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Urban Sprawl and Speculation in Suburban Land†

By MARION CLAWSON*

THE RAPID spread of suburbs across the previously rural landscape is a common phenomenon in the United States today. Even the most casual observer cannot but be impressed with the magnitude of the changes. There has been much criticism, on aesthetic and other grounds, as to the kind of suburbs being built; they have also had their defenders, or at least those who say the results cannot be hopelessly bad because people still move in great numbers to the new suburbs. This article will not attempt a general critique or appraisal of modern suburbanization but rather will consider only one phase of it.

One feature of postwar suburbanization has been its tendency to discontinuity—large closely settled areas intermingled haphazardly with unused areas. This intermixture of open and developed areas is largely independent of the density of the settlement within the developed areas; the question of the ideal density of settled suburban areas is another issue, which we shall not explore. The lack of continuity in expansion has been given the descriptive designation of "sprawl," which well connotes its hit-ormiss character.

"Sprawl" has been widely criticized as leading to unnecessarily high costs of social services and of private transportation, as well as for the frequent lack of publicly available open areas. It is also responsible for, or associated with, much wastage of land, since the intervening unused areas are mostly not used at all. Others have tended to minimize these deficiencies, arguing that they are but part of a growth process, not too serious in nature. Whatever may be the verdict on sprawl, it is clear that suburbanization has been the result of a relatively aimless process. It seems highly doubtful if any participant in suburban growth, or any observer, actually chose the pattern which has resulted. Possibly no one objects violently enough to exert the force required to change it but neither will anyone defend it as ideal. One aspect of this picture has been large-scale speculation in land, with consequent high costs to the actual settler and with large areas priced out of any market except urban usage, but the latter not yet taken over. Although nearly everyone seems aware of this process, and although most are critical of the results, yet it appears there is a serious lack of understanding as to just what is going on.

The purpose of this acticle is to explore the economic process in suburbanization—why some areas are developed, why intermingled ones are not, why land speculation invariably accompanies the process, and the like. The economic forces will be described, as far as possible, and some judgment offered as to which are manipulatable and which are not, and how. A basic premise is that no significant progress can be made in developing better suburbanization until the present processes are better understood.

[†] In preparation of this article the author has benefited greatly from discussions with colleagues at Resources for the Future, notably Harvey S. Perloff and T. Lowdon Wingo. The views expressed are those of the author

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Role of Agriculture

Perhaps the place to start is by eliminating one possible major causative factor of suburban sprawl-agriculture. Urban growth and urban demand have a major effect upon agricultural land use as a whole; in fact, as one surveys the history of agricultural development in the United States, one concludes that urban demand has been the main causative factor in agricultural development.1 But the differential or locational effect of agriculture upon suburban land values has been very small. For one thing, some of the physical qualities which make land valuable for agriculture also make it suitable for urban use.

Locational theory as applied to agriculture, from von Thünen downward to the present, has emphasized the effect of the urban market on agricultural land use and land value but has also stressed the effect of transportation costs, as well as such differential factors as land fertility.2 Under conditions of primitive transportation methods and high transport costs, agricultural production may be highly stratified, with bulky, low value, perishable products near the market, and those with higher value in relation to weight and with less perishability produced farther away. The width of the zones in any model depends upon transportation costs to a large extent; and the sharpness of the boundaries between zones depends largely upon natural production conditions and upon intra-farm economies, such as the need to grow feed for draft animals.

Today, the chief agricultural commodity with a clear orientation to the nearby urban market is fluid milk and it is held there largely by "health" regulations which make its importation from more distant areas impossible. Although there are some advantages in producing fruits and vegetables near the market, yet as a matter of fact the great bulk of urban supplies of these commodities comes from a considerable distance—from across the continent in many cases. Today this nation has a combination of good, relatively cheap transport, and technologysuch as refrigeration which makes long distance transport of perishable commodities possible. Even the fluid milk zone is more than 50 miles in radius for our larger cities, and within this zone there is almost no local advantage to agriculture. The widest arc of the suburban spread is far less than the nearest edge of the zone within which agriculture might have any differential effect upon local land values.

Some farm or rural land near cities will indeed come to have relatively high values as country estates or as a certain type of gentleman farming. But in this case the value of the land arises from the urban settlement not from agricultural production. Although such estates may lie outside of the usually defined suburban area, yet in fact the same value-making processes are at work. It is the city as a place of residence and of work which gives value to such estates, not their agricultural output.

Farmers in some areas, notably in California, have tried to protect their farm districts from encroachment. In general, such efforts have not been conspicuously successful, in part because such farmers are ambivalent: they want

¹ Marion Clawson, R. Burnell Held and C. H. Stoddard, *Land for the Future* (Baltimore, Maryland: Johns Hopkins Press, 1960). See especially

² For a clear recent statement of locational theory as applied to agriculture, see Raleigh Barlowe, Land Resource Economics: the Political Economy of Rural and Urban Land Resources Use (New York, New York: Prentice-Hall, 1958).

their land left in farms but they also want a chance to sell at the best possible price. It seems highly doubtful that agriculture can perfect an institutional barrier against urban expansion; at the most, it may help guide the direction and nature of the suburbs which develop. If we are to explain the suburban growth and land speculation processes, we must therefore look to forces other than agricultural land use and output.

Characteristics of the Market for Raw Suburban Land

The market for raw, undeveloped suburban land has several peculiar characteristics. First of all, land for suburban development is not a homogenous commodity, any more than is land for any other possible use. While differences in soil texture and fertility may be less important, as compared to these same qualities for agriculture, they are not negligible. Slope of land may be highly important, as affecting building costs. The risks of flood damage differ greatly from area to area. In these and in other ways, the native or natural qualities of potential suburban land may differ greatly.

The history of land ownership usually results in a present ownership pattern of variable size tracts of land owned by different owners. Some pieces are large, others small. Some owners have one objective, others another. A potential new owner must deal with what he finds, buying as he can. He will find it impossible to buy exactly as he wishes but must deal with discrete tracts in different ownerships. Subdivision of large tracts often creates a "plottage" value, which is at its peak when the size of tract coincides with the tract best suited to the use for which the land is intended. Tracts either larger or smaller than the optimum have lower value. The passage of time may change the use of land and hence the optimum size of tract. It is significant, we think, that since the war the major railroads of the country have purchased potential industrial sites along or near their tracks when they could, largely to prevent subdivision which would spoil the larger tracts for industrial development.

The owner of a discrete tract often must sell it all, or a major part, if he wishes to sell any. Suburban land, equally with or perhaps more than other land is not, perhaps cannot be, sold in incremental pieces, but rather in relatively large chunks—chunks not necessarily adjusted to the needs of the buyer or seller.

Society, acting through government at some level, has given suburban land further special characteristics. Location with respect to transportation, to water supply, to sewerage, and to other services vitally affects potentiality of land for suburban development. These qualities were given the land without action by the landowner, except as far as he was able to influence the public action which resulted in these services. Individuals may buy and sell land to take advantage of the services provided by group action but they are not responsible for the services.

Society has affected the value of suburban land in other ways—by taxes, by zoning and building codes, and the like. If master plans, zoning, and building codes were explicit, firm, enforceable, and enforced, and if there were confidence they would remain so, they would greatly limit if not completely determine land values in many areas. In fact, zoning in particular and others to some degree can be changed under political and other pressures. Even the courts do not always accept values consistent with zoning regulations, when private land is condemned

for public use. Public action through zoning and other related measures affects land values; but the major effect may be through the uncertainty created. While some of these services or action by society affect land over rather large areas more or less equally, yet some have a highly local effect.

Suburban land also differs greatly in accessibility, especially to major highways and sometimes to rail lines. The quality of accessibility may affect its price and its saleability greatly. Accessibility is generally not provided by the individual landowner but rather through the public, as in the case of highways, or by large private undertakings, as in the case of rail lines.

The market for suburban land is a derived one, dependent upon the market for the dwellings, shopping centers, or industrial plants erected on it. As such, it is subject to the uncertainties of market for the final product, compounded by the uncertainties of the conversion process. The market for suburban housing is a fragmented and not wholly consistent one, often variable in short distances or over brief times. Differences in price for houses are often reflected back into differences in price for undeveloped land, but in varying degree.

Lastly, the market for suburban land is usually very thin. There are very few buyers and very few sellers at any one time. Annual turnover in relation to total area is small. For almost any commodity there is a liquidation value at forced sale; a normal value between willing seller and willing buyer; and a forced purchase price when for some reason the buyer must buy almost regardless of price. For suburban land these prices might well stand in the ratio of 50 or less, to 100, to 200 or more, respectively. The time required to make a sale of land may

be considerable, and directly related to the price obtainable. Part of these variations may be due to lack of information on the part of buyers and sellers but much is probably due to the character of the commodity itself. One need only contrast these characteristics of the market for suburban land with the market for wheat or even for autos. For these latter and for many other commodities there are many buyers and sellers; and forced sale, normal sale, and forced purchase prices stand in much closer relationship to one another. Some of these characteristics we have described for urban land do apply to all kinds of land for any purpose. Although empirical studies are lacking we hazard the judgment that these factors are more serious for urban than for other land.

Value-Making Process for Undeveloped Suburban Land

Undeveloped suburban land, not yet in use for urban purposes but already taken out of other land uses, obviously must derive its value from the expectation of its later development as urban land. As we have noted, agriculture does not contribute in any important way to the value of potential suburban land, especially when the land is no longer actually used for agriculture. Most land has a value based on its agricultural productivity of less than \$400 per acre, although of course there are exceptions; much suburban building land at the time of development sells by the lot at prices equivalent to \$4,000 per acre or more, with modest subdivision improvements, or at least \$2,000 per acre as completely raw potential suburban building sites, and often at much higher figures. The potential subdivision value depends on many factors not the least of which is the popular estimate of the kind of suburban

district it will ultimately be, which in turn depends somewhat upon neighboring districts but also somewhat upon the prices the subdivider puts on his lots: that is, to a degree, to put a high price on suburban lots gives them a high value. The conversion value of the raw potential suburban land into actual developed suburban land is somewhat uncertain at any date, depending in part upon the action of the community as a whole, and in part upon the skill of the subdivider and developer himself.

The date at which there will be an active demand for the raw suburban land for actual development is to a large extent uncertain. In some instances a piece of land may lie close to areas developed within the past few years and toward which the tide of development is flowing. Under such circumstances its present value is moderately forecastable on the basis of estimated probable future conversion date and value. In other cases, land may lie at greater distance or in directions where future development is less certain; then both its conversion date and its conversion value are more uncertain. The timing of development of a particular piece of suburban land is partly outside of his control. He may obviously withhold it for later development, if he thinks a greater net income can be obtained thereby—he is less able to speed up its development. The large, well-financed, skillful developer can bring about the development of a particular tract more nearly on his terms than can a smaller developer; but each operates within the general market structure.

An expected future income or value can be discounted back to a present worth or value. An interest or discount rate is required to do so. The discount rate may be thought of as having two parts; a more or less normal interest rate based upon alternative sources of investment or alternative sources of funds in competitive money markets; plus an uncertainty factor. The latter relates not only to the date of future conversion from raw to developed status for the land -and even as to "whether" as well as "when"—and the value at that date, but probably should include a large allowance for illiquidity as well. As we have noted, suburban land can be sold quickly or at forced sale only at prices substantially below its normal value when ample time is available to negotiate a sale. In practice a single discounting figure will be used, large enough to include all these and perhaps other factors as well.

The appropriate interest rate in land speculation depends to a large extent upon the situation of the particular individual.3 A man with ample investment funds, perhaps faced with a high marginal income tax rate and hence eager to secure capital gains on which a lower rate is paid, could afford to speculate on land at interest rates perhaps no higher than 2%. A farmer, short of capital and hence forced to ration his scarce capital among various potentially profitable farm enterprises, or forced to borrow at 6% or more, would necessarily use a much higher rate—perhaps 6, 8, or even 10%. A real estate developer, perhaps short of capital and eager to use his available capital in enterprises where the turnover was rapid, would be in a position similar to that of the farmer. These differences among individuals would logically lead to greatly different positions in land speculation, but we shall not explore them in more detail here.

In addition to delays and uncertainties as to time and value of suburban

⁸ For a very stimulating discussion of this point, see Mason Gaffney, "The Unwieldly Time-Dimension of Space," American Journal of Economics and Sociology, October, 1961.

land for conversion to development, there are some holding costs to be taken into account. Taxes over a period of years may be considerable even at low assessments and low rates. Occasionally charges other than taxes must be met annually. One cost of holding is interest on the value of the land if sold, but of course the discounting formula includes this factor.

One could easily construct or adopt formulae to show these relationships, or give illustrative tables of different time periods, different final conversion values, different discount rates, and different holding charges. The best guess as to land values 10 years from now will justify present values well under half of that level; and the best guess as to values 20 years from now will justify present values much less than a fourth as high. It is altogether possible that normal or free market values may be higher than this because of widespread optimism over ultimate values, time of conversion, costs of holding, uncertainties, and the like.

The ownership of any suburban land for a rise in value is a speculative undertaking. Profits, when all factors are taken into account, are by no means assured nor large on the average. Everyone knows, or at least has heard, of others who have made substantial gains from holding suburban land for a rise in price. This type of common knowledge nearly always is ignorant of or ignores the cases, perhaps more numerous, when increases in value were much less or even negative. The chance for profit in holding suburban land for development arises entirely out of error in consensus or out of individual judgments more astute than the consensus. If there was complete knowledge as to the time of future conversion, as to value at that time, as to holding costs and as to discount rate, then obvi-

ously everyone would be in complete accord as to present worth. There would be no opportunity for speculative gain, because all future value would have been fully and accurately discounted into present value. It is altogether possible that at times the consensus on these matters is in error-everyone is sure of something which later history proves not to be true. Under such circumstances, a sounder judge with a minority view may reap a profit. At other times a consensus may be lacking but one view may prove in time to have been closer to the fact than any other; if the person who held it acted upon his convictions, he may have profited.

As long as the price of land ripe for conversion from undeveloped to developed status is relatively high, then the price of land less ripe for development will be somewhat lower until at the margin the prospects for conversion into developed status are so uncertain or so remote that even the most optimistic will not bid up the value of this land. As long as we have free markets in suburban land and as long as the total effect of the various factors in the formula promise some present value above alternative use value, and given imperfections of knowledge and incomplete consensus, then we can reasonably expect speculative bidding up of suburban land values. Viewed in this way, land speculation in and beyond the suburbs is not only normal but inevitable. The possibilities of its control will be explored later.

Forces Leading to Development of Particular Suburban Tracts

Given the nature of the market for raw suburban land and given the value-making process for such land, what are the forces leading to the development of particular tracts of such land? How can we account for the fact that a relatively few of the many possible suburban tracts are developed in a particular year and how can we predict which ones will be developed and which left for a later future?

One basic factor is the over-all market demand for urban land for the whole urban area concerned. Some cities or metropolitan areas are growing rapidly, others at a more modest pace, and some are essentially stagnant. The amount of new land needed for urban purposes annually will obviously vary greatly among cities, depending upon this factor. At some times the real estate and building market is much more active than at others, depending in large part upon credit availability as well as upon general economic demand. When the demand for new urban land is high, not only is more land needed but the profitability of conversion is probably greater. This means not only greater profits to landowners, on the average, but also that some tracts or types of development which would be marginal in other circumstances will now be promoted—it is the time for the long chance, for the unusual deal.

The extension of essential public services to particular areas or districts will bring land within such areas or districts closer to the point of actual development or building. Provision of new roads, schools, water supply, sewerage, and other services, or marked improvement in them, add greatly to the impetus for development. The possibility of alternative devices, such as septic tanks instead of trunk sewer lines, may have the same effect. Viewing the subdivision developments which actually take place, one can hardly say that these public services, which he is tempted to call essential, are in fact either essential or necessary to building development on specific sitesone sees too many areas that get built up,

at least to a degree, without them, or at least without satisfactory services. Yet the provision of new services undoubtedly gives a fillip toward development. On the other hand, it is unlikely, of itself alone, to be sufficient. That is, mere extension of one public service, or even of a group, to an area previously lacking them, may not lead to much actual building. Other factors—above all, over-all demand—must be present.

Though empirical data are lacking, at least to this author, yet one cannot but suspect that the personal desires, projections, and preferences of present landowners must be a major factor responsible for some tracts developing while other intermingled ones do not. Institutional factors, such as estate holdings, trusts, defective titles, covenants, and others, may affect marketability of particular tracts, especially in the shortrun. Some present landholders may be optimistic about future increases in value of their land, others more cautious; some may have ample capital for which they seek investment outlets, others may have pressing need of any capital they can raise by sale of their land; and in other ways landowners may differ considerably. It seems wholly probable that owners of identical land (if one can imagine such a thing) might react quite differently to exactly the same offers for their land. Moreover, the differences between individual landowners may well be so great that a small increase in offered price, such as another year or two might bring, will be insufficient to move the man who wants to hold for later profit. Anyone familiar with urban real estate knows of many tracts remaining vacant for many years while all around them development proceeds apace. Surely one major factor must be the characteristics of the landowner himself.

As we have noted above, raw suburban land differs greatly in physical suitability for development and also in size of parcel which each owner possesses. A residential builder may wish a moderate size tract; some will appear too small for his needs, others larger than he needs, but not available in part. An industrial development is likely to need a relatively large tract, as well as one of specific locational and other qualities and thus many smaller tracts are practically unavailable or nonexistent to him.

When all of these factors are combined one should expect a rather hit-or-miss type of suburban development as normal; it will not normally be incremental, even regular. Instead, some tracts will be developed, other nearby ones remain vacant for long periods, relatively more distant ones developed sooner than some nearby ones, and so on. One should, in fact, anticipate exactly what we have experienced: sprawl! The frontier of urban land use or building will not move slowly and regularly, taking in all land as it goes; instead, development will leap ahead to more distant tracts, passing over nearby ones, taking in some large and some small tracts, and leaving others of assorted sizes. While there has been much criticism of sprawl, and even a little wonder at why it looks as it does, in fact, given the institutional and economic forces we have described, one should have expected exactly the same kind of sprawl we have experienced in such a large way since the war. Those who are surprised at it have even ignored history for this is exactly the way the farm frontier passed across the nation a century or so ago. Canada has succeeded in some provinces in requiring a more uniform filling-up of the frontier areas before additional areas are opened for settlement but this has been difficult to enforce even there.

Effect of Speculative Land Prices and of Suburban Sprawl on Use of Intermingled Land

It is a matter of fairly common knowledge that the land within the suburban zone of sprawl for the most part is not used for any economic output until it is actually developed for urban usage. Vacant lots, larger vacant leap-frogged areas, and surrounding vacant lands characterize the suburban scene. Why should there be so much idle land, hopefully "ripening" for later transfer to urban use?

The processes we have described bid up the price of this land far beyond its value for agriculture, forestry, or other rural land use. This alone need not render the land idle for these purposes. It is true that the farmer who formerly farmed it is likely to prefer to take his gain, go elsewhere, and buy a bigger and/or better farm with his enhanced capital. It is also true that the new buyer, particularly the land speculator, may not know how to farm, or perhaps care to try. Yet it is possible that he might lease the land to an actual farmer; the gains, while small, perhaps would nevertheless meet the annual cash holding costs of the land and possibly more, thus facilitating in some degree the holding of this land speculatively.

When land comes within the zone of suburban influence, for possible later development, its taxes often rise. Until new public services are extended to the area, the increases in taxes may be small, often less than the rise in land values. Land speculators and the "Court House gang" are sometimes the same people, or at least not unknown to each other. But special services in the form of more roads, better or bigger schools, water lines, sewer lines, and the like often are extended to the potential urban area; and this is almost sure to lead to higher taxes

on the land. The taxes may indeed rise so high that they exceed any possible return from land used for farming. But this alone would not necessarily take such land out of farming. High as the taxes might be, some net income from farming would seem to be preferable to none at all from idle land. High taxes mean high annual carrying costs to the land speculator and thus either depress present values (future values discounted back to the present) or provide an incentive for early sale, especially by the landowner who either cannot meet these costs or is pessimistic about future increases in value. Thus, a farmer might be even more willing to take a rise in land prices and transfer his capital elsewhere where farming was more profitable. But again, presumably the land could be rented for farming and at least some income obtained. Taxes in excess of income attributable to land make continued land use of any type impossible but not necessarily short-term use of this type.

A more serious fact is that in the suburban zone the planning horizon has shortened drastically and uncertainty greatly increased for any land user. The farmer now does not know when he may one day receive an offer for his land so high he simply cannot resist it; the speculative landholder is faced with a similar situation. Each knows that such generous offers come at most irregular intervals and to forego this one does not mean that another equally good one will come along soon. A tenant farmer under these circumstances will have no assurance of continued operation. A generation ago, agricultural economists pointed to the depressing effect on good farming of the uncertainty in the typical Southern share crop farm. The cropper never knew from year to year where he would be the following year; hence he made no

investment nor plan for more than the current year. Under that circumstance, however, the landlord knew that the farm would be operated by someone in successive years and at least some expectation of continuity existed on his part. The farmer, whether owner or tenant, in suburban zones has no such expectation of continuity. If he has high fixed investment in land improvements such as an orchard it will pay him to operate it as long as he can and recover as much of the sunk investment as he can. If he has high movable investment that might be jeopardized by loss of the land, such as a herd of high-producing dairy cows, his move will be accelerated. Not only is the actual farm operator affected by this shortened planning horizon and increased uncertainty but so also are the innumerable marketing and supply services which are indispensable to modern agriculture. As farming declines, some of these move out also, further hampering successful farming within the zone.

At any rate, land within the suburban zone, not actually used for urban purposes, typically is not used at all. Our best estimate is that there is about as much idled land in and around cities as there is land used (in any meaningful sense) for urban purposes. In the suburbs, the idled land is an even larger proportion. While this is a waste, we think it is inevitable, given the economic and institutional structure we have described. That is, land speculation, sprawl, and intermingled idle land are all natural outgrowths of economic and institutional forces, not perversions of them. Instead of surprise and shock that these situations exist, we should expect them. Perhaps we regard the result as socially undesirable; if so, we should examine wherein the economic and institutional base might be modified. We should look for causes, not moan over or try to treat results.

Possibilities of Controlling Sprawl and Suburban Land Speculation

The following criticisms have frequently been levied at sprawl. Others denied them or at least argued that in practice the situation is not as bad as pictured. Our personal conviction is that sprawl deserves many of these criticisms. But, regardless of the reasons, society (acting through government at some level) might decide to reduce or eliminate suburban sprawl and speculation in raw suburban land. The common criticisms of sprawl are: (1) A sprawled or discontinuous suburban development is more costly and less efficient than a more compact one, each of the same density within settled areas. Many costs depend on maximum distance or maximum area; if these were reduced, costs would be lower per capita or per family served. (2) Sprawl is unaesthetic and unattractive. Sprawl is wasteful of land since the intervening lands are typically not used for any purpose. (4) Land speculation is unproductive, absorbing capital, manpower, and entrepreneurial skill without commensurate public gains. It destroys or impairs economic calculations that ideally lead to maximum general welfare. (5) It is inequitable to allow a system in which the new land occupier is required to shoulder such a heavy burden of capital charges or debt merely for site costs—costs which in large part are unnecessary and avoidable.

That is, we may accept urban sprawl and speculation in raw suburban land as the natural consequences of the economic and social processes we have described and at the same time we may seek to change one or more stages or bases of those processes because we dislike their final outcome if unchecked. Where might society intervene, and how? A number of possibilities seems to exist. The following suggestions are largely complementary; most would be effective alone but jointly they would be more so.

First of all, effective market reporting of transactions in suburban land would be helpful. If numbers of parcels, total area, location of parcels, prices paid, and other terms of sale were widely reported and generally publicized, this would provide a solid factual basis now lacking or at least not generally known. Such market reporting for unimproved urban and suburban land should be supplemented by similar reporting for suburban developed real estate. We have in mind something like the market news reporting for agricultural produce markets for other primary materials such as metals and lumber, or even stock market reports. With the low turnover in the real estate market perhaps monthly reports would be frequent enough. Obviously, such reports must be city by city to be really useful. But broad regional and national totals and averages would be helpful, also. Such reports might well be limited to information of public record such as recorded deeds or transfer tax receipts unless buyers and sellers could be induced voluntarily to report unrecorded sales. If limited to public information some may doubt the advantage of such reports. However, even if everything in them was known to the alert land speculator, such reports, if widely distributed, would bring useful information to many who otherwise would be uninformed. This type of market information might be provided by federal, state, or municipal government or conceivably by real estate boards.

Secondly, this type of reporting on transactions made could be supplemented

by demand and outlook studies of the type long established in agriculture. Given the best possible forecasts of population growth in a city or metropolitan area, how much land will be needed annually, and over the next 10 years? How does the amount required compare with the area presently available? Several past studies have shown platted and subdivided land adequate to accommodate 20 or more years anticipated growth in a city.4 The ratio of land available to average area developed has varied greatly from time to time though perhaps nearly always far in excess of a rationally optimum area. Under these circumstances a few astute speculators may make substantial profits; but all speculators as a group will lose unless present prices are lower than one-fourth to one-tenth of sale price when actual development occurs. Information of this type would at least help actual developers and builders to avoid some speculative traps and excesses and should exert some stabilizing effect on speculation.

Thirdly, urban planning and the subdivision controls and zoning which make it effective might be made into a stabilizing force rather than the unsettling one we have suggested it now is. This assumes that some means could be found which would make the results of urban and suburban planning more generally known and more widely accepted so that the necessary public and political support would be forthcoming to secure adherence to the plans in the face of aggrieved group or sectional interest. As we have noted, zoning controls and similar regulations are simply not taken seriously in the land valuation process; it is

assumed they can be changed upon a political or interest group demand.

If planning, zoning, and subdivision were firm-enforceable and enforcedthen the area available at any one time for each kind of use could bear some reasonable relation to the need for land for this use. That is, area classified for different purposes could be consciously manipulated or determined in relation to market need. Sufficient area for each purpose, including enough area to provide some competition among sellers and some choice among buyers, should be zoned or classified for development; but no more. By careful choice of the areas concerned sprawl could be reduced, perhaps largely eliminated. Forcing relatively full development of each zone before opening up the next zone to settlement would put landowners in a very strong position to exploit buyers. This could be dealt with in a different way, discussed below.

Fourthly, local real estate taxes could be made into a conscious instrument to implement plans. This could be done by gearing taxes more closely to land values as the latter are affected or established by zoning and subdivision regulations. Taxes should be sharply raised in most suburbs on land zoned and classified for reasonably early development. They could be put high enough to bring severe pressure on landholders, forcing or inducing them to sell relatively soon. High taxes in the zones classed for early development would increase the cost of speculative holding of land and thus make early sale more attractive. At the same time, taxes might well be lowered on lands not classed as ready for early development. This would remove one incentive for early development. It would also lower costs of holding land and thus would encourage speculative holding and

⁴ For a summary of better known studies of this kind, see Clawson, Held and Stoddard, *op. cit.*, p. 70–74.

higher prices. This could be dealt with as explained below. Keeping taxes lower but at the same time putting the land in a class for deferred development might encourage use of intermingled and adjacent land for other purposes, at least for a few years more in each case.

The lands not classed for early development might have part of the tax deferred. The part payable annually could be adjusted to a reasonable level for other land use; the deferred part would reflect value for later development. The deferred part would accumulate from year to year and would be a lien on the land. The deferred part might come due when the owner sold for actual development or it might come due when the public planning body classified the area as ready for development. The former would encourage longer holding for speculative gain and hence probably more urban sprawl. Many more owners would prefer to gamble on higher future land prices. Making deferred taxes due when the planning body classified the area as ready for development would have the opposite effect: now pressure would be exerted for early sale and hence more nearly solid development encouraged.

Assessment and taxation have not generally been used deliberately to modify land use but they have nevertheless exerted great influence in this direction. Some may question the wisdom or the legality of taxes based on land use plans or the conscious use of taxes to implement plans. But, to the extent the plans are backed up by vigorous land zoning and subdivision controls, they do in fact vitally affect if not determine land values.

Fifth, the public, acting through government at some level, should acquire as much of the vacant lands as it needs for public purposes. By-passed or leap-frogged areas are often suitable for parks or

other public purposes. Owners of such areas are often willing to sell. Others will prefer to hold for later possible gain. The area actually required for public use is often small compared to the total vacant area. But its early public action would have two effects: (1) the parks, schools, and other public uses would considerably affect private land use; and (2) offers by public agencies, or asking prices by such landowners, establish the market price of such land. If local tax assessments for such land could quickly be adjusted to the customary ratio of assessed to market price, then the profitability of continued speculative holding would be sharply decreased and urban sprawl correspondingly lessened. Close cooperation between school, park, and other bodies interested in acquiring land for public purposes, on the one hand, and tax assessment bodies on the other, could be most effective.

Sixth, a more purposeful and coordinated use of public services such as roads, water lines, and trunk sewers could greatly affect urban sprawl. By refusing to extend any of these or other services to more distant areas until most of the intervening area was filled up, urban sprawl could be substantially reduced. The wisdom to plan public improvements in this way and the courage to enforce such plans would require a substantially higher level of performance than urban and metropolitan public service agencies typically now have. Such a program by public agencies should be accompanied by an educational program so that the general public would understand how and why such services were used for this purpose. Unless accompanied by some of the measures previously described for bringing pressure on closer-in landholders to sell,

this too would give them monopoly power and large gains in land prices.

Underlying all these suggestions is the idea that government at some level possesses great powers for influencing, if not controlling, the future form of the city and metropolis. To achieve positive goals, suburban sprawl and speculation in raw suburban land must be greatly reduced or eliminated. The net effect of these various measures would be to greatly change general expectations of future land prices and dates of maximum net gains. Some reduction in land prices at time of development might be achieved; timing of development and hence of gain in land prices based on it would be more predictable. Hence, some of the basis for land speculation would be gone. Users of land for other purposes would have a longer and more certain planning horizon.

These suggestions assume that these varied powers of government can be marshalled to such a coordinated program. This may be unrealistic. Most of these programs are for local government. Local government is notoriously fragmented and uncoordinated-much more so, really, than federal government about whose deficiencies we hear so much. If a really coordinated and effective attack is to be made on urban sprawl and speculation in raw suburban land then perhaps we shall have to use the Suburban Development District which I have proposed elsewhere. Under that proposal, various local governmental and private interests, subject to some regulation by the state, would be empowered to form special districts, with very wide powers over all aspects of the suburbanization process. Such powers would have a limited time duration and the districts would pass out of existence once an area were reasonably well settled.

The ultimate in public control over land settlement and land speculation is achieved only when a public agency first acquires all the land from present owners and then sells it to new owners. Experience in the United States and abroad with forced land reform, land colonization, or other land use arrangements where the public objective diverges significantly from private objectives has shown rather clearly that anything less can somehow be evaded in some way. However, it seems to this author most unrealistic to think of wholesale public acquisition of land in potential suburbs with its subsequent sale to actual occupiers and developers. We have, it is true, gone about this with the seriously decadent slums in the older parts of our cities; one reason we were willing to do so there was that the process required a major infusion of public funds. Public acquisition, possibly public development, certainly sale to private users of land in new suburbs would, on the other hand, be highly profitable; for that reason, if none other, private interests will bitterly oppose it. On the governmental level we are not willing to take strong measures to prevent a possible or probable future disaster or difficulty; we wait until it is upon us. Thus, while for logical completeness one should include wholesale public acquisition and subdivision of suburban land as a means of achieving better cities, through reducing sprawl and speculation, as a practical matter it probably is not a real alternative.

⁵ "Suburban Development Districts: A Proposal for Better Urban Growth," Journal of the American Institute of Planners, May 1960.