and individual water wells, both necessitating, of course, large building lots. Clean air, nature close at hand, lots of elbow room, white snow cover in winter, friendly neighbors, and a safe environment for children more than offset the loss of urban amenities and the inconvenience of the increased commuting time necessary to reach the city by the breadwinner of the family.

Realizing the importance of good education and the value of good teachers, suburbanites emphasized the establishment of excellent schools in their child-oriented communities. The service area of an elementary school, in fact, determined the size of the minimum planning unit of a suburb, the “neighborhood.” Minimum and maximum limits of elementary school size and a maximum of 1/2-mile (0.8 km) walking distance from the farthest dwelling to the centrally located school implied that the population size of a neighborhood ranged between 2,000 to 8,000 persons, and a neighborhood’s area did not exceed 500 acres (202 hectares). As advocated in their publication Planning the Neighborhood, the American Public Health Association, suggested the ideal size of the “normal” neighborhood of about 5,000 persons ranged between 50 to 250 acres (20.2
to 101 hectares), with 5 acres (2.02 hectares) allotted for the elementary school with its playground. (1960, 2)

Generous spatial standards also characterized street widths in the suburbs. Initially, the standard width of a suburban public right-of-way was a “chain,” a unit of length used in surveying which equaled 66 feet (20.11 m). In the center of this right-of-way was a paved roadway measuring 36 feet (10.97 m) and accommodating two traffic and two parking lanes. With minimum setback requirements of 20 feet (6.09 m) from the right-of-way, the visual width of streets, from house front to house front, added up to 106 feet (32.30 m), a width in excess of that of Fifth Avenue in New York City, which is 100 feet (30.48 m) wide. The word “street” with its urban connotation was avoided in most suburbs, and instead “avenue,” “boulevard,” “crescent,” or “drive” were used. It may be of interest to note that Shaftesbury “Avenue” in London (64 feet or 19.50 m) and “Boulevard” Haussmann in Paris (99 feet or 30.17 m), both tree lined wide thoroughfares with multi-level buildings on both sides, are narrower than typical North American suburban streets.

Neither the traffic intensity of local streets, nor aesthetic considerations seemed to justify the amount of land set aside for streets in suburbs. From an aesthetic point of view, narrower streets would be more attractive and more intimate in scale for one- or two-story domestic buildings, because the ratio of street width and building height would be more congruous. Although street widths have been gradually reduced in the last few decades, they are still functionally and aesthetically disproportionate.

Since many suburban residents had managerial skills, they were able to elect a mayor and aldermen from their own ranks who could run municipal affairs effectively. The local government council discovered early on that the suburban population, consisting primarily of young married couples with children, had few social liabilities, and were unburdened by welfare payments to old-age persons, or unemployed and under-privileged people; moreover, with little crime, light traffic and no subsidy for mass transit systems, municipal taxes in suburbs were very low in comparison to those paid in the city. These favourable circumstances meant that suburbs enjoyed good borrowing power, which was soon put to use to obtain loans for the upgrading of municipal services to match, or even to exceed, those of the city. The paving of roads, building of sidewalks, installation of municipal water supplies, storm and sanitary sewers, and at times even the replacement of overhead wires by underground cables, were all financed through borrowed capital amortized over several decades, and paid for through the levy of local improvement taxes. Thus, urban amenities that prior to the ‘50s were the prerogative of city dwellers, gradually became standard amenities enjoyed by the residents of suburbs too. Suburbanites rightfully considered themselves very fortunate since they now could enjoy the best of two worlds, country living with urban amenities.

The discomfort of commuting to the city on clogged highways in the ’50s and ’60s was still an annoyance. As their numbers increased, however, suburbanites acquired political clout, enabling them to lobby effectively for new highways and expressways to alleviate traffic congestion. Their political power was so strong that new autoroutes were even extended.
to the city’s downtown area to facilitate rapid access for white collar workers living in the suburbs but working in the heart of the city. Often expressways were built through derelict urban land, but unfortunately they all too often entailed the demolition of viable residential neighborhoods. Although suburbanites now had easy access to their workplaces, their demand for inexpensive parking areas still had to be satisfied, which necessitated the creation of large parking lots in the city center, mostly on demolished building sites. Improved access to the city core via limited access arterials or expressways created an anomaly that made travel time from suburbs to downtown shorter than from many residential districts of the city proper, whose residents had to wind through a myriad of streets with traffic lights to reach their workplaces in the city center.

The exodus to the suburbs became a flood when moderate-income families joined the upper- and middle-income groups in their quest to raise their families in suburbia. And, large shopping centers with even larger parking lots were built to cater to suburban residents. To satisfy their parking requirements at peak hours, the size of parking lots had to be designed to be five times the area of retail shopping. A new scale, the scale of the motor car, now shaped urban design.

The parent city was short-changed. Family members worked in the city, but paid taxes in the suburbs, and with commerce following the suburban exodus and establishing suburban shopping centers, a further loss of tax revenues accrued to the cities. The wasteful use of prime urban land for parking lots serviced by an expensive municipal infrastructure, further reduced the city’s tax base. State subsidies, business taxes, sales taxes and metropolitan tax assessments were soon needed to compensate for the loss of real estate tax revenue in the parent city.

The extent of social repercussions attributed to this mass exodus to suburban residential developments is controversial. In Clifford Moller’s opinion, the physical segregation of residential neighborhoods divided along class-lines invariably leads to social isolation and impoverishment due to a lack of contact with other groups, whether less or more fortunate. Social alienation is also experienced by people who “escaped” the urban tenements to become suburban home owners. First, to have “made it” is the source of great satisfaction, but with time the monotony of the suburban street and the lack of vitality and intimacy of their new residential neighborhood bring about doubts, in spite of the fact that they are now better housed than their former city neighbors. The achievement of a higher level of material prosperity is often blunted by a condition of social and cultural poverty (1968, 69-72).

In the early ’70s, during the energy crisis, the rapid expansion of suburbs appeared to be curtailed, for a short while, by higher fuel costs affecting both transportation and home heating. But, this curtailment was only short lived. First, a change-over from large gas-guzzling cars to smaller compact cars eased transportation costs. Second, many homes were retrofitted with better insulation to reduce heating costs in winter, and air-conditioning costs in summer. When oil prices slumped after a few years, life in auto-intensive suburbia once again became affordable.
Nevertheless, the energy crisis did leave an impression of vulnerability in the public’s mind and it prompted some architects to experiment with the design of energy-efficient housing by exploiting solar energy through optimized orientation of dwellings towards the sun. It was also a heightened concern with energy conservation that led in the ’80s to the reassessment and gradual public acceptance of more energy-efficient cluster- and town-houses as viable suburban dwelling alternatives to the hitherto unchallenged dominance of the detached home.

Whereas the majority of suburbanites opted for residential developments with urban amenities, a few well-to-do families adhered to the original objective of living close to nature, which often implied living at a greater distance from the parent city. These so-called “exurbanites” were willing to do without standard urban amenities in exchange for more space in a bucolic landscape. Such a departure from the typical monotonous subdivisions was a small residential enclave called The Five Fields in Lexington, Massachusetts. Designed by The Architects Collaborative (TAC) and begun in 1951, this eighty acre (32.37 ha) tract of gently rolling and partially wooded land derived its name from the farmers’ fields whose stone-walled boundaries were in great part allowed to remain. Like in Riverside, near Chicago, the roads as well as the siting of free-standing houses complement the existing topography, a conscious attempt not to interfere with the natural formation of the landscape. In keeping with the New England tradition, a twenty acre (8.09 ha) area was set aside in the center of the development for a common green.

To ensure more space around homes, residential developments for the well-to-do were at times combined with recreational development such as golf courses, resulting in compatible land uses with long views over the fairways from houses bordering them. At other times homes were successfully integrated into nature preserves, such as in Del Monte Forest, California, where a gated private community was established without compromising the natural scenic beauty of this Pacific Coast site; one might even argue that if it were not for its residents who became zealous guardians of this natural haven it might have been engulfed by the expansion of neighboring Monterey.

The attractiveness of planned communities with clear boundaries drew the attention of planners to the monotony of traditional subdivisions with seemingly endless rows of houses along nondescript streets, and a new planning approach with defined neighborhood boundaries was introduced: Planned Unit Development or PUD. Richard Untermann and Robert Small defined a PUD as “a parcel of land planned as a single unit rather than as an aggregate of individual lots, with design flexibility from traditional siting regulations (setbacks, height restrictions) or land use restrictions (such as mixed land uses)” (1977, 10).

PUDs offer not only a greater flexibility in the selection of house types and siting of buildings, but they also are more economical if developed as a cooperative or condominium property with narrower private street widths. This cellular growth pattern, where each planned unit is designed as an entity, challenges developers to treat the environment of their project more thoughtfully. Hence, generally, PUDs offer more attractive communities than the
usual monotonous suburban sprawl of evenly distributed houses as far as the eye can see.

Probably in recognition of the negative visual effect of large housing tracts, recent PUDs are smaller in size than they were in the ’60s and ’70s, and their use is not restricted to very exclusive developments. Philip Langdon attributes the growing acceptance of planned unit developments to “a central principle of the PUD: the clustering of housing on portions of the site where it makes economic, ecological, and architectural sense.” (1987, 29) Another advantage of PUD communities is the greater tolerance of neighboring communities with different dwelling types and residents with a lower income level. This is especially true with communities that have clearly defined boundaries, often fenced, developed as gated communities to offer safety and security to their residents.

In the ’80s the process of suburbanization is continuing and the dream of living in the countryside with urban amenities is as strong as ever. According to the U.S. Bureau of the Census, the suburban proportion of metropolitan development reached about 65% in 1980, and there are no indications that this trend is diminishing. With commercial offices and corporate headquarters relocating to suburbs, and light industry moving to industrial parks, urban dispersal is an ongoing process. The shops, cinemas and offices in new suburban shopping plazas are draining business from the city. These new hubs’ climate controlled atria, adorned with fountains and exotic plants, are the “new” urban spaces. They are called “tomorrow land” by some Californians.

Many architects and planners see no danger in this development. Quite the contrary. Peter Rowe, for example, sees the emergence of a “middle landscape,” as neither town nor country. This new environment, “still very much under development in both a physical and cultural sense,” is the “real locus of growth and innovation in our society,” in Rowe’s opinion. And, it is replacing “the functional specialization, diversity, and social heterogeneity of the traditional city with dispersed, disurban, and almost rural patterns of small town, country life.” (1991, 589-91)

While the “middle landscape” is emerging, the socio-economic and environmental effects of a continued unregulated suburban sprawl, accompanied by an increasing rate of car ownership, is making America a nation of suburban dwellers, dependent on the private automobile for all transportation. Such developments can have only grave consequences for the parent city. The continuous loss of middle-income residential population creates an imbalance and a polarization of the very well-to-do and underprivileged inhabitants of the city. With the ever growing number of suburbanites, an anti-urban political power may emerge that would not only make it impossible to curtail the further deterioration of cities, but prevent their rescue.
References