THE DYNAMICS OF NEIGHBORHOOD CHANGE AND DECLINE

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PREFACE

This paper was financed in large part by a grant from the Ford Foundation. It is one of five, the other four focusing on the dynamics of neighborhood change and decline, low-income housing assistance, federal policy toward the residential construction industry, and federal housing policy generally. Three of the other four papers are available as part of this series:

Shelter Subsidies for Low Income Households
(Research Report No. 3)

Neighborhood Strategies
(Forthcoming)

Residential Construction: Too Much or Too Little
(Forthcoming)

A small number of copies of this paper were first circulated in 1981. The present version updates and polishes several of the ideas but is essentially the same as the original version. We should like to thank Louis Winnick of the Ford Foundation, and Philip Morrison of the University of Pennsylvania for their helpful comments on the original draft.

THE DYNAMICS OF NEIGHBORHOOD CHANGE AND DECLINE

The economic and physical decline of urban neighborhoods has become a widespread and widely misunderstood phenomenon during the post-war period in much of the developed world and especially in the USA. It has not been restricted to aging central cities. Most growing cities and not a few suburbs possess swaths of decay as well. By contrast, many older residential neighborhoods have retained most of their initial environmental quality. Indeed, with growing national income and the expansion of both private and public services most neighborhoods probably offer more attractive living environments today than when they were first constructed. And a scattering of neighborhoods only recently regarded as hopelessly decayed has experienced visible regeneration, often without material government assistance. However, a large proportion of old urban neighborhoods have become less desirable and many are badly deteriorated. Dwellings have fallen into disrepair and the quality of public facilities and services has also suffered. After decades of changing occupancy, these neighborhoods are now inhabited by residents of much lower socio-economic status than that of the original occupants.

Because these patterns of decline and rebirth are poorly understood, they raise important questions for analysis and, ultimately, policy. What are the various factors which cause U.S. neighborhoods to pass from higher- to lower-income groups? Do the same or a different set of variables cause neighborhoods to deteriorate? Is neighborhood decline inevitable once it has proceeded beyond a certain point or can decline be halted or reversed at any point in the process? If reversal is possible, what must be made to happen in order to bring about that result? And is reversal a zero-sum game, in that gains in one neighborhood are realized only at the expense of worsened conditions elsewhere? Finally, do policies aimed at other housing objectives, such as maintaining a high volume of new construction adversely affect neighborhood stability? These and associated questions present stimulating puzzles for solution. Although a number of studies have contributed to an understanding of the causes and consequences of neighborhood change, several aspects of change are still in sharp dispute and certain others have been lightly touched upon or overlooked.

Neighborhood policy is invariably based upon some "theory of the problem." Plainly, if that theory is inaccurate or incomplete, as we think current theories are, it may lead to "solutions" that are unavailing or worse. Currently, public intervention to arrest neighborhood decline assumes that it is premature or unnecessary. However, if as some persons feel, neighborhood decline -- like the decline of living organisms -- is the inevitable consequence of advancing age, it is not a problem that can be prevented or corrected. Similarly, if

neighborhood decline involves no more than an inevitable transfer of obsolescing structures to ever-lower income groups, one might view the phenomenon as simply an occurrence having neither positive nor negative connotations. The problem for policy in this situation would have to do, instead, with the distribution of income in society. Finally, to the extent that decline of individual neighborhoods is the consequence of rising living standards and the concomitant rejection of marginal segments of the housing inventory by those who can afford to maintain homes in good-as-new condition, one can regard decline in a generally positive light. Depending on the situation, therefore, neighborhood policies either could seek to prevent and reverse decline or could focus on techniques that would help neighborhoods adjust downward and prevent the effects of decline from influencing surrounding areas.

This essay examines the meaning and causes of neighborhood succession, and the relationships between succession and decline. Its purpose is to cut through the conceptual morass of definitions and assumptions about neighborhood change and in this way to clarify the "theory of the problem." The essay has six substantive parts.

We begin by looking at why there is a tendency for spatial separation of income groups in urban areas, with higher income households congregating in exclusive neighborhoods and successively lower income households forming somewhat homogeneous, though less attractive, neighborhoods of their own. Without such separation the basic requisite for income succession would not exist. And although it might seem only natural that wealthy families should live in better surroundings than not so well-to-do households, there are in fact conflicting theories as to why this is so.

In the second section of the essay we explore various meanings of neighborhood and some of their implications for theories of neighborhood succession and decline. A number of the explanations of succession and decline are substantially weakened by a flawed understanding of what a neighborhood really is and how it relates to the several different housing submarkets of which it usually is a part.

The third section of the essay discusses the concept of neighborhood succession and how it differs from the related concept of filtering. Although the essay could perhaps proceed without this discussion, we need a term to indicate, unambiguously, change in the socio-economic characteristics of a neighborhood. "Filtering" is frequently used to describe such change, but because it has so many different definitions, its use here would only serve to confuse things. The term succession itself, however, also can be interpreted in several different ways. Hence, it needs to be carefully specified.

With the above groundwork in place, we turn in the fourth section to the heart of the essay -- an explanation of the succession process. Here we try to relate, in an internally consistent way, the various independent, intermediate, and dependent variables operating within neighborhoods, within the larger housing system, and within the economy as a whole, thus resolving some of the conflicts that exist among already competing theories of the process.

An understanding of neighborhood succession is but a short step away from an understanding of neighborhood decline, which is the focus of the next part of the essay. Unless decline precedes succession -- a possibility we discuss -- succession must inevitably lead to decline if there exists within the community a poverty population of substantial size to inherit neighborhoods rejected by those who can afford to maintain them. Nevertheless, questions concerning how this inheritance takes place and whether it occurs unnecessarily because of market inefficiencies or for other reasons are matters of interest and dispute. Our treatment of some of the theories of decline, e.g., redlining, are necessarily brief and rely heavily on the work of others. Nevertheless, the reader may find that by reviewing the various theories together, it is possible to place them in better perspective.

The essay concludes with an examination of possibly the most widely misunderstood aspect of neighborhood decline -- housing abandonment. Various discussions of abandonment either fail to distinguish between its causes and its often unfortunate consequences or assume that it is usually caused by market imperfections. They conclude, therefore, that abandonment is a problem which should be prevented. Our view is quite different.

Two perhaps obvious points must be made before we begin. First, the neighborhoods that make up the universe in urban America are richly diverse in character. No generalization about the processes by which they are formed or undergo change can be without exception. It must be understood, therefore, that each of our hypotheses and inferences is an abstraction from reality, applicable in most but surely not all specific contexts. Second, a full-blown theory of neighborhood change must explain not only why many neighborhoods decline but also why others remain unchanged or even flourish through time. Although we pay some attention to the latter phenomenon, our primary interest is in the causes and process of decline -- if only because it is that with which current public policy is most concerned. What follows, then, does not purport to be a comprehensive theory of neighborhood change, but rather is only a step in that direction.

THE DETERMINANTS OF SPATIAL SEPARATION OF INCOME GROUPS

We suggested at the outset that geographic separation of households according to real income lies at the core of the neighborhood succession process. Of course, in principle an income hierarchy of neighborhoods is not necessary to get the process started. If neighborhoods in a newly developing community were initially indistinguishable one from another on the basis of their income profiles, income separation could still develop with the passage of time, in the absence of special interventions to prevent such an eventuality. Equally, an hierarchical structure could evolve into one of entropy.[1] In general, though, it is accurate to say that if geographic separation of income groups fails to come into existence at some point in a community's development, succession almost by definition will not take place. It is extremely important, therefore, that the social and economic forces which produce separation be understood, particularly because it is these same forces which are creating the geographical isolation of lower income groups, the companion phenomenon of succession and decline.

At first blush, it might seem almost silly to inquire into the reasons for income segregation in urban communities. In every city, buildable sites vary in the amenities and accessibility they provide. So it is only natural that more wealthy families appropriate the most attractive areas and leave the less desirable ones to those who can afford nothing better. At the extreme, it is to be expected that the poor will reside down-wind from smoke-belching factories or near the railroad yards or other places no one prefers to be. This superficial explanation falls apart on slightly closer examination. Variations in attractiveness of sites should be reflected in square-foot land costs, yet very low-income households often occupy some of the highest-price locations. Since they are clearly paying more per square foot than middle- and upper-income households in the community for some locations, why do they not compete with these households for other land as well? And why, if low-income households pay so much for land, do any of them at all live in the path of noxious odors? Why don't they move upwind, and live in income-heterogeneous neighborhoods? Finally, if separation is the natural order of things, how does one explain the fact that examples of just the opposite are often to be found? In the cores of large cities, in many small communities, and in some of the older affluent suburbs, such as those along Philadelphia's Main Line, the rich and the poor live in close proximity. Nor surprisingly, given these anomalies, residential

[1] Also, if the income distribution were completely egalitarian but housing preferences differed and dwelling units were spatially grouped according to quality a neighborhood hierarchy would result.

differentiation of socio-economic and other groups has been the object of scientific inquiry for a very long time.[1]

Basically, explanations of separation appear to fall into three categories, each emphasizing a different set of variables. The first (not chronologically), formulated originally by Muth, building upon prior work by Alonso as a foundation, is a long-run comparative statics analysis which explains separation in terms of certain transportation-cost, land-price and demand relationships, described below, that interact in such a way as to cause upper income households to gravitate toward the metropolitan fringe, with middle- and low-income groups settling progressively closer to the center.[2] The second explanation is oriented toward the social and physical environment of sites, rather than their accessibility and size. It particularly stresses the desire of many households to separate themselves visually and symbolically from lower status households, and it ascribes importance to the public controls and private devices which contribute to that desire. The third explanation, unlike the first two, emphasizes the supply side of the real estate market. It is historical in nature and focuses on the immobility of housing units and the cost of new construction. We will examine each of these three explanations in turn.

Income Separation Resulting from the Trade-Offs which Different Income Groups Make between Accessibility and Land Consumption:

In Muth's tightly argued model, several simplifying assumptions are made in order to highlight the variables which he believes to be controlling. These assumptions may be grouped under three headings: deterministic, spatial, and behavioral.

1. Deterministic: A precisely determined outcome to an economic model normally requires that the economic system and economic agents be well-behaved. In the access-space model, Muth assumes that housing producers and consumers seek maximal utility in the context of perfectly competitive markets for land and housing. This means, among other things, that all buyers and sellers are fully informed and that price signals are clear and provoke immediate optimizing adjustments.

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[1] In this section and the following ones on succession and decline we do not cite some of the early contributions to the literature by R.E. Park and E.W. Burgess, Homer Hoyt, Walter Firey, or Lloyd Rodwin because the literature on residential differentiation and succession has evolved since their seminal contributions. Nonetheless, a number of ideas which we attribute to later authors can be traced back to this original group.

[2] Richard F. Muth, Cities and Housing (Chicago: University of Chicago Press, 1969).
William Alonso, Location and Land Use (Cambridge, Mass: Harvard University Press, 1964).

2. Spatial: Muth assumes that housing development takes place on a previously undeveloped isotropic plain; i.e., a surface with no pre-existing structures or urban infrastructure to influence or interfere with contemporaneous urban development. He assumes, in addition, that apart from housing, all activities -- employment, recreation, etc. -- are located in the central business district (CBD).

3. Behavioral: Finally, Muth simplifies the nature of houses, households, and the housing markets. The key assumption here is that the only attributes of a house which generate satisfaction to its occupants are its location relative to the CBD and its size or number of space units. It is here that the accessibility-space trade-off emerges: the farther a household lives from the CBD, the higher will be its direct and opportunity costs of commuting; but, on the other hand, the price of space units falls with distance from the CBD.

Using these assumptions, a rather elegant mathematical proof is offered, leading to the following set of conclusions:

> "in order that a household in space with a member employed in the CBD (central business district) maximize its utility, two conditions must hold. The first, that housing and all other commodities be consumed in such quantities that the marginal utility per dollar spent is the same for all, is quite well known. The second, that no small move can increase the household's real income, implies that housing prices must decline with distance from the CBD if the marginal cost of transport is positive. The second condition also implies that the relative rate of decline in housing prices must vary directly with the marginal cost of transport and inversely with a household's expenditures on housing. The two conditions together imply that the consumption of housing services by otherwise identical households must increase with distance from the CBD...
>
> "The greater a household's income the greater its expenditures on housing tend to be; hence the smaller must be the price gradient at, and the greater the distance from the CBD of, its equilibrium location. However, household income differences arise largely because of differences in the hourly earning opportunities of its members and, consequently, the value they would place on their travel time. Thus, on a priori grounds alone, the effect of income differences upon a household's location cannot be predicted. Empirically, however, it seems likely that increases in income would raise housing expenditures by relatively more than marginal transport costs, so that

higher-income CBD worker households would live at greater distances from the city center."[1]

Mills has presented a proof of the same proposition and summarized it somewhat more succinctly, as follows:

> "A remarkably simple and realistic result can be stated: Suppose that the disutility of a mile of commuting is proportionate to the wage rate, and that the factor of proportionality is no greater for high than for low-income workers. Then, if the income elasticity of demand for housing exceeds 1, high-income workers live further from the city than do low-income workers. If the income elasticity is less than 1, high-income workers nevertheless live farther out, provided the demand for housing is not too inelastic with respect to its own price."
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> "The result does not rest on coercion. In the model, the poor live close to the city center because it is the best place for them to live."[2]

Although it is not made explicit in these quotations, it is the land component of housing services whose price varies inversely with distance from the CBD. It is because upper income groups both wish and are able to consume larger quantities of land than lower income groups, and because the cost of acquiring this land drops faster than their commuting costs rise, with increasing distance from the urban center, that wealthy households are found at the periphery.

In order to see the argument more clearly, a simple example may be helpful. Suppose that in a city where all employment is at the center and land is featureless, all transportation is by public vehicle at a money cost of $100 per year per mile per passenger, and the time cost of travel is perceived to be zero. Now imagine two groups of households with income and budget patterns as follows:

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[1] Actually, as Muth recognizes elsewhere, few upper- and middle-income workers calculate their opportunity costs of travel time by reference to their hourly earning opportunities. Many work during the time they are in transit and most probably receive annual salaries. For most of them the opportunity cost of the work-journey is leisure foregone. The value of leisure is probably proportional to earnings, however, so his reasoning is essentially correct.

[2] Edwin S. Mills, Urban Economics (Glenview, Ill.: Scott Foresman and Co.) 1972. p. 71.

Budget Item	Household Group A	Household Group B
Housing Structure	$1,500	$ 3,000
Land & Commutation	500	1,000
Other Consumption and Saving	4,000	8,000
Total Income and Expense	$6,000	$12,000

It can be seen that Group-A households would be willing to pay annual rent of $400 for a site located a mile from the CBD, since their commutation cost to that site would be $100 per year and they have allocated $500 to land and commutation combined. Their corresponding bids for sites that were two, three, and four miles from the CBD would be $300, $200, and $100, respectively. If they wanted, say, 1,000 square feet of land, their square-foot bids in each zone going outward would be 40 cents, 30 cents, 20 cents and 10 cents, respectively. Group-B households are able to make higher bids per square foot for all of the sites, but suppose they wished just to match the bids of Group-A households and get as many square feet at those prices as their budgets would allow. How mucy land would they be able to get in each commutation zone? In the one-mile, $100 zone, they would have $900 to bid for land, and thus be able to acquire 2,250 square feet by matching the Group-A bid of 40 cents a square foot. In the next three zones, however, if they matched Group-A bids, they would be able to obtain 2,667, 3,500, and 6,000 square feet respectively. It is this increasing comparative advantage which impels them to move further out. According to Muth and Mills, the introduction of time costs -- which are higher for upper- than for lower-income groups -- reduces but does not eliminate this advantage. Neither do modest changes in assumptions about income elasticities.

The argument is both theoretically and empirically compelling. A large fraction of higher income households does live on the metropolitan fringe, and the preponderance of the urbanized poor does reside near the core. In addition, it is intuitively obvious and can be easily demonstrated that if the per-mile money cost of commutation is high but the time-cost is low or nil, high-income households will find it advantageous to live farther out, whereas if the reverse is true -- if time-cost is high because of a very poor transportation network, but money cost is low -- the poor will be pushed to the fringe, as they are in the urban areas of many developing countries. But do these truths confirm the Muth/Mills inference that geographic separation of income groups is explainable in general by reference to income elasticities of demand for residential land and travel time? A careful, if slightly flawed, empirical study by Wheaton strongly suggests not.

> "It is the view of some urban theorists that households of greater income select more distant suburban locations as a natural consequence of long-run spatial competition. For

this to be the case, the income elasticity of land consumption must exceed the income elasticity of the cost of travel -- including the value of commuting time. Based on cross-section data, the results of this study [by Wheaton] strongly suggest that these two elasticities are very similar, in fact so much so that the spatial bidding for land of different income groups looks almost identical.

The indirect implication of this result is that the long-run spatial theory of Alonso, Mills, and Muth empirically contributes little to the explanation of American location-income patterns."[1]

There is other less formal, but equally troubling, evidence that casts doubt on the Muth/Mills position. For example, even in fairly small cities where commutation costs are negligible, higher income households tend to live on the fringe. Conversely, when cities become very large and accessibility becomes correspondingly more important, a pronounced tendency develops for many higher income households to reside near the urban core. Moreover, most cities have clusters of neighborhoods, each roughly equidistant from employment centers, but with differing income profiles. Taken together, these various pieces of evidence suggest that the model argues post hoc, propter hoc. It very persuasively demonstrates how a particular set of variables could produce a particular set of outcomes, but it fails to consider either observable exceptions to these outcomes or the fact that other variables might be at least as or more explanatory. Even as a simplifying abstraction of reality, it is misleading. This deficiency will become more clear as we describe the other two explanations for income separation below.

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[1] W.C. Wheaton, "Income and Urban Residence: An Analysis of Consumer Demand for Location," American Economic Review, 67, 4: 1977, p. 630-631. Wheaton's conclusions derive at least in part from an assumption that housing preferences among households in the same broadly defined demographic groups are identical; i.e., that the households themselves are identical. No evidence of which we are aware supports this assumption, and there is considerable evidence to the contrary. Wheaton, however, feels that for the purposes of his analysis the assumption is acceptable. Whether this is so, we don't know. It is unlikely, though, whether any cross-section analysis will provide an adequate explanation of income separation. See, for example, William Grigsby, response to John Quigley, "Housing Markets and Housing Demand: Analytic Approaches," in Larry S. Bourne and John R. Hitchcock, ed., Urban Housing Markets: Recent Directions in Research and Policy (Toronto: University of Toronto Press, 1978, pp. 47-48. Also, W.C. Wheaton, "Monocentric Models of Urban Land Use," in Peter Mieszkowski and Mahlon Straszheim, Current Issues in Urban Economics, (Baltimore: The Johns Hopkins University Press, 1977) pp. 107-129.

Income Separation Resulting from Environmental Preferences:

In his critique of the Muth/Mills type of trade-off model, Wheaton suggests that spatial externalities best explain the geographic distribution of income groups in cities. Richardson provides support for this view, citing a number of studies which suggest that consumers place much more weight on the living environment which a site affords than on its size or convenience to employment centers:

> "Ellis emphasized the importance of environmental preferences and neighborhood characteristics in residential location and decisions...Senior and Wilson pointed out that for some households (e.g., retired households) access to the workplace does not matter at all. Yamada stressed the role of environmental externalities..... Both Little and Kirwan and Ball explored the implications of the desire of most families to live in homogeneous neighborhoods. Several economists (Ellickson, Oates, Barr) have argues that public goods and the choice of local fiscal jurisdiction may influence location decisions, ... At the empirical level, Richardson, et al. found that a "hybrid" model stressing inter alia environmental area preferences fitted much better than the standard trade-off model."[1]

Evidence to support the importance which households attach to environmental factors, broadly defined, abounds. No one, including Muth and Mills, would be likely to argue that point. Practically everyone wants to avoid crime, foul air, noise, visual ugliness, and poor public services. Compared to accessibility, the importance of both positive and negative environmental variables in the residential decisions of households has no doubt markedly increased, as huge investments in transportation infrastructure have made mobility within all but the largest metropolitan areas essentially frictionless for the automobile-owning sector of the population.

Less clear is how a near universal desire for a good living environment translates itself into geographic separation of income groups into neighborhoods that are fairly homogeneous with respect to socio-economic status or why environmental amenity and neighborhood socio-economic status appear to be correlated? Is it simply that good environments cost more than mediocre or poor ones? Or does each income group seek separation in the belief that those who are significantly lower than they are on the income ladder have different, potentially incompatible behavior patterns even though the nation is

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[1] Harry Richardson, Urban Economics, (Hindsdale, Ill.: The Dryden Press) 1978, pp. 28-29.

allegedly broadly middle class? Or is it that the physical environment upper-income households seek cannot be obtained even in middle-income areas; or that a prestigious neighborhood of expensive homes on spacious grounds is an important status symbol; or that more affluent households realize that the amount and quality of public services in neighborhoods vary with resident income? Or is it possibly because developers simply do not offer attractive price-heterogeneous subdivisions, or that zoning and subdivision regulations make such subdivisions impossible? Economic models of residential location either ignore these questions entirely or deal with them in naive fashion.

Whatever the sociological, cultural, and other forces involved, they do not play themselves out in the upper- and lower-price sectors of new- and used-housing markets. Developers of new homes find it difficult to sell a few expensive homes in modest-price complexes, or to market an entire subdivision of expensive homes in an area below its price range. However, a significant proportion of both new- and used-home purchasers buy beneath their financial means. A noteworthy example is Levittown, New Jersey where a section of expensive homes sold very slowly even though a sizable percentage of those who acquired the nearby tract houses could have afforded the more costly residences. Presumably, despite the outstanding reputation of the builder, the community did not have the sort of reputation or appearance that appealed to upper income families looking for expensive homes, though it did attract a segment of the upper income market.

In smaller cities, the number of households is not large enough to generate exclusive neighborhoods of significant size, so the home itself may serve as the status symbol. And in some communities, status may be satisfactorily conferred in other ways -- through occupation, accomplishment, or ownership of other forms of visible wealth. So it would be an over-simplification to suggest that geographical separation of income groups flows from values deeply embedded in our society or even that large-scale geographical separation is the dominant pattern for urban America as a whole. Yet there appears to be a strong preference for income separation, as witness the widespread practice of exclusionary zoning and the disinclination of builders to plan subdivisions that would interlard a small number of inexpensive homes among the more expensive ones, even where it might be financially feasible for them to do so. Furthermore, although the residential patterns in smaller towns, in foreign cities, in communities of an earlier era, and even in the gentrifying neighborhoods of our central cities all illustrate that satisfactory social and physical environments for the well-to-do can be produced in a variety of ways other than through geographical separation of income groups, separation is an accepted way of doing so. Households who seek separation for these reasons often sacrifice a good deal of accessibility to achieve it.

Why separation tends to place upper income households at the urban fringe and lower income ones near the center is, however, not directly addressed by the environmental-preferences model. By implication, those with higher incomes are outboard because of the superior environment there. But such reasoning is to some degree tautological, since wherever well-to-do households congregate, their immediate environs are likely to be more pleasant than neighborhoods occupied by populations with substantially less means. Moreover, part of the pleasant environment sought by many of those who can afford it is aesthetically pleasing open space, a fact which provides support for the Muth/Mills thesis. Still further, if the argument is that upper income households gravitate to the fringe not simply to find nice surroundings but also in order to escape unpleasant environments or high taxes, it fails to explain why the same spatial distribution of income groups is found in urban areas with very few undesirable sections and no tax havens. The explanation is clearly incomplete.

Separation Caused by the High Price of New Construction and the Immobility of Housing:

Missing from the two previous explanations of income separation is any attention at all to the supply side of the residential real estate market, and in particular to how the nature of the product affects the dynamics of urban growth. For a number of reasons -- including the unequal distribution of income and wealth, the strict enforcement of building codes that preclude the creation of shanty towns, the cost of developed land, and the pattern of consumers' preferences -- a very large fraction (perhaps 50% or more) of all American households are not potential buyers or renters of newly built dwellings. Phrased loosely, they cannot afford new homes. As a consequence, when unsubsidized residential construction occurs either in response to rising incomes or population growth or the improved accessibility of undeveloped land or for any other reason, it will be occupied by upper income households.

New construction can occur either on suitable vacant land, most of which is on the urban fringe, or on sites already occupied by income producing real estate. Since most buildings cannot economically be moved, the latter approach is normally much more expensive than the former. An acre of attractively located urban land that might bring $100,000 if it were vacant, would usually cost five to ten times that amount if good-quality occupied buildings were on it. So, excluding unattractive urban sites that might be cheap but would not attract upper income demand, residential construction has two locational alternatives: build on relatively cheap vacant land at the fringe; or demolish existing buildings and replace them with much higher density structures, usually elevator apartments, thereby spreading the high cost of land acquisition over a large number of individual

units. A still different form of new construction is substantial rehabilitation of older residential or non-residential structures. As with supercession of existing dwellings by higher density structures, however, the market situations in which this is both physically possible and financially attractive are fairly limited. The attractiveness of high-rise structures is especially constrained by their much higher per square foot construction costs relative to single-family homes.

Thus, most new construction historically has been on the urban fringe, whether at the row-house densities of many 19th century cites or on the large suburban lots of today. And upper income households predominate at the fringe, because they are the only ones who can afford it. Their only alternative is already built-up land -- not vacant land as in the Muth/Mills model -- that is either inordinately expensive or in an undesirable location. this trade-off, recognized as early as the mid-1920's, appears to have been ignored by urban economists for at least 50 years, and even today is not prominent among the economic models of urban growth.[1]

The constraint that the high price of new housing puts on the volume of demand for the units not only helps hold down the price of land at the periphery but puts upward pressure on land prices at the center. These twin considerations make outlying sites even more attractive to higher income households. For the dynamics of growth to be reversed, that is for an expanding upper income population to be able to push lower income households to the periphery, the enforcement of building codes would have to break down, permitting the construction of the shacks and jerry-built structures that are characteristic of urban areas in developing countries.

In brief, neither the accessibility land consumption trade-off which the Muth/Mills model postulates nor the trade-offs assumed in the environmental-preferences model incorporate realistic assumptions about either the supply side of the housing market or urban growth dynamics. The models do not reflect the choices with which consumers are actually confronted in making their locational decisions. With respect to the Muth/Mills model in particular, it is clear that the suburbs would embrace a broader income stratum if supply-side barriers to low-income entrance did not exist. The constant pressure by developers to repeal large-lot zoning ordinances is one indication of this fact. Another is the suburbanization patterns of prior decades when the gap between the average price of new homes and that of existing ones was much smaller than it is now.

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[1] Ernest W. Burgess, "The Growth of the City," in Robert E. Park, Ernest W. Burgess, and Roderick McKenzie, The City (Chicago: University of Chicago Press, 1925).

And in a quite different context, squatter settlements may rise at the fringes of rapidly urbanizing cities in developing countries where building codes do not exist or are not enforced.

It is impossible, given the level of construction costs in the United States and the immobility of the housing product, for a substantial fraction of lower income households who are already residing near the center of a growing metropolitan area to be pushed to the fringe, even if high-income groups preferred locations close to the core. Ahistorical explanations of urban structure would predict such a result, however, by virtue of their implicit assumption that locational decisions are made upon virtually a blank slate. The truth cannot be blinked that once land has been developed a wide range of otherwise competitive kinds of development is foreclosed. As the "write-down" provision in the urban redevelopment program recognized, demolition of income-producing assets is a costly decision and, what is more, once a piece of land is put to a certain use, the range of feasible uses for nearby, still undeveloped land is significantly changed. The present distribution of residential land uses and population can be fully understood only if spatial models take into account the way in which the special characteristics of the housing product have affected the historical development of cities.

The Muth/Mills model argues against this position on the grounds that in the long run, capital is mobile; hence that as structures near the center wear out, reasonably priced sites do become available for use by upper income households. Such reasoning, however, ignores the typically poor surroundings of these sites.[1] So in the absence of publicly assisted redevelopment on a large scale, attractive alternatives to construction at the fringe do not normally exist even in the long run. To this extent environmental preferences are helpful in explaining urban growth dynamics. And central-city attempts to draw high-income households to the core do provide a weak test of the Muth/Mills hypothesis; weak because now that the long run has arrived and suitable sites have become available at the center, the entire intra-urban configuration of homes and jobs is quite different from what is postulated in the Muth/Mills model.

Conclusions:

It is not necessary for our purposes to choose among the competing demand- and supply-side explanations of income separation. Each has explanatory power at a particular geographical scale and over a particular time frame. They should be joined into a more general theory of separation that includes other variables as well. Preferences with respect to both accessibility and environment obviously have an important bearing on locational decisions of households. So, too, do immobility of housing structures and construction costs, factors ignored by cross-sectional analyses of accessibility and environment, because they implicitly assume that everything is variable in

[1] As Muth himself elsewhere recognizes. Muth, **op. cit.** pp. 94-99.

the long run. The housing immobility/cost-of-new-construction explanation contributes most to our understanding of the general process of income separation through suburban growth that is apparent in virtually all American metropolitan areas regardless of their size, age, or environment. By itself, however, it reveals little about income separation at the neighborhood scale.

Perhaps the most important point emerging from the explanations is that they all suggest a certain inevitability to the geographical separation of income groups. Whether separation is regarded as undesirable or inconsequential, it is not, according to any of the explanations, primarily a product of imperfect market processes or of public design. Nor, strangely, is it even due entirely to consumer preferences. Yet, various social, governmental, economic, and market forces working in combination seem to make it part of the "natural" order of things, a fact which must have some influence on preferences themselves. That a natural order is presumed should not be surprising, since non-residential uses in urban areas also exhibit a tendency to separate themselves into homogeneous and complementary groups. The proclivity of households toward income separation, though, is offset to some degree by the preference of many households for neighborhoods that are relatively homogeneous with respect to other variables, such as race, ethnicity, religion, and life style; and also by the wide variation in housing preferences among demographically "identical" households. One cannot easily predict, therefore, whether income separation is likely to become more or less pronounced in the future.

For present purposes it is enough to note that income separation does occur, that there is variation in income within as well as across neighborhoods and that while inlying neighborhoods are on average poorer than outlying ones there are also high-income neighborhoods in central areas and poor enclaves near the fringe.

RESIDENTIAL NEIGHBORHOODS AND SUBMARKETS: SOME GENERAL CONCEPTS

Our analysis of neighborhood change is complicated by the fact that despite the long history of interest in urban neighborhoods, consensus about precisely what they are or should be does not exist. Whether such disagreement really matters is an open question. One could argue that progress is in a field of inquiry not necessarily impeded by lack of concensus of definitions. Advances in medical science have not waited for agreement about what constitutes health, and the social programs of the 1960s produced many benefits while academics quarreled over the meaning of poverty. It can be demonstrated, nevertheless, that the way in which neighborhoods are defined does affect the substance of stabilization and revitalization efforts,

and, therefore, the likelihood of their success in different situations.

Operationally, neighborhoods are invariably defined as contiguous parcels of residential real estate that together comprise an areal unit of relatively small size, usually not more than half a square mile or so and frequently much less. In some instances, an entire city may be carved up into spatial units called neighborhoods; in other instances some parts of a city are delineated as neighborhoods while other parts remain undefined. Always, however, an attempt is made to draw boundaries that will separate dissimilar land uses and populations and include similar ones. Phyical barriers separating residential uses, such as parks, rivers, or major commercial strips or transportation arteries facilitate the process of demarcation. Where there are no barriers, the dividing lines may be arbitrary, including zones of transition that reflect conflicting views among residents and others about where the boundaries should be drawn.

Although the operational specification of neighborhoods always proceeds along roughly the same path, with variations reflecting differences only in the extent to which intuition and formal analysis are used, conceptual views about what neighborhoods are or should be have shown no tendency to converge over the years. Divergence of opinion is as great now as when doubts about the concept of neighborhood first began appearing several decades ago. Everyone seems to agree, if only implicitly, that a neighborhood is a small residential area plus something else which distinguishes it from all other residential areas. That is, the segmentation of urban areas into subsections called neighborhoods is a useful exercise only because each subsection is not an exact duplicate of every other one. This differentiation occurs because, for a number of commonly recognized reasons, economic and social activity and population groups are neither randomly nor uniformly distributed across urban space. Similar, and often complementary, activities and populations tend to cluster together, giving rise to communities of interest based in part simply on spatial proximity and in part on the shared values or objectives that explain that proximity. If populations with similar characteristics, e.g., blacks or members of the medical profession, resided at scattered locations around an urban area, they would continue to comprise communities of interest but obviously not neighborhoods.

Conversely, though, whether a spatially proximate group of totally dissimilar households -- rich and poor, black and white, stable and unstable -- should be regarded as a neighborhood when their interests are quite different is much less a matter of agreement. Some analysts prefer to view neighborhood partly as a sociological or communications concept, much

in the way in which it was perceived in the 1930s and 1940s. Following this view, a subsection of a city is a neighborhood only if "most of the residents are engaged in peculiarly dense and multi-functional communication and exchange and there is a sharp break in the interaction along a spatial boundary."[1] Some of those who favor this concept see neighborhood in ideological terms. If, through physical and social planning, a large number of internal social networks can be created, all sorts of beneficial results will occur. Social relationships will be less fragmented; people will develop a sense of place and lose their feelings of anonymity; problems of social control will lessen; and lives will generally be happier and more productive. Therefore, not only should neighborhoods be created in the design of new communities, they should be retrofitted into large metropolises where they are not already present. In the abstract, the concept has a small-town flavor, but in practice a great deal of importance is often attached to homogeneity of interests, ethnicity, or income as the glue which will hold the neighborhood together.

A somewhat different but overlapping view sees neighborhoods primarily as political units permitting participatory democracy with respect to various issues of local concern. While it might be desirable, according to this concept, if residents of an area interacted in numerous other ways, face-to-face contact on matters involving public decisions is what is most important. The opportunity for such contact is lost if elected representatives are chosen on a city-wide basis, and if no decision-making power resides within smaller geographical units. Like the preceding notion of neighborhood, this one has ideological overtones.

A quite different conception of neighborhood argues that the social-network dimension of neighborhood is irrelevant and confusing. A small geographic subsection of a city even if it consists of a quite heterogeneous group of households who have little communication with each other should be regarded as a neighborhood, because the spatial proximity of residents would by itself dictate some minimal number of common, even if conflicting, interests in aspects of the social and physical environment. If it became perceived that the environment was in any way threatened, a latent sense of neighborhood would manifest itself; otherwise it might remain indefinitely invisible.

We favor this concept of neighborhood because it accords most closely with the requirements of useful operational definitions. It may be possible initially to define neighborhoods in terms of communication/exchange networks, leaving

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[1] Seymour Mandelbaum, "Too Clever by Far: Communications and Development," Communities, 7, 1982, pp. 103-114.

some areas undesignated, but over time as these networks change, it is completely impractical to keep changing neighborhood boundaries. It is much more sensible to keep the boundaries constant and measure change within them than attempt to keep the networks constant by adjusting the boundaries. Having defined a city's neighborhoods, it is extremely helpful to understand the networks, and it may be beneficial to increase and strengthen various internal connections, but these activities lie outside the framework of definition. There is no minimal number of interactions that must occur before an area can qualify as a neighborhood. Beyond that, the types of neighborhood that become defined through social-network and demographic analysis tend to be precisely the opposite of the heterogeneous units which public policy has more or less vigorously attempted to create through civil rights legislation, school busing, scattered-site subsidized housing, anti-snob zoning, and other similar efforts. The Housing and Community Development Act of 1974, for example, explicitly specifies neighborhood diversity as an important objective of social policy.

All of the three concepts of neighborhood are flawed in one vital respect. They ignore the fact that communities of interest associated with spatial proximity fall on a continuum starting at one end with households in adjacent dwellings and proceeding to city- or metropolitan-wide aggregations. Different "neighborhoods" form around different values, objectives, and concerns. These neighborhoods not only nest, one within another, they also overlap. Thus, the neighborhood of residents within an apartment building or on a single street front may be entirely within a larger neighborhood of several apartment structures or street fronts, but the group of citizens fighting for a park near the adjoining edges of two different primary school districts would probably include families from both of these districts. Households readily perceive these multiple overlapping neighborhoods. If asked about the racial mix in their neighborhood, they may think only in terms of their block or their block plus one or two adjacent blocks, whereas if asked about shopping facilities, they are likely to enlarge the boundaries of their imagined neighborhood to include destinations within walking distance.

The conventional geographic definitions of neighborhood reflect a two-dimensional view of an n-dimensional set of relationships. The importance of this fact to stabilization efforts can be better appreciated if the difference between neighborhoods, is defined, and housing submarkets is understood Neighborhoods are frequently thought of as housing submarkets. Families moving from one neighborhood to another are assumed to be moving to a new submarket. Conceptually, however, the two entities are not the same, and in many instances the overlap between neighborhoods and submarkets is slight. Housing

submarkets arise when the mix, the quantity, or the price per unit of housing services varies across the market. They are often comprised of non-contiguous pieces of real estate, e.g., tenure and structure-type submarkets and their "boundaries" are constantly shifting. A dwelling unit or neighborhood may be in one submarket today and, through succession be in another one next year. By contrast only one of the conceptions of neighborhoods we have discussed permits movable boundaries and all require spatial contiguity.

Two or more arbitrarily defined neighborhoods could easily prove to be in the same submarket. They are likely to constitute separate submarkets, i.e., are likely to be perceived to be different by buyers and renters, only if they are distinct in locational and internal characteristics. More precisely, neighborhood submarkets exist if:

(1) different neighborhoods supply different mixes of characteristics which cannot, without major public or private investment, be replicated elsewhere; i.e., attribute-mix supply is price inelastic.

(2) spatial frictions dissuade long-distance substitutions across space.

(3) demand is inelastic with respect to location or attribute mix, and price differences per unit of housing service persist because households are prepared to bid-up prices rather than relocate.

(4) neighborhoods have sharply defined edges, suggesting marked household or housing or other differences.

The locational attributes of a dwelling that are important in the decisions of families to either locate in or avoid a particular neighborhood and in the decisions of mortgage institutions to make loans there. Hence the variables that define a geographic submarket may be external to or extend beyond particular neighborhood boundaries. Families might, for example, be most concerned about the quality of the school situated some distance away but serving neighborhood children. In other words, although households may define their nieghborhood as the area within which they can walk or with which they have some familiarity, neighborhood at that scale is not necessarily involved in an important way in their residential choice and satisfaction. What is external and internal to their submarket may be entirely different. It follows that a change in one or more important attributes of a submarket, regardless of whether the change is specific to a particular neighborhood, will trigger a residential shift in households from one submarket to another and, in the process, from one neighborhood to another.

The weight which households attach to various factors is a function not only of their own preferences but also of the extent to which different neighborhood and community attributes, such as safety, beauty, quiet, status, and convenience, that would satisfy these preferences are broadly or narrowly distributed across space. The more broadly distributed are certain attributes, the more important will other attributes become in the residential decision. Only a few may be neighborhood specific. Hence, although subdivision of communities into "neighborhoods" for planning purposes has much to commend it, such an exercise may easily lead to erroneous inferences about what these geographic units really mean in the lives of the residents, and what issues and problems can be effectively addressed at that level in different types of city. In addition, arbitrary delineation of neighborhoods may have the effect of papering over the important question of which decision-making responsibilities and which service-delivery functions might usefully be decentralized to what sub-units of a city or urban area. Since the quality of much of what is consumed in urban areas, e.g., air, water, education, and health care, should be as constant across space as possible, it is far from clear how variety should be built into the urban system through the development of distinctly different neighborhoods that collectively satisfy a range of preferences and undertake a range of service-delivery responsibilities. Finally, demarcation of neighborhoods may focus attention on boundaries which residents may not recognize at all and which, therefore, may be meaningless with respect to many components of a neighborhood stabilization strategy.

Despite these complexities, all of them well-discussed by others, we feel that, well or poorly defined, spatially definable housing submarkets -- whether they be called neighborhoods or something else -- do exist in cities, and they do change in character over time. We, therefore, find no compelling reason to abandon "neighborhood" as our unit for analysis of intra-urban residential dynamics. As will be seen, however, we approach the subject within a conceptual framework based on the notion of housing submarkets, since neighborhood change can be properly understood only within such a theoretical context.

THE CONCEPT OF NEIGHBORHOOD SUCCESSION

It has long been recognized that as dwelling units grow old, they depreciate in real value unless they happen to be blessed with special site or locational advantages or are continually upgraded by their owners.[1] As depreciation occurs, the dwellings usually pass into the hands of households with successively lower incomes. This process, loosely labeled "filtering", is the principal means by which households unwilling or financially unable to acquire newly built units are said

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[1] Richard Muth, Urban Economics Problems (New York: Harper-Row, 1975), p. 68.

to obtain housing in the United States. Because residential structures in any particular neighborhood usually have been built at about the same time, have closely comparable locational characteristics, and are of similar original construction, capital depreciation and associated filtering are typically neighborhood-wide.

Although at a very general level there is little disagreement among the analysts concerning the contours of this housing-market process, opinions diverge sharply about precisely how filtering should be defined and what it involves. This is so because as dwellings change hands over the years, several different things are taking place simultaneously. There are both absolute and relative shifts in occupants' incomes, in prices and rents of their dwellings, and in amount and quality of housing services. Complicating matters, these movements frequently are not in the same direction. How to capture this complexity in a single definition is the unresolved problem. As a consequence, several different definitions of filtering have come into use, each including a different set of variables. None of the definitions is necessarily better or worse than the others. The existence of more than one does, however, create the potential for confusion in any discussion of neighborhood change and decline. For this reason, we briefly review several competing formulations and then suggest an alternative way of viewing neighborhood change that is more congenial to our analysis.

Among the definitions of filtering that have been offered, the following probably collectively embrace the various competing views.

1. "This process ... is described most simply as the changing of occupancy as the housing that is occupied by one group becomes available to the next lower income group as a result of decline in market price, i.e., in sales price or rental value."[1]

2. "Filtering is a change over time in the position of a given dwelling unit or group of dwelling units within the distribution of housing prices and rents in the community as a whole."[2]

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[1] Richard U. Ratcliff, Urban Land Economics (New York: McGraw-Hill, 1949), pp. 321-22.

[2] Ernest M. Fisher and Louis B. Winnick, "A Reformulation of the Filtering Concept," Journal of Social Issues, VII (1951), p. 52.

3. "Filtering is the term used to describe the process through which existing housing gradually declines in value, thereby making it available to groups of lower socio-economic rank."[1]

4. "A dwelling unit has filtered if, and only if, the quantity of housing stock contained in this unit has changed. A dwelling unit has filtered up if, and only if, the quantity of housing stock contained in this unit has increased. A dwelling unit has filtered down if, and only if, the quantity of housing stock contained in this unit has decreased."[2]

5. "Filtering is the process by which a change in the demand or supply, and then the price, of housing at one quality level produces (because of resulting demand shifts and housing stock shifts) an eventual change in the price and quantity of housing at some other quality level."[3]

6. "Filtering (changes in house prices and rents) must be measured while holding incomes, quality and space per person constant; or, in a more relaxed form,... filtering occurs only when values decline more rapidly than quality, so that families can obtain either higher quality or more space at the same price or the same quality and space at a lower price than formerly."[4]

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[1] Roger S. Ahlbrandt, Jr. and Paul C. Brophy, Neighborhood Revitalization, (Lexington, Mass: D.C. Heath and Co., 1975), p. 9.

[2] Edgar O. Olsen, "A Competitive Theory of the Housing Market," American Economic Review, LIX (Sept. 1969), pp. 612-622 (Emphasis in Original) Olsen noted that "in these definitions, 'housing stock contained in' could be replaced by 'housing service yielded per time period by.'"

[3] Lawrence D. Schall, "Commodity Chain Systems and the Housing Market," Journal of Urban Economics, Oct. 1981, pp. 141-163.

[4] William G. Grigsby, Housing Markets and Public Policy (Philadelphia: University of Pennsylvania Press, 1963, p. 97.

7. Filtering is "...the process by which dwellings descend over time from higher to lower income households. This shift...can sometimes take place without a drop in prices or rents....not all (price and rent) declines imply filtering....not all filtering involves a shift in occupancy."[1]

8. Filtering is "a change in the real value (price in constant dollars) of an existing dwelling unit." [i.e., simply depreciation][2]

9. "We begin by viewing households rather than dwelling units as the active participants in the filtering process. That is, households filter through the housing stock, rather than vice versa. We then define filtering as follows: Filtering takes place when a household, without change in its income or tastes, experiences a change in its housing bundle to a different rank on its scale of preferences... This consideration elicits two significant corollary definitions -- for active and passive filtering: Active filtering occurs when a household experiences a change in the ranking of its housing bundle by moving to a different unit. Passive filtering occurs when the household does not move but experiences a change in the ranking of its housing bundle nonetheless."[3]

10. "Filtering in the housing market is the process in which the real housing consumption of families or households changes over time, whether by depreciation or renovation of the same dwelling unit or the choice of a different dwelling unit (which may be newly constructed or have experienced depreciation, renovation, or conversion from a different type). The process involves changes in real incomes and in the relative prices of housing services."[4]

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[1] William G. Grigsby, et al., Rethinking Housing and Community Development Policy, Department of City and Regional Planning, University of Pennsylvania, 1977, p. 30.

[2] Ira Lowry, "Filtering and Housing Standards," Land Economics, XXXVI, November 1960, p. 363.

[3] Charles Leven, James Little, Hugh Nourse, and R.B. Read, Neighborhood Change: Lessons in the Dynamics of Urban Decay New York: Praeger, 1976, p. 46.

[4] G.W. Davies, "Theoretical Approaches to Filtering in the Urban Housing Market, in L.S. Bourne and J.R. Hitchcock (eds.) Urban Housing Markets: Recent Directions in Research and Policy (Toronto: University of Toronto Press, 1978).

It can be seen that depending upon the definition, filtering is either a process or a set of outcomes and, if the latter, could involve, in differing combinations, change or no change in: occupancy; occupants' incomes; value or rent of dwelling units; price per unit of housing services delivered; or quality and quantity of services provided by housing units or neighborhood environs. Indeed the last definition implies that virtually any change in a system of neighborhoods is filtering. It is not surprising that the literature is replete with controversy over whether filtering occurs or works. To expect a single concept to be capable of succinct definition and yet encompass so many processes and outcomes is to tax it too heavily.

Rather, therefore, than adopt any of the above definitions of filtering for use here, we believe that the analysis of neighborhood change is best approached by choosing a different term, "succession", introduced into the literature many years ago by Park and defined here approximately as in Leven et al. to mean a change in the characteristics of the occupants of dwelling units over some time period.[1] There is no implied causal mechanism in this definition and a range of explanations of observed change can exist. Also, a number of different types of succession could be identified -- racial, income, social class, ethnic, and so on. Our focus here, however, is primarily on income, so in what follows that reference point should be assumed wherever it is not explicit. In addition, except where otherwise stated, "succession" here means a downward shift from higher to lower income, since that is by far the more frequent occurrence. Such a shift is usually, but not exclusively, associated with a change in occupancy. In some instances, in situ income change for an entire group of households could occur. Whether this type of change should be regarded as succession is a question which can only be answered arbitrarily. In the discussion here, we depart from Park and include in situ change as part of succession. We also include changes arising from additions to or reductions in the number of occupied dwellings. This broader view permits succession to be measured simply by looking at the changing income profiles of neighborhoods. In contrast, as we shall elaborate later, if income succession were defined to include only situations in which there was a shift in occupancy, the focus of measurement would be on the changing income composition of inmigrating and outmigrating households.

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[1] See Park, R.E., "Succession, An Ecological Concept." American Sociological Review, 1936, Vol. 1, 171-179. Also, Leven, Little, Nourse and Read, op. cit., define succession as a change in a neighborhood's socio-economic composition.

It follows from the above that it is the ranking or position of a given neighborhood's income profile, not absolute changes in it, that determine if the neighborhood has undergone succession. If, for example, the profiles of all neighborhoods in an urban area were to rise or fall by 10 percent, none would have experienced succession. But if one of them changed by (say) 20 percent and the others by half that, the change in relative position would constitute succession.[1]

By "neighborhood succession," then, we mean a shift in the income profile of occupants of closely proximate dwelling units, relative to that of occupants of other units. The focus is on groups of dwellings. Individual housing units may experience succession every time they change hands even if the group of dwellings of which they are a part have an unchanging occupant income composition overall. That is, there will be movements of individual dwellings, on a somewhat random basis, up and down the income scale without any material impact upon the neighborhood's absolute or relative position on an income scale of neighborhoods. Consequently, individual shifts may be ignored. The phrase "income profile" also underlines the reality that there is a range of household income in each neighborhood; a neighborhood containing households all with virtually identical real incomes almost certainly does not exist.

It is important to emphasize that despite their similarities, succession and any of the definitions of filtering should not be interpreted as synonomous. Succession can take place without the shifts in prices, rents, and housing quality that are central to one or more of the filtering definitions. For instance, if real household income of the general population is rising, the households who newly occupy a neighborhood undergoing succession may pay the same (or even higher) prices in constant dollars as were paid by their immediate predecessors during the latter's first years of occupancy. Conversely, it is possible for prices or rents or housing quality in a neighborhood to shift even without a corresponding change in average real income of occupying households.

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[1] Empirically, there may be a problem in using resident income profiles. For various reasons, the central tendency of a neighborhood's income distribution may change over time, even though average income does not. For example, in several Philadelphia neighborhoods, rejuvenation in the owner-occupied sector but not in the rental sector caused a shift toward bi-modality in the distributions. How should such a change be classified? The in situ constraint could also be criticized. If resources were available, it might be better to measure the changing number and characteristics of in- and out-migrants.

By our definition, the latter fact is controlling; no succession has occurred.

THE PROCESSES AND CAUSES OF NEIGHBORHOOD SUCCESSION

Although interest in neighborhood succession has historical antecedents among scholars who were simply trying to understand the structure and growth of urban areas and who had no immediate problem applications in mind, today it is a concern about neighborhood decline and rebirth that impels most inquiries. If succession were not somehow intimately intertwined with decline, the subject would not have such a broad audience. The literature on neighborhood succession has a long history, dating at least from the 1920s when Park, Burgess, and McKenzie argued (among other things) that as housing ages it undergoes a sequence of occupancy to households with progressively lower income.[1] Later Homer Hoyt's classic empirical work added much insight into the process.[2] More recently, Edward Banfield has provided an extremely useful description of metropolitan growth and neighborhood decay, synthesizing many of the earlier contributions.[3] A number of urban analysts, for example Muth, Sweeney and Ohls, have also contributed materially to our knowledge through rigorously formulated conceptual models subjected to quantitative testing and analysis.[4] In addition, the simulation models of Birch, and also Kain and Apgar, as well as the arbitrage model of Leven and his colleagues, have provided useful insights into the macro and micro dynamics of neighborhood change.[5] And several more broadly oriented models such as those of de Leeuw and Struyk, Rothenberg, and

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[1] R.E. Park, E.W. Burgess and R.D. McKenzie, op. cit.

[2] Homer Hoyt, One Hundred Years of Land Values in Chicago (Chicago: University of Chicago Press, 1933).

[3] Edward C. Banfield, The Unheavenly City Revisited (Boston: Little Brown & Co. 1974), Chapter 2.

[4] Richard E. Muth, Cities and Housing (Chicago and London: University of Chicago Press, 1969).

James C. Ohls, "Public Policy Toward Low Income Housing and Filtering in Housing Markets," Journal of Urban Economics, 2, April 1975, pp. 144-171.

James L. Sweeney, "A Commodity Hierarchy Model of the Rental Housing Market, Journal of Urban Economics, 1, July 1974, pp. 288-323.

[5] Charles L. Leven, James T. Little, Hugh O Nourse, and R.B. Read, Neighborhood Change: Lessons in the Dynamics of Urban Decay (New York:Praeger Publishers, 1976).

Straszheim, have helped provide a general context for analysis.[1] Most recently, Downs has approached the question of neighborhood change in a manner somewhat similar to our own.[2] Going back to the first extended formulation of filtering by Ratcliffe in 1949, the list of contributions is long, which explains why we have not listed them all here.[3]

Valuable as all of this prior work is, no single piece or combination of them lays the foundation we need for our inquiry into neighborhood decline. For that reason, it is necessary for us to outline our own explanation of succession, demonstrating as seems appropriate its relationship to others.

A Framework for Analysis

The process of neighborhood succession is difficult to understand because so many different variables are involved, some of them internal to the neighborhood and others external, some operating on the supply side of the market and others on the demand side, and some truly independent and others only intermediate. At the risk of over-simplifying, we attempt to eliminate some of the complexity by describing, with the help of Figures A through E, how the housing market is structured and what variables may alter that structure over time. With this foundation in place, the variables themselves are examined in the next section.

Our description of market structure begins with individual housing preferences. Through their residential decisions, consumers attempt to fulfill to varying degrees a wide range of basic human needs and desires, each of which is related to one

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1 Frank de Leeuw and Raymond Struyk, The Web of Urban Housing (Washington, D.C.: The Urban Institute, 1975).

James R. Rothenberg, "Urban Housing Markets and Housing Policy," in Samuel J. Bernstein, and W. Giles Mellon, eds. Selected Readings in Quantitative Urban Analysis (New York: Pergamon Press, 1978).

Mahlon Straszheim, An Econometric Analysis of the Urban Housing Market, (New York: National Bureau of Economic Research, 1975).

2 Anthony Downs, Neighborhoods and Urban Development, (Washington, D.C.: The Brookings Institution, 1981).

3 Richard U Ratcliff, Urban Land Economics, (New York: McGraw-Hill Book Company, 1949).

or more: dwelling-unit sites, neighborhood, location, and public-service characteristics (Figure A).[1]

This general notion of housing as a package of attributes, each with a price, became commonplace in the 1970s. However, analysts who have applied the complex commodity idea to housing through the use of hedonic price indexes have not thus far been interested in the underlying preferences for security, status, etc. (Panel A in Figure A), but only in preferences for dwelling-unit and neighborhood characteristics themselves (Panel B). The latter probably are much less stable than the former, since perception of the way in which a particular type or style of dwelling provides security, status, and other desired objectives are continuously changing. So despite all the research in this area, our understanding of housing preferences is still quite primitive.

Dwelling units with generally similar characteristics will normally appeal to segments of the population that are similar with respect to either their preferences for physical comfort, etc., or the amount and type of housing they require to satisfy these preferences, or their ability to pay for different housing attributes. It is useful for a variety of analytical and policy purposes, therefore, to segment the total market for dwelling units into sub-markets according to demand and supply characteristics. Since housing preferences vary markedly among consumers with quite similar socio-economic characteristics -- a point too often overlooked in the formulation of housing programs -- similar households scatter themselves among a number of submarkets (Figure B).

Taking the segmentation one step closer to what is necessary for our discussion of neighborhood succession, we must note the relationship between housing submarkets and neighborhoods. As discussed earlier, residential structures in a neighborhood are usually built around the same time on similar size lots in the same price-rent range and with almost identical locational characteristics, so there is a tendency to view neighborhoods as submarkets. A single neighborhood, however, will often contain several different types of dwelling unit that appeal to different types of household and that are closely linked with similar dwelling units outside the neighborhood (Figure C). Conversely, because of the large number of variables which buyers and renters must trade-off, similar

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[1] Consumer theory for complex commodities such as housing was formally introduced to the field of economics by Lancaster (Kelvin J. Lancaster, "A New Approach to Consumer Theory," Journal of Political Economy, Vol. 74, 1966, pp. 132-157) only 17 years ago, but has been well accepted in marketing and psychology for many years.

Figure A

CHART RELATING THE THINGS WHICH HOUSEHOLDS SEEK TO HAVE PROVIDED BY THEIR RESIDENTIAL SETTING TO DWELLING-UNIT ATTRIBUTES THROUGH WHICH THESE OBJECTIVES ARE SOUGHT

A	B
Households seek residential settings that provide in varying amounts:	By purchasing or renting dwelling units that vary with respect to:
Space and facilities efficiently arranged for certain household activities and recreation Healthful, safe, secure environment Physical comfort Visual, olefactory, and aural amenity Privacy and quiet, internal and external to the dwelling Confirmation of self-perceived social status Expression of self Assurance of peer-group acceptance Social mobility Convenieht access to particular locations Financial security	Price Size Layout Building Material Architectural Style Equipment Condition Lot size and characteristics Neighborhood physical and social environment Neighborhood status Location re other land uses Quality and cost of local public services

Figure B

MATRIX SEGMENTING THE HOUSING MARKET INTO SUBMARKETS ACCORDING TO DWELLING UNIT AND HOUSEHOLD CHARACTERISTICS (X'S INDICATE POPULATED CELLS)

Types of HHs	Types of Dwelling Units					
	A1	A2	A3	A4	A5	An
H_1	X	X	X	X		
H_2		X	X	X	X	
H_3		X	X	X	X	X
H_4		X	X	X		
H_5		X	X	X		
↓			X	X	X	X
Hn				X	X	X

Figure C

MATRIX SEGMENTING THE HOUSING MARKET INTO SUBMARKETS OF DWELLING UNITS AND NEIGHBORHOODS (X'S INDICATE POPULATED CELLS)

Types of N'hoods	Types of Dwelling Units					
	A1	A2	A3	A4	A5	An
N_1		X	X			
N_2		X		X	X	
N_3	X		X			X
N_4	X		X			
N_5			X	X	X	
↓						
N						

types of dwellings may be demanded by households having quite different preferences and constraints. In examining the dynamics of neighborhood change, the existence of these overlapping sets need to be kept firmly in mind. Since there is a separate submarket of demanders for every dwelling-unit and neighborhood attribute, a small change in a highly valued attribute could shift consumers from one submarket to another, precipitating neighborhood succession. More will be said about this later.

The various neighborhoods in an urban region are linked together through the movement of households into and within the region. These connections can be expressed as in Figure D which, if filled with actual numbers, would show the number of particular types of household moving to and within different neighborhoods each year. In a stationary economy or housing system, despite the steady movement of households the numbers in each cell would be expected to remain approximately the same year after year, and the population composition of each neighborhood would also not change. Subject to the qualifications in the next paragraph neighborhoods would maintain their income profile even though the incomes of inmigrants would normally be either lower or higher than those of outmigrants. This is so because the profile of the sitting population would also be shifting over time as households moved through their life cycle. This fact is frequently lost sight of, as for example in calculations measuring the loss of central-city family income in terms of the difference between average incomes of inmigrants and outmigrants. The same reasoning, if applied to demographic analysis, would produce the absurd conclusion that the population is steadily growing younger because the average age of inmigrants into the world is about 60 years lower than the average age of outmigrants.

This constant internal motion within the system, in which the overall structure and magnitude of the system do not alter, is what John Stuart Mill termed "circulatory dynamics." It contrasts with situations in which the dimensions and structure of a system change over time, circumstances that Mill termed "change dynamics." Whether a block or a neighborhood or a larger area is experiencing circulatory dynamics rather than change dynamics obviously depends in large part on the size of the area itself and the time frame under consideration. So the distinction between the two types of dynamics is to some degree arbitrary. Nevertheless, it is helpful in understanding neighborhood change.

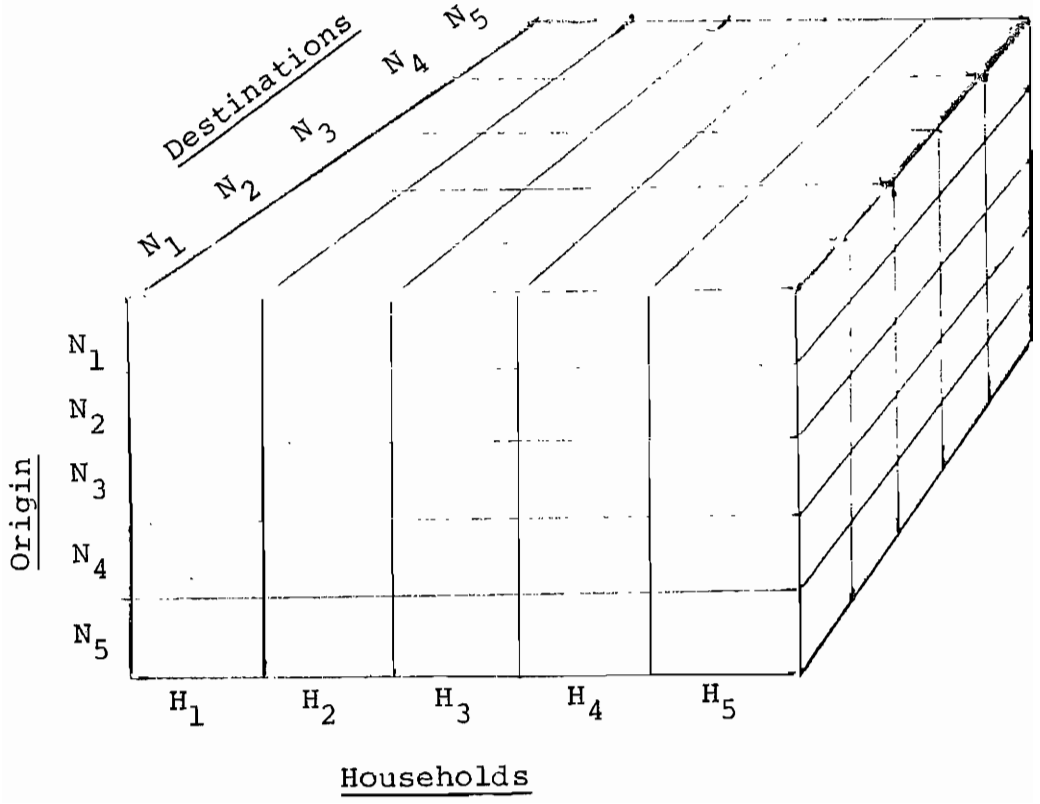
In the real world of dynamic changes the number of movers in each cell in Figure D changes over time because:

(a) The number of characteristics of households demanding various housing attributes increases or decreases as a consequence of shifts in population, incomes, and life-styles.

Figure D

MATRIX DEPICTING IN GENERAL TERMS THE ANNUAL MOVEMENT OF HOUSEHOLDS WITHIN AND AMONG NEIGHBORHOODS

(The number in each cell would be the number of households of specified characteristics who move from the neighborhood of origin to the neighborhood of destination in a given year)



(b) The supply of neighborhoods offering differing mixes of attributes changes as new neighborhoods are created and as existing ones experience alterations in their characteristics (including their accessibility to other activities) or are removed from the inventory.

These changes will result, usually, in shifts in the number of movers from one neighborhood to another. The shifts are a reflection of neighborhood succession, although they do not reveal how much succession is or has occurred or if it is continuing.

With this conception of housing submarkets and neighborhoods as a fremework, it is now possible to describe in progressively greater detail how neighborhood succession occurs. We start with an overview of the process in Figure E. According to the figure, a change in any one of a number of social or economic variables (Panel A), acting through a system of housing suppliers and market intermediaries (Panel B), causes households to make different maintenance and moving decisions (Panel C), altering the characteristics of residential structures and their neighborhoods (Panel D). These alterations may in turn feed back to one or more of the independent variables in Panel A or intermediate variables in Panel B, or household decisions in Panel C, causing a second-round perturbation.

It can be seen that not all of the changes in housing and neighborhood characteristics in Panel D imply income succession. Only a change in the household-income profile is equivalent to such succession. The arrows within Panel D indicate, therefore, that succession either could follow directly from shifts in the independent and intermediate variables in Panels A and B, respectively, or could take place as a consequence of these variables acting on the other characteristics of a neighborhood, or could fail to occur at all. Notice also that all of the neighborhood characteristics (Panel D) are treated essentially as dependent variables. This is in contrast to some explanations of neighborhood succession and decline which argue that housing deterioration is an inevitable consequence of aging, hence an independent variable causing succession.[1] We explore that questionable proposition later in the essay and also examine other possible ways in which succession could be internally generated.

Although Figure E indicates connections among relevant variables involved in neighborhood succession, it fails to explain why and how these changes occur. To address these

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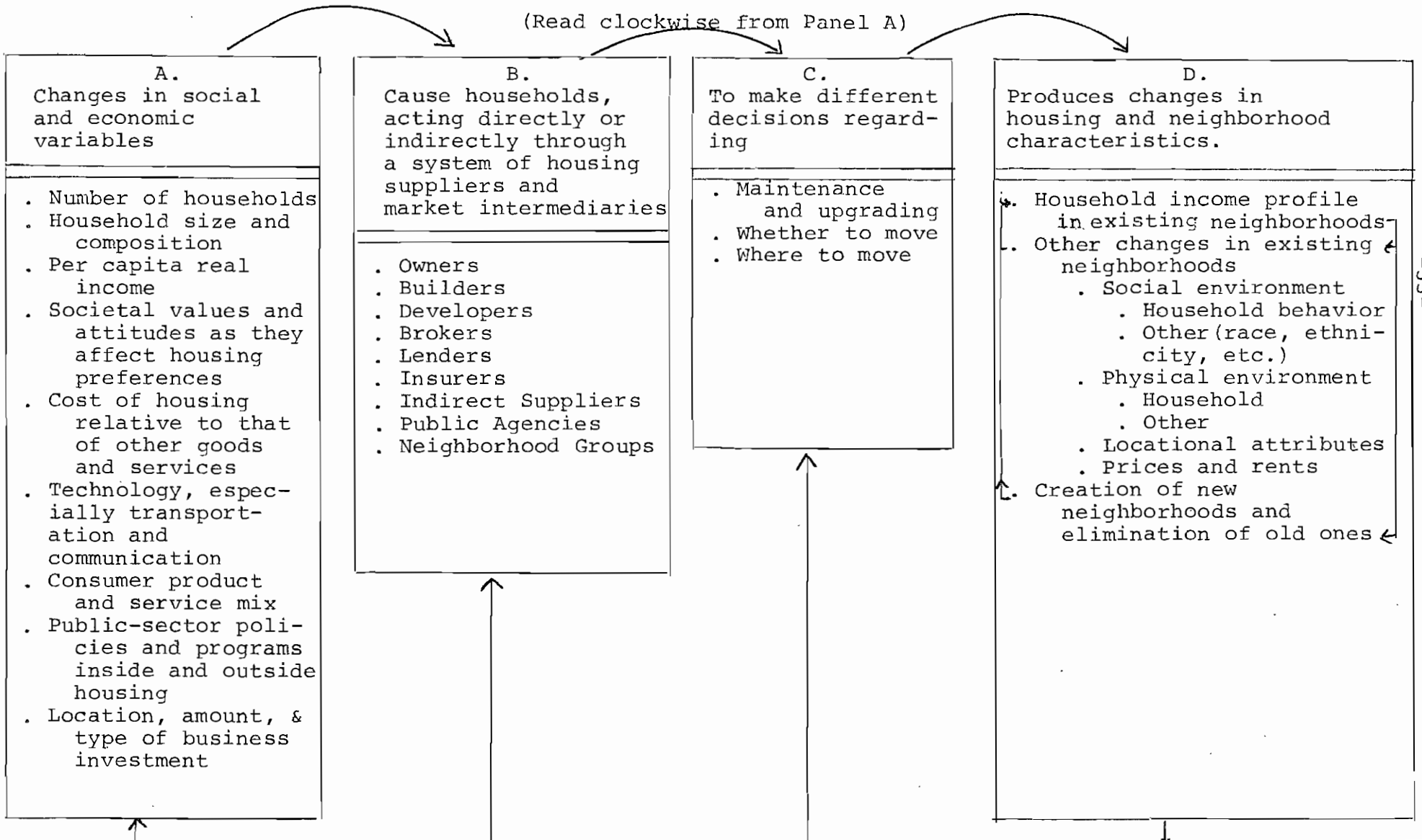
[1] And possibly implying that succession is a continuous process rather than one which occurs in discrete steps.

Figure E

SCHEMATIC DIAGRAM DESCRIBING GENERALLY HOW SOCIAL AND ECONOMIC CHANGES, ACTING THROUGH THE HOUSING SYSTEM, ALTER THE CHARACTERISTICS OF THE HOUSING INVENTORY AND NEIGHBORHOODS



questions, we shall begin by examining the characteristics through time of a set of neighborhoods in a hypothetical community where all relevant variables are held constant (i.e., circulatory dynamics). We will then relax one variable at a time in order to trace the effects of its change on neighborhoods. The analysis starts with Panel A in Figure E. Each of three variables listed in Panel A -- per capita real income, number of households, and public-sector actions -- along with a composite variable, obsolescence, is considered in turn. A description of the changes in these variables upon both housing and neighborhood should be sufficient to give the reader a flavor of the larger set of processes involved, while at the same time revealing some not-altogether-expected relationships among the variables themselves.

We then treat several of the neighborhood-specific variables (Panel D) in similar fashion. The housing-system variables (Panel B) are not explored in this section on succession but, rather, later in the essay as part of the discussion of the circumstances under which neighborhood succession turns into neighborhood decline. Given the importance which public policy attaches to the role of market intermediaries in situations of neighborhood change, it might seem more appropriate to inquire into their activities here as well as later. In our judgment, however, intermediaries are very unlikely to be prime movers of, as opposed to subsequent contributors to, a process of succession. If intermediaries have any significant role in neighborhood change, the role takes the form of actions that accelerate succession, producing adverse effects that would not otherwise have occurred.

Causes of Succession: Changes in Real Incomes

Imagine, a community in which size and composition of population, level and distribution of real income, consumer preferences, and technology remain constant for a period of years. Suppose too that all households in the community have incomes sufficiently large to permit adequate maintenance (whether by themselves or by landlords) of their dwellings. So that barring, then, an occasional fire or natural disaster the housing stock remains intact and in good repair through time. In these circumstances the only consequential changes that will take place are moves of households from one home to another, within the same neighborhood or to a different one, as a result of progress through their life-cycles, as in Figure D. Even so, because all other variables are held constant by assumption, the population composition of individual neighborhoods will remain virtually the same as before. None will have passed into the hands of a higher or lower income group.[1]

What would happen in our hypothetical community if the level of real household incomes began rising, with all other variables remaining constant? Assuming householders as a group would like to upgrade their housing conditions as their financial means permitted, they would have two choices. They could upgrade in place: add rooms, renovate the interior or exterior, install new equipment, etc. Or they could elect to move to a better, more expensive home. The choice would depend upon a number of factors, including the amount by which income had increased, expectations about the permanency, size, and regularity of current and future increments to income, comparative costs of upgrading versus moving, and the degree of attachment to the neighborhood of current residency. If each neighborhood were upgraded roughly in proportion to the rise in incomes, a new steady-state situation would be reached in which all neighborhoods would retain their same position relative to each other and no succession would take place. If, however, many of the households -- either because of their higher incomes or because they were ready to move anyway -- decided to change residence prior to a significant amount of upgrading, there would be a general upward movement to better previously unaffordable neighborhoods and some new construction would occur. When all moves had been completed, the population composition of individual neighborhoods and demand relationships among neighborhoods would differ in some degree

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[1] We take note of certain exceptions, both rare in contemporary America, to this generalization. If the age profile of a community were strongly skewed, "normal" moves could produce a shift from equilibrium to which the community would not return. One can also visualize a community where all households consist of extended families which occupy the same structures for generation after generation and where the only moves are to the cemetery. However, without a skewed distribution, normal inflows and outflows may be such that a steady-state neighborhood is the exception even in a stationary economy except over the very long term.

from what they had been. The relative attractiveness of all neighborhoods, and perhaps also the absolute attractiveness of some, would have been altered, affecting subsequent decisions of households normally in the market and causing an additional number of households to move in order to leave environments no longer suited to their preferences.

Succession caused by gradually rising real incomes, is we believe, much more the rule than is succession due to declining prices, as assumed in much of the filtering literature. The amount of succession would be reduced to the extent that upgrading by owners of existing dwellings succeeded in offsetting the obsolescing effects of new construction. When incomes generally are rising, however, demand for and construction of new units is doubly stimulated: first, by those whose higher incomes alone encourage them to enter the new-home market; and second, by those who can realize capital gains from sale of their homes because of the impact of rising incomes on prices for units in the housing stock as a whole. The overall result is a relative (even if not also an absolute) decline in average household income in some neighborhoods, which is one form of downward succession. And if, as we have assumed by holding everything but income constant, rising incomes and new construction occur in the absence of growth in household population, the community's least attractive neighborhoods would experience rising vacancy rates, absolutely lower prices and rents, and some abandonment - just as they would if the aggregate number of households fell. Except for the added factors of racial discrimination and poverty, neighborhood change patterns in many of the snow-belt metropolitan areas approximate this description.

Falling real incomes in a community may have similar effects. Once households conclude that their reduced circumstances are likely to be long-lasting rather than transitory, some of them will move into lower price or lower rent units or double-up. One consequence of these adjustments is abandonment or boarding up. And, unless local laws barring "substandard" housing are strictly enforced, new construction in the form of shanty-towns may be demanded and supplied. Both these responses to falling real income were prevalent during the early 1930s. Doubling-up and a reduced rate of household formation have followed upon the more recent decline in real income in 1979 and 1980.

Causes of Succession: Growth in Number of Households

In an economy where the annual volume of new residential construction constitutes a very small fraction (ranging between 1 percent and 3 percent) of the standing stock and where high contruction costs produce prices and rents that limit effective demand for new units to those households in the upper portion of the income distribution, the question arises: how, in

the absence of rising incomes, might a growing household population find housing accommodations without being subsidized? Some sort of succession would have to occur.

In order to see how, we return to our hypothetical community in a state of equilibrium relaxing the assumption that the number of households is constant, and postulating growth instead. How will the market adjust to this change? Initially, the number of new units put in place would be substantially fewer than the number of additional households seeking places to live. Over a period of time, however, a number of market adjustments would occur, adjustments - among them neighborhood succession - that would stimulate new construction, possibly in an amount sufficient to accommodate population growth without overcrowding. The sequence of events would be along these lines. The vacancy rate for units in the low-price or low-rent stock would fall, as the additional households who could not afford new construction moved into existing accommodations. As the vacancy rate dropped, bids by demanders for dwellings in that price or rent range would tend to rise. At the same time, some of the households who would ordinarily have been attracted to those units would perceive them to be overpriced, so they would raise their housing expense-to-income ratio in order to occupy somewhat better units for which they had previously been unwilling to make a bid. As this upward movement gathered momentum, vacancies in the higher quality segment of stock would decrease and prices and rents would rise, causing more affluent households in search of housing to scan still-more expensive units. This "push from below" might or might not affect the volume of new construction materially, the actual result depending upon the degree of excess demand for (or "shortage" of) units at each price or rent level, the number of dwellings created by conversion of existing structures, and upon how quickly and in what price sectors builders reacted to changes in housing demand. Population growth would, in any case, inevitably cause some rearrangement of neighborhood occupancy by income group, which is to say that neighborhood succession would occur. Also there might well be some postponement of household formation if expansion of the housing supply were insufficient to prevent prices and rents from returning to their original levels.[1]

A somewhat different explanation of this process postulates that consumers perceive boundary lines or areas to exist between neighborhoods of differing socio-economic status and that an expansion of demand in a lower status neighborhood increases the unit price differential at the boundary between

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[1] For a partially similar analysis of this process, a treatment that yields a different result, see James T. Little, "The Dynamics of Neighborhood Change," in Donald Phares (ed.), A Decent Home and Environment, (Cambridge, Mass.: Ballinger Publishing Co., 1977), pp. 63-78.

that neighborhood and nearby higher status areas.[1] This differential, it is argued, either disappears as lower income households recognize its existence and move across the boundary or is recreated at the new boundary line separating the neighborhoods. This explanation seems more plausible with respect to racial succession, where boundary lines usually are fairly visible, than with respect to income succession, where they are not. Indeed, the greater the socio-economic difference between two abutting neighborhoods, hence the more distinct the boundary line, the more difficult it would be for an expanding lower income population to cross into the higher status area.

The succession process would be accelerated if some non-trivial fraction of inmigrating households, with behavioral patterns markedly different from the sitting population, became "visible" in the receiving neighborhoods. Those neighborhoods would lose attractiveness to both established and potential residents some of whom would now take occupancy of existing units of higher value in other neighborhoods, thereby exerting additional pressure, directly or indirectly, for new construction in the community.

Conceivably, of course, inter-neighborhood migration would not be produced by population growth. Instead, the entire increase in households might be accommodated by more intensive use of the existing stock of housing in each neighborhood. The number of units could be enlarged by means of conversion or more households could crowd into each existing unit, or both. This kind of adaptation -- also a sign of downward neighborhood succession -- is likely to occur, if population growth is rapid relative to the rate of increase of real income.

Causes of Succession: Decrease in Number of Households

It is easy to see that if a community lost households, some of them in the middle- and upper-income brackets, neighborhood succession (by our definition) would occur. In such circumstances, owners would be forced to lower their asking prices or rents in order to market their properties. This would mean, in turn, that inmigrating households as well as some established residents would, without any change in income or in housing expense-to-income ratio, be able to move into housing they previously felt was beyond their financial grasp.

Conceivably, the declines in price and rent could occur evenly throughout the stock without altering the income ranking of any neighborhood. More likely, the declines would be concentrated in certain neighborhoods, either those that had already become "obsolescent" or those in which initial

[1] Leven et al., op. cit., pp. 37-47.

loss of population was greatest.[1] Curiously, given declining total demand for housing, the initial succession of socio-economic, racial, or ethnic groups could stimulate some pre-existing residents in affected neighborhoods to move elsewhere in the community, indirectly adding to demand for new construction.

Causes of Succession: Obsolescence

When a neighborhood's housing and environs change for the worse in an absolute sense (structures fall into disrepair, trash fills the streets, or noxious odors become noticeable) the cause for its diminished attractiveness to consumers is properly called deterioration. Neighborhoods also undergo relative decline in attractiveness to buyers and renters. Even though they remain in good condition in all essential respects, they either gradually suffer over time as new neighborhoods are added to the community or they fall victim to a shift of consumers' preferences away from housing and toward other goods and services, such as vacations, boats, and cars. In either case, they experience obsolescence, a condition often equated with, but different from, deterioration.

Housing and neighborhood obsolescence may occur for any of several reasons, such as the appearance of better products, or a shift in consumer preferences in favor of safety, status, privacy and other consumption objectives, or a shift in the way consumers relate various housing attributes to these objectives. The several forms of obsolescence may be classified as: style, structural equipment, site, or locational. Illustrative of style and structural obsolescence are multi-story Victorian houses in a market where the preponderance of households currently prefer ranch-style dwellings. Residences with archaic electrical wiring or water pipes are examples of equipment obsolescence. Lack of off-street parking may be an instance of site obsolescence. Locational obsolescence would result if improving transportation networks caused certain neighborhoods to become relatively less accessible to jobs and other centers of activity. If they become absolutely less accessible, as could happen to central-city neighborhoods if jobs suburbanized, they would have suffered a form of deterioration. A central-city neighborhood could also become locationally obsolescent if consumer preferences shifted in favor of outdoor space. Conversely, if tastes changes in favor of easy walking distance to shops, churches, schools, and the like, outlying neighborhoods would become obsolescent compared with those within the urban core.

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[1] The meaning and significance of "obsolescence" in a housing and neighborhood context are discussed below.

Associated with the neighborhood obsolescence is a shift of some households to the new-home market. Indeed, builders continually try to attract customers away from the standing stock by offering features which existing homes do not have. Thus, the same new construction that may be partially a consequence of obsolescence creates additional obsolescence. To protect their properties from declining demand due to obsolescence, owners as a group invest large sums annually in modernization of their properties. But some structures are difficult to modernize even at great expense, and a private owner acting alone can do little to counteract site or locational obsolescence. Neighborhoods with numerous housing units afflicted in this way thus experience a decline in demand, either absolute, or relative to others or both. If, as often happens, property owners react to succession by trimming modernization outlays the process may be further stimulated.

Although obsolescence in a dynamic economy is an almost inevitable consequence of aging buildings and their environs and for that reason is often viewed as the principal determinant of succession, it is very difficult to establish how large a part it plays, given that other causal variables are also at work. The same must be said about predicting the forms obsolescence will take in a particular neighborhood or urban area.

Causes of Succession: Changes in Housing Demand and Supply Resulting from Governmental Intervention

Federal policies and programs have -- particularly since 1960 -- had a major impact upon the determinants of both the demand for and supply of housing. Directly or indirectly, different kinds of governmental intervention have affected the size and distribution of real income among households, the size and spatial distribution of the housing inventory, the level of costs for new construction and rehabilitation, the responsibilities of housing suppliers and market intermediaries, and the costs of occupancy. The same interventions have, therefore, had considerable impact on the rate and location of neighborhood succession. A few illustrations should suffice to demonstrate this point.

Several Federal programs have provided subsidies for new construction and for maximum rehabilitation. Holding constant other variables (notably population size and household income), when new or totally renovated units are made available to moderate-income households at a subsidized price, the supply of dwellings increases without a corresponding change in moderate-income demand. The first-order effect is analogous to that in a submarket experiencing a decline in population: units vacated by households moving into the new or renovated dwellings will pass into the hands of households with still

lower incomes (unless they remain unoccupied).[1] Indeed, some Federal legislation has been designed to produce this result in the belief that the welfare of all concerned will thereby be improved. This inference is not always warranted. In cities with stable or falling household populations the game of musical chairs precipitated by housing subsidies may cause abandonment of other than the worst dwellings, reduction instead of enhancement in the quality of the immediate environs, and injury to the welfare of individual owners and occupants in the vicinity of the abandoned properties. These ill effects would, of course, be lessened to the extent that abandonment is confined to one or two neighborhoods, something it has not thus far been possible to do.

Conversely, when governmental actions remove habitable units from the inventory, as so often happens with urban renewal and highway construction, the resulting reduction in supply may stimulate new construction, just as occurs when there is growth in population. But because clearance usually focuses upon the low-price or low-rent stocks, intensified rivalry among home-seekers is felt predominantly in these sectors of the market rather than being distributed among all price and rent levels, as is the case in a normal population-growth situation. It is uncertain, therefore, if displaced households would generate, even indirectly, demand for new construction.

Less directly, removal by government of artificial barriers to free expression of housing preferences, such as exclusionary zoning and racial discrimination, serves to reduce demand in certain sectors of the market and increase it in others, causing upward or downward succession. And public investment in transportation infrastructure may have similar differential effects, improving the locational advantage of some neighborhoods at the expense of others, as analysts of central-city decline have frequently observed.

Causes of Succession: Neighborhood Deterioration

Up to now we have argued, in effect, that the important determinants of neighborhood succession lie outside the affected neighborhoods themselves, residing instead in the larger community as a whole. Changes in "macro" factors have the effect of making particular neighborhoods relatively less attractive to the types of households who originally occupied them and relatively more available, therefore, to others. In contrast, most of the lay public and a large

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[1] Lower prices or rents for the vacated units could attract higher-income households with a low preference for housing but this theoretical possibility seems unlikely to occur on a significant scale.

proportion of urban analysts appear to believe either that market intermediaries in the housing system behave in such a way as to initiate succession (e.g., through redlining or block-busting) or that deterioration of the neighborhood causes it to become absolutely less attractive to the segment of the population which originally found the neighborhood a pleasant place to live. We now explore the latter possibility.

It may seem immaterial to ask whether neighborhoods deteriorate as a consequence of succession or whether they experience succession as a consequence of deterioration. Whatever the sequence of events, once a neighborhood has begun to decline, it is in the interest of most of those affected that something be done about it. In reviewing remedial strategies, however, it is vital to know if succession is the initial cause or a consequence of the problem. A popular question helps to illustrate the possibilities: Have central cities declined because an increasing proportion of middle-class families have opted for the suburbs, or have these families chosen the suburbs because of worsening central-city conditions?[1] It is easy and perhaps to some degree correct to answer, "A little of both." But if suburbanization of upper-income households is explained primarily by population growth, rising incomes and improving transportation systems, (within the constraints imposed by immobility of dwellings and construction costs) then provision of good schools and crime-free streets in central areas are not going to draw the fringe dwellers -- most of whom have never lived in the city and do not work there -- back to the urban core. And to the degree succession is the cause rather than the consequence of neighborhood problems, current public-sector neighborhood investment strategies may be inappropriate.

What is Neighborhood Deterioration? Although the terms "neighborhood deterioration" and "neighborhood decline" -- which we consider to be synonymous -- are used casually in the literature as though everyone knows precisely what they mean, they raise some sticky definitional issues. If "decline" is used in a relative sense to describe the worsening position of a given neighborhood in the universe of neighborhoods in a market area, then as time passes and new residential areas are developed, most older ones will be perceived to deteriorate as they gradually move lower on a scale of relative quality. What seems more relevant for purposes of policy formulation is an absolute reduction in neighborhood quality.

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[1] We have deliberately avoided the use of the term "flight" here, because statistically only a small proportion of suburban growth can be explained by the movement of households from central cities to the suburbs of the same cities.

Neighborhood deterioration or decline may be usefully defined, then, as an absolute negative change, relative to a set of specified standards, in the physical or social quality of an area. Broadly, physical deterioration could result from inadequate housing maintenance, intrusion of blighting commercial and industrial uses, increased vehicular traffic, disappearance of aesthetically pleasing open space in favor of trash- or rubble-strewn empty lots, or building abandonment. Deterioration of a neighborhood's social environment might be manifested in such changes as a growing proportion of "problem" families, a rising crime rate, or a drop in the quality of neighborhood schools. Although it is usually presumed that social and physical decline occur more or less in tandem, examples may be found of neighborhoods that remain in good physical condition while suffering social deterioration, or that are shabby to behold but free of serious social problems.

Not all social changes that are viewed as undesirable by a neighborhood's current residents would necessarily be viewed as an indication of decline by the community at large, e.g., the movement of middle-class families into a previously exclusive high-income enclave. Further, not all apparently deteriorating neighborhoods were ever of much better quality. Indeed, despite their abhorrent appearance, they may actually be in better condition today than originally.

Even if specification of conditions and trends in a neighborhood is correct, care must be taken in inferring that a problem exists. As with automobiles and refrigerators, the quality of neighborhoods as a whole may be rising, even while individual ones are going down hill.

Forms of Neighborhood Deterioration: In defining neighborhood deterioration, we have described two forms: physical and social. Each of these categories can be further subdivided: the physical subsumes housing structures and spaces; and the social subsumes residents and other individuals and organizations (Figure F). By examining each of these forms of deterioration separately, it is possible to make a somewhat more reasoned judgment as to the likelihood of deterioration occurring before succession commences.

Figure F

Forms of Neighborhood Deterioration

Social	Physical
1. Residents	3. Dwellings
2. Other Institutions and Organizations	4. Other Structures and Spaces

1. Social deterioration; residents: Almost by definition, it is not possible for social deterioration involving the residential population (Cell 1) to occur prior to succession. Only under exceptional circumstances could the sitting population take on attributes over time which made them undesirable neighbors in each other's eyes and in the eyes of potential residents. Perhaps stable young couples could develop into poor parents, or good parents could become "problem" oldsters, or an economic downturn could destroy a stable social environment, but these possibilities seem remote.

A possibility slightly less remote, yet still an uncommon occurence, would be succession to a similar income group, but one perceived by existing residents to have undesirable traits. In an economy of rising real incomes, neat, well-kept neighborhoods might experience inmigration of families who cared more for Saturday-night frolicking than well-kept lawns. Given our definition of neighborhood deterioration this may not be the most appropriate example, but it will perhaps suffice. Even given this form of succession, one may conclude with some degree of confidence that Cell 1 is not heavily populated in the absence of succession.

2. Social deterioration; organizations and institutions: Not quite the same can be said of Cell 2. Ordinarily one would not expect social institutions and relationships to break down while the neighborhood retains its income profile. This assumption ignores, however, racial succession, alleged by many to be a primary factor in neighborhood decline. Although most instances of racial change are presumed to be associated with a reduction in neighborhood income, typically the initial inmigrants have incomes similar to or higher than the incomes of those whom they replace and have similar or "superior" behavior patterns. Why then might decline occur? It seems most likely if racial turnover takes place rather quickly. Rapid change tends to be disruptive because the integration of disparate populations is a slow process; even building social ties among the inmigrants themselves takes considerable time. Before these ties have been created, social and physical problems may become sufficiently pronounced to cause many residents to give up on the neighborhood. And if mortgage lenders and city agencies -- who for some purposes could be viewed as part of social fabric of the neighborhood -- take flight, problems become intensified.

On the other hand, the link between racial succession and neighborhood decline may not be the behavior of market intermediaries or social institutions but rather the income succession that sometimes follows, even if it does not initially accompany, racial change. A number of studies of house-price movements in racially changing neighborhoods have noted that prices at which homes are initially transferred frequently cannot be sustained (particularly if they have been artificially inflated by discriminatory practices) because the number of black families who can afford the homes is insufficient to offset

declining white demand. As prices drop, lower income black buyers and renters are able to move in.

> "... in most cases, [racial] transition [is] associated first with racial change and [is] followed by declines in the socio-economic status of neighborhoods. This, together with other evidence, suggests that while preference for neighborhoods may depend primarily on the neighborhoods income level, expectations are formed largely on the basis of proximity to racial change. That is, market participants view declines in neighborhood income as the inevitable consequence of racial transition."[1]

In such situations, it is not deterioration that leads to succession but the reverse.

In sum, it is possible to visualize two situations in which neighborhoods might experience social deterioration prior to income succession. One is where income and class (defined in behavioral terms) do not totally overlap. The second is where racial or ethnic succession precipitates disruption of neighborhood social institutions or uncertainty in the local real estate investment market.

3. Physical deterioration; dwellings: Whether it is possible for physical deterioration to occur prior to, and therefore be the cause of, neighborhood succession is a more complex question. With respect to housing deterioration (Cell 3), a number of analysts argue, in effect, that residential structures are like automobiles, inevitably deteriorating over time and just as inevitably discarded by their owners when they become too expensive to maintain. Quigley, for one, observes that:

> "Once built and inhabited by upper-income households, who demand higher quality, housing generally deteriorates."[2]

Muth makes the point more strongly:

> ".....buildings and neighborhoods necessarily (emphasis ours) deteriorate over time, both because of physical wear and tear and because of obsolescence."[3]

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[1] James T. Little, op. cit. Little cites for empirical support a study by Hugh O. Nourse and Donald Phares, "Socioeconomic Transition and Housing Values: A Comparative Analysis of Urban Neighborhoods," in eds. Garry Geppert and Harold M. Rose The Social Economy of Cities (Beverly Hills, CA: Sage Publications, 1974).

[2] John M. Quigley, "What Have We Learned about Urban Housing Markets?" in Mieszkowski, P. and Mahlon Straszheim, Current Issues in Urban Economics (Baltimore: Johns Hopkins Press) 1979, p. 417.

[3] Op. Cit., p. 98.

And the authors of The Dynamics of Neighborhood Change, in describing how a neighborhood might shift from a situation of good health to one of incipient decline, suggest that:

> "The houses may have pretty well reached the end of their 'reasonable' life and need repairs and remodeling that the owners can't afford; after awhile this begins to show and people looking for houses (who are in the same income range) aren't interested."[1]

A number of models of the housing market, in using age as a proxy for deterioration, make the same assumption.

Broadly held though this view is among knowledgeable persons, it is totally incorrect. It is true that buildings suffer from the destructive forces of wide temperature variations, wind, sun, water, and man's occupancy. Some buildings are constructed to resist these forces better than others, but they all experience deterioration and their equipment eventually wears out. Most of them can, however, be maintained almost indefinitely if their owners choose to do so. This is because various parts of a building do not deteriorate at the same rate or wear out at the same time, so the cost of repairs, maintenance and replacement in any one year is, on average, a very small proportion of original construction cost (in constant dollars) -- usually well under two percent. This relationship holds not just for relatively new buildings but for older ones as well. A study by Peter Rydell suggests that maintenance expenditures do rise with age but eventually flatten out at a level about 40 percent above their starting figure, still a very modest sum.[2] The difference, then, between adequate and inadequate maintenance may be only a few hundred dollars a year. By contrast, the consequences of some forms of under-maintenance may be immediate and severe, drastically reducing the attractiveness of a dwelling or making it uninhabitable. The quickness with which the forces of nature move in when man is no longer interested in resisting them is readily perceived in neighborhoods that are in the path of a highway development or part of an urban redevelopment site. But man is the key, not nature. And a continuing downward path of deterioration, commencing at the moment of first occupancy or a few decades thereafter, is not a structure's inevitable destiny. We venture the guess that a very large

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[1] Public Affairs Counseling, a division of Real Estate Research Corporation (Washington: U.S. Government Printing Office, 1975), p. 12.

[2] C. Peter Rydell, "Factors Affecting Maintenance and Operating Costs in Federal Public Housing Projects", R-634-NYC, The New York City Rand Institute, December 1970.

proportion of the structures over 40 years old -- a figure frequently used to denote the problem sector of the housing stock -- are superior in quality today to what they were when first erected.

Although housing decay may be avoidable and under-maintenance normally self-defeating, the two phenomena are widely observable, raising the question as to the circumstances under which they occur, and particularly if homes being adequately maintained could, in the absence of income succession, start suffering from poor care and therefore allow succession to occur. In the absence of expectation of a public taking or similar imminent termination of the flow of services from a dwelling, why would owners lower levels of upkeep, allow prices and rents to fall, and permit a lower income group to take over the inventory? Is it really possible, as commonly asserted, for housing deterioration to lead to succession or must succession come first?

In nearly every neighborhood, individual households postpone maintenance outlays because of temporary or permanent loss of income, ill health, family problems, and similar reasons. Scattered around in every very good neighborhoods, therefore, are a few structures in need of more than normal remedial attention. In the course of time, however, the repairs are made either by the same or new occupants. A few bad apples don't inevitably spoil the barrel. The decay does not spread either like cancer -- or at all. The steady-state condition of adequate maintenance is retained. Some discussions in the literature suggest a sequence of events starting either with housing and neighborhood obsolescence or with deterioration of various parts of the neighborhood other than the housing itself. These changes cause prices and rents to decline which in turn leads to housing deterioration. We elaborate on this line of reasoning below, but in the context of the present discussion, it can be seen that since there cannot be price or rent changes without market transactions, income succession as a necessary condition of housing deterioration is implied.

We cannot, in brief, conjure up in our minds a set of circumstances that would, more than rarely, cause a downward shift in maintenance prior to succession. This conclusion starts, however, from a presumption of adequate maintenance. If succession has proceeded to the point where inadequate maintenance enters the picture, it is relevant to ask if succession and deterioration intertwine in a continuous process in which each one leads to the other, or whether succession moves in discrete steps from one stage of equilibrium to another. This question we dwell on later in the essay, though it strikes us as essentially unanswerable.

4. Physical deterioration other than dwellings: This brings us to the final type of neighborhood deterioration that might bring about income succession -- a worsening of the physical environment other than housing (Cell 4). There are several different possibilities. If a neighborhood is starting to become relatively less attractive as a consequence of gradual obsolescence, encroachment of incompatible uses becomes easier.

> "As residences grow old and depreciate, ..., the vigor of the neighborhood and its power to resist encroachments, physical and social, lessen ..... Older residents gradually lose the will to maintain the constant struggle to keep out non-compatible entities from the neighborhood."[1]

Also, however, still vigorous neighborhoods could succumb to the economic pressure created by the expansion of more competitive uses.

> "An expansion of manufacturing firms out of a neighboring industrial district or retail and service firms beyond their original locations along major tracts may make housing in surrounding areas less desirable because of increased dirt, noise, and for many other reasons. Or the owner of a parcel in a neighborhood of, say, single-family residences, may find it profitable to him to convert it to a grocery store, filling station, or a rooming house. However, by doing so he may reduce the desirability of surrounding residences,..."[2]

Succession could also possibly begin if a neighborhood were adversely affected by spillover of crime, excessive noise, air pollutants and so on from nearby neighborhoods. It might seem on the surface that this conclusion follows in part from the way in which we have defined neighborhood for purposes of discussion. By creating arbitrary neighborhood boundaries, we appear to ignore social and physical decline that is not occurring within our boundaries but which is perceived to exist within a larger set of boundaries as defined in the minds of residents and potential residents. And as a

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[1] George Sternlieb and James W. Hughes, "Analysis of Neighborhood Decline in Urban Areas," Center for Urban Policy Research, Rutgers University - The State University of New Jersey, n.d., pp. i-ii.

[2] Muth, op. cit., pp. 118-19. This quotation is a summary of others' arguments. It is unclear if or to what extent Muth himself shares their viewpoint.

consequence, we conclude that succession is occurring prior to decline in the neighborhood itself whereas households leaving the area or deciding not to move there feel decline has already commenced. Enlarging our perceived boundaries, however, to match those of persons actually making residential moves or investments would not alter the argument. One would still have to ask why the nearby neighborhoods were experiencing problems. Were the problems a consequence of succession or did they have other antecedents? No matter how one defines neighborhood boundaries, this question remains. In most cases, it seems to us that, at least initially, succession precedes decline of a neighborhood's physical environment, though once that decline has commenced, it would be expected to cause further downward income movement.

Causes of Succession: Some Conclusions

It may seem unnecessary to elaborate the proposition that neighborhood succession could stem from any one of a variety of causes. Most persons would probably concede this point at the outset and turn to other questions. Our discussion has, nevertheless revealed several things about succession that seem worth emphasizing as a prelude to our examination of the relationship between succession and decline. In evaluating these observations, keep in mind that succession is not synonomous with any of the several different definitions of filtering that appear in various places in the housing literature.

First of all, given the forces which produce spatial separation of income groups in the housing market, it is virtually inevitable in a dynamic urban society that most of every community's neighborhoods will experience succession. Some may successfully resist for several human lifetimes; others may start at the bottom of the quality hierarchy and have no lower rung on the ladder to which to descend. Continuous adaptation of most of the stock of housing to changing consumer requirements is, however, to be expected. Indeed, as we observed, without succession, growing communities would be unable to accommodate household expansion satisfactorily. Had the suburbs not opened up, central cities would be even less desirable places for lower income households to live in than they now are. Because of the inevitability of succession, neighborhood stabilization programs which attempt to arrest the process in particular sections of the city are likely to avert change only by channeling succession elsewhere. For a market area as a whole, change cannot permanently be halted.

Second, contrary to much lay and some professional opinion, the antecedent of succession generally is not an absolute decline in neighborhood quality, though such decline does nurture the process once begun. Rather, the causes of succession are typically either shifts in the determinants of consumer demand

or changes in the configuration of a community's housing supply or a combination of both that make certain neighborhoods relatively less attractive.

Third, analyses of succession which attempt to explain the phenomenon in terms of shifting price differentials along and near the boundary lines between neighborhoods are not very helpful, and perhaps somewhat misleading. By focusing on micro-level dynamics rather than on the broad forces of change, these analyses leave the impression, even if unintentionally, that boundary-line relationships are independent variables. Where boundaries are visually apparent, as is often the case where racial succession is involved, they may be important. Where income succession alone is occurring, changing boundaries are not readily perceived, and the first lower income inmigrants could be expected to move into the interior of a neighborhood, not just jump across the border. Change is well underway before residents become aware of it.

Fourth, although succession is often said to be caused by new construction, this observation explains very little, since one must then inquire into the causes of the new construction. One of these causes is succession itself. A theoretical implication of this fact is that vacancy-chain analysis, which assumes that occupancy of new units releases old ones, may start in the middle of the process.

Fifth, for specific neighborhoods, though not for a community as a whole, totally opposite trends, e.g., increase or decrease in number of households or rising or falling incomes, can produce similar succession results. This point suggests that it is important for communities to develop predictive models that can simulate the process of family movement and neighborhood change. Although in theory such models should not be difficult to construct, experience indicates need for a finer-grain grouping of households by income, stage in life-cycle, and other variables than are incorporated in present models.

Finally, succession simultaneously can produce both "good" and potentially "bad" results; good, in that it permits a community to adjust more readily to changing housing requirements; bad, in that, if we are to believe what many observers say, it leads inexorably to decline. But is decline really inevitable? Are neighborhoods like cars, ultimately destined, with few exceptions, for the scrap heap? And if so, why is neighborhood preservation a concern for public policy at all, and what should be its objectives? Conversely, do public subsidy programs designed to stimulate new construction in order to keep pace with household growth, have the unavoidable collateral effect of accelerating succession, hence decline?

In order to address these questions, we must first understand the circumstances under which neighborhood succession could lead to neighborhood decline. It is to that subject which we now turn.

THE CAUSES OF NEIGHBORHOOD DECLINE

Neighborhood decline is the major cause of neighborhood succession. Although, as discussed earlier, there is some difference of opinion, not to say confusion, about whether neighborhood decline does or does not precipitate neighborhood succession, there is substantial agreement regarding the circumstances under which the reverse is true. As most observers see it, succession leads to both social and physical decline when the neighborhood is inherited by a population that does not have the will or resources necessary to maintain its housing and take care of its other needs, and when public facilities and services are inadequate to offset the decline in private income. Illustrative of this view are the following:

1. "...A neighborhood starts clearly declining when owners can't make enough money to keep their property up, much less make a profit. This is because the people who want to live there cannot afford to pay so-called 'economic rents' and if they own their own home cannot afford adequate maintenance or major repairs."[1]

2. "In economic terms neighborhoods decline because they are no longer able to attract property owners who are interested in and have sufficient income to adequately maintain the housing."[2]

3. "Neighborhoods decline because they lose their competitive edge. A myriad of different forces is at work. Paramount among these are socio-economic changes in the composition of the incoming population. As increasing renter population may be less committed (sic) to the neighborhood; large households may use the housing stock more severely; and lower economic

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[1] Public Affairs Counseling, a Division of Real Estate Research Corporation, The Dynamics of Neighborhood Change (Washington: U.S. Government Printing Office, 1975), pp. 11-12.

[2] Roger S. Ahlbrandt, Jr. and Paul C. Brophy, Neighborhood Revitalization: Theory and Practice (Lexington, Mass: D.C. Heath and Co., 1975), p. 5.

levels mean that the ability to pay for housing is reduced."[1]

4. "Although it is true that there is no necessity for property to deteriorate with age, if income falls there will be fewer resources available for normal repairs ... (which if not made) leads inexorably to deterioration in housing quality."[2]

5. "... the quality of the housing stock in the neighborhoods low-income households choose to inherit is adapted to their circumstances. This would be done primarily through conversion of existing structures to a larger number of smaller units and allowing these units to deteriorate by deferring maintenance and repairs."[3]

6. "As the outward movement of upper-income families occurs, the structures which are left behind for occupancy by low-income households are ... in reasonably good condition. However, the costs of financing and operating these structures do not decline sufficiently to permit rents which the poor can afford unless adequate maintenance is sacrificed. Conversions to multifamily occupancy may raise rental incomes sufficiently to forestall decay for a time, but they also lead to increased wear and tear, so eventually deterioration wins the day anyway. The process is hastened by the competitive disadvantage of low-income families in dealing with a class of landlords who enjoy a partial monopoly in the market and who demonstrate less concern for the well-being of their tenants, structures, and neighborhoods than do landlords generally. It also is hastened by the powerlessness of the poor to prevent their neighborhoods from being inundated by bars, junkies, abandoned cars, and other unpleasant assortments."[4]

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[1] Roger S. Ahlbrandt, Jr., "Public Policies for the Preservation of Capital in Older Areas," AREUEA Journal, Vol. 5, No. 1, p. 69.

[2] Charles L. Leven et al., Neighborhood Change: Lessons in the Dynamics of Urban Decay (New York: Praeger Publishers, 1976), pp. 38-39.

[3] Richard F. Muth, Cities and Housing (Chicago: University of Chicago Press, 1969), p. 117.

[4] William G. Grigsby and Louis Rosenberg, Urban Housing Policy (New York: APS Publications, Inc., - Center for Urban Policy Research, Rutgers University, 1975), pp. 198-99.

A companion version of the relationship between neighborhood succession and neighborhood decline holds that when succession involves a group of households with absolutely lower incomes, succession and decline proceed more or less in tandem, because in a competitive housing market, the prices of housing services equal their cost of production. If because of housing or neighborhood obsolescence or some other factor, the prices which can be commanded for these services drop, cut-backs must be made. Initially, the cuts may not impair the basic quality and condition of housing structures. Doormen may be eliminated, lawns may be cut and watered less frequently, and so forth. If prices and rents continue to decline, however, at some point, owner-occupants and landlords alike will defer needed maintenance and structures will deteriorate to a level below acceptable community standards.[1] Mortgage payments suffer first.

All of these explanations appear to be essentially the same. They imply that for neighborhood decline to be prevented, either the problem of inadequate income must be greatly mitigated, or low-income households must be prevented from moving upward in the inventory, or the low-income population must be geographically scattered, so the impact of their presence will be minimal. By implication, all of the explanations call into serious question neighborhood stabilization efforts, except to the extent that such efforts are built on the premise that, for one reason or another, "unnecessary" or avoidable succession is occurring.

Although no one would deny that inadequate income is an extremely important force in neighborhood decline, explanations which emphasize this factor are flawed in several respects. First, they either ignore completely or only partially address the question of how poor people acquire homes that at one time were of good quality and well maintained. Yet how blight spreads is not abundantly clear on the face. Second, in Numerous areas, neighborhoods are to be found where there are signs of deterioration but, so far as can be determined, where few or no low-income households are in residence. Conversely, fully half of all low-income households live in standard accommodations, so their homes cannot be contributing to neighborhood physical decline. Moreover, in at least some declining neighborhoods, maintenance expenditures by landlords have been observed to rise over time.[2] Still further, census data show a wide range

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[1] Olsen, op. cit. Also Lowry op. cit.

[2] Michael A. Quinn, Donald S. Elliott, Jr., Robert E. Mendelson, and Jeffrey A. Thomen, "Maintenance Effort and the Professional Landlord: An Empirical Critique of Theories of Neighborhood Decline," Center for Urban and Environmental Research and Services, Southern Illinois University at Edwardsville, August, 1980, p. 16. See also Grigsby and Rosenburg, op. cit., Ch. 9.

of substandardness and decline among cities and neighborhoods with similar income distributions. Finally, the boundaries of declining neighborhoods appear to be expanding even while real incomes rise, subsidy programs expand, and the problem of substandard housing becomes less widespread and severe.

Conceptually, the notion that succession and decline occur in tandem is especially flawed, since it is normally self-defeating for landlords, in the face of declining values and rental payments, to eliminate maintenance expenditures that can still be covered by rents. Values and rents will drop faster if needed upkeep is deferred. Owner-occupants would be doubly penalized by such a strategy, because they would also reduce the stream of satisfaction they derive from their homes.

A more encompassing explanation of neighborhood decline appears to be needed. Recognizing that there are a number of differing circumstances under which stable neighborhoods eventually reach low-income households through succession and thereupon also begin to decline, two questions seeking an answer are, why is decline apparently expanding and why is it often considerably more or less extensive in neighborhoods of low socio-economic status than one would expect on the basis of residents' incomes alone?

Five different reasons have been offered. Depending on the author, the blame is placed on: (a) behavioral characteristics of certain portions of the low-income population especially when such populations are concentrated in a few areas; (b) investment policies of housing suppliers and market intermediaries in declining neighborhoods; (c) public-sector policies themselves; (d) racial discrimination; (e) the thinning out of central cities. All of these explanations turn out to be complementary with those which ascribe the problem entirely to low income. They suggest that when low-income succession is either underway or about to occur on a significant scale, conditions are likely to become worse than they need be. Nowhere do the explanations allege that neighborhood problems normally arise independently of the threat or actuality of low-income succession. Even those analyses that attach considerable importance to racial discrimination in accounting for decline also explicitly or implicitly include low income as a contributing factor.

Although these ancillary explanations add to our understanding, they do not, even taken together, satisfactorily address all of the apparent gaps in the low-income explanation. Before reviewing them, therefore, it seems advisable simply to offer some general observations about why neighborhood decline seems to involve more than low income and why it occurs in more neighborhoods and is more severe in the U.S. than in other countries with comparable levels and distributions of income.

Before reviewing the ancillary explanations it should be mentioned that judgments concerning causes of neighborhood decline may be based on inadequate and misinterpreted evidence. For example, the common belief that neighborhoods frequently start to decline even prior to significant low-income entry is at variance with actual longitudinal studies connecting changing resident incomes with neighborhood conditions. Moreover, the measure used to define low-income -- current money income adjusted for household size -- is, as has often been noted, a very rough indicator of a household's economic resources, and if not matched against consumption needs, provides a decidely inferior indicator of well being. Hence, it is possible that neighborhood decline may proceed much more nearly in tandem with inmigration of deprived households than superficially seems to be the case. In the same vein, measured current money income is a weak proxy for social health or pathology, as any comparison of third-world squatter settlements with American slums would quickly demonstrate. Nor is it a very precise predictor of housing consumption. Many financially able households live in unsavory surroundings well below their means, while a large proportion of low-income households deprive themselves in other respects to acquire a decent environment. As a consequence, when neighborhoods lose their attractiveness to stable middle- and moderate-income households, they become available not only to low-income households but also to non-low-income consumers who are indifferent or "perverse" with respect to their neighborhood conditions. The behavioral patterns of these consumers, together with other low-income related problems, produce high operating costs for landlords and extra expenses for the public sector, adding to the amount of decline that would be expected from low income alone.

The inadequacy of current money income as a measuring rod in explaining neighborhood decline would no doubt be conceded by all of the persons whom we quoted above. They have probably used "low-income" as a short-hand expression. Nevertheless, since income subsidies are widely advocated as a means of reducing housing deprivation, the low correlation between measured income and neighborhood conditions is worth pondering.

Questions must also be raised about the adequacy of data purporting to measure neighborhood decline. Is decline truly a growing phenomenon, as one would judge from the increasing importance lately given to neighborhood stabilization in federal urban policy? Or is it just the opposite: with rising real incomes, are most neighborhoods that are experiencing succession, perhaps improving absolutely in quality even while falling in socio-economic status? Is a decreasing proportion of neighborhoods actually undergoing decline? Data to answer this question do not exist in published form.

These explanations of the lack of total congruence between falling income and declining neighborhood environment suggest that with various data adjustments and refinements in hand, one would conclude that the amount of neighborhood decline is about what one would expect. The housing market is operating efficiently; declining neighborhoods are a reflection of rising prosperity generally coupled with a sizeable but residual problem of inadequate family income and individual and social pathology. Let us explore, however, the five less sanguine views.

Behavioral Characteristics Associated with Low Income:

A variety of personal problems either contribute to or are one consequence of an individual's insufficient financial resources. Many of the problems consume an inordinate share of an already inadequate income. Some of them manifest themselves in behavior which raises owner's cost of maintaining low-rent structures and weakens stable middle-class environments well above what it would be in a stable middle-class environment. Notable examples are poor housekeeping, theft, vandalism, and assaults. Downs has argued that concentration of a large number of deprived households in a single area compounds whatever problems arise from low income alone, because concentration produces a critical mass of individuals exhibiting behavior which not only aggravates the conditions produced by low income, as already mentioned, but also causes a total unravelling of the social fabric, destroying the residential, educational, and employment environment for everyone.[1]

The Downs thesis has been extensively discussed, but no one has determined the overlap between income and behavioral problems nor what the critical mass of problem creators is in various situations.[2] If critical masses of such individuals do exist, lower income neighborhoods not so burdened should reveal measurably superior individual and social well-being. There is casual evidence that this is indeed so, though strangely enough, no research attempting to verify this possibility has been undertaken. Neither has there been much progress toward solving the puzzling problem of how to reduce the proportion of problem individuals in a neighborhood below critical-mass levels either through dispersion or treatment in place.

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1 Anthony Downs, Opening up the Suburbs (New Haven and London: Yale University Press, 1973) p. 9.

2 W.G. Grigsby, S.A. White, D.U. Levine, R.M. Kelly, M.R. Perelman, and G.L. Claflen, Jr., Re-thinking Housing and Community Development Policy, (Philadelphia: Dept. of City & Regional Planning, University of Pennsylvania, 1977), p. 82-83.

Supply-side Inefficiencies

A second explanation of decline in excess of what one might expect from low-income occupancy alone is that housing investors and market intermediaries, upon experiencing the early symptoms of neighborhood deterioration, become unduly pessimistic and start to bail out, causing acceleration of what might otherwise have been a slow process of low-income succession and neighborhood decay.[1] Theories of decline assigning part of the blame to the supply-side of the market have been the subject of intensive investigation. "Redlining" by lenders and "milking" of properties by landlords have been explored in great detail.[2] These explorations almost universally conclude that popular conceptions of lenders' and landlords' behavior are incorrect. Landlords, as mentioned earlier, would usually forego more in rental income by deferring maintenance than they could save in expenditures. Indeed, real increases in maintenance effort have been found in areas undergoing decline in profitability due to neighborhood succession.[3] Sometimes this is accomplished only by deferring mortgage and tax payments.

As for redlining, although there is little doubt that in older depreciating neighborhoods, mortgage loans and property insurance either have been made available on less favorable terms than in better neighborhoods or have not been possible to

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[1] Katharine L. Bradbury, Anthony Downs, and Kenneth A. Small, "Some Dynamics of Central-City Suburban Interactions, "The American Economic Review, Vol. 70, No. 2, May 1980, pp. 411-412. The acceleration of succession which results appears to be interpreted by some observers as market instability, the implication being that equilibrium will not be restored until self-aggravating forces are overcome or until succession reaches the lowest income groups. But continued downward movement could easily occur in the absence of acceleration, so a simple speeding up of the process cannot be equated with instability. Definitions of market stability appearing in the neighborhood stabilization literature are not helpful in reducing this confusion. Michael A. Stegman and David W. Rasmussen, "Neighborhood Stability in Changing Cities", The American Economic Review, Vol. 70, No. 2, May 1980, p. 417. Also, Rolf Goetze and Kent W. Colton, "The Dynamics of Neighborhoods: A Fresh Approach to Understanding Housing and Neighborhood Change", Journal of the American Planning Association, Vol. 46, No. 2, April 1980, p. 187.

[2] The term redlining derives from the alleged practice by mortgage lenders and property insurors of drawing boundary lines around neighborhoods where services are to be restricted or withdrawn. "Milking" is the deliberate undermaintenance of rental structures for the purpose of maximizing short-run profit.

[3] Quinn, et al., op. cit., p. 16 Grigsby and Rosenburg, op. cit., Ch. 9.

obtain at all, there is disagreement about whether lender and insurors behave reasonably in this regard or what the consequences of their practices are. There are two distinct schools of thought. One holds that redlining is a product of racial discrimination. In stark words of the National Commission on Neighborhoods, "The underwriting policies of major actors in the real estate and finance industries have created a dual housing market ... Studies of disinvestment now indicate that a broad range of discriminatory activity is required for the existence of a dual finance market."[1] The contrasting view is that the inter-neighborhood differences in levels and terms of transactions, are ascribable primarily to differences in degrees of risk, a point underlined by the fact that redlining is sometimes applied in the U.S. to white neighborhoods and is practiced in foreign countries having few ethnic or racial minorities.[2]

Concerning the effects of redlining, it is argued on one hand that the practice helps to confirm the negative expectations of its practitioners. Fearful that loans will be defaulted as capital values in a deteriorating neighborhood decline, lenders refuse to make loans or do so on such restrictive terms (low loan-to-value ratios, shorter than usual repayment periods, higher than usual interest rates, etc.) that prospective owner occupants look for homes in other locations where easier financing is possible, causing a shift of dwelling to rental tenure. And current owners in the neighborhood elect to defer maintenance, replacement and modernization expenditures - thereby reinforcing the tendency for capital values to fall steadily. For their part, lending institutions and their defenders argue that their assessment of the degree of risk in marginal neighborhoods is solidly confirmed by experience (e.g., the high default rate on FHA loans in the inner city) and, in any case,

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[1] The National Commission on Neighborhoods, People Building Neighborhoods, Final Report to the President and the Congress of the United States (Washington, D.C.: U.S. Government Printing Office, 1979), p. 72.

[2] Baptiste, "Attacking the Urban Redlining Problem", Boston University Law Review, Vol. 56 (1976), reprinted in Roger Montgomery and Daniel R. Mandelker, Housing in America: Problems and Perspectives, 2d Ed. (Indianapolis: Bobbs-Merril Company, 1979), p. 345. Also Neil S. Mayer, "Roles of Lending, Race, Ownership, and Neighborhood Changes in Rental Housing Rehabilitation," (Washington, D.C.: The Urban Institute, 1979. Jack M. Guttentag and Susan Wachter, "Redlining and Public Policy", Monograph 1980-81, Monograph Series in Finance and Economics, Graduate School of Business Administration, New York University, 1980. Also, George J. Benston, "Mortgage Redlining Research: A Review and Critical Analysis", Prepared for the Conference on Financial Institution Regulations, sponsored by the National Science Foundation and the Federal Reserve Bank of Boston, October 1979.

that their terms become restrictive well after demand for housing and prices in marginal neighborhoods begin to decline. If prospective home buyers or home improvers in such areas are prevented by lack of financing from carrying out their plans, the counter-argument concludes, they have been well served.

Specific instances can be found where redlining was premature, thus a contributory cause of deterioration. Equally, there are cases where redlining has been no more than a consequence of neighborhood decline or decay. In any event, lenders themselves have begun to recognize that even if withdrawal of operations from a neighborhood is based upon sound business practice, the collective decision to do so may not contribute to social welfare. Partly because of this recognition but more often because of community pressure and government intervention, they have begun to alter their practices. Still, further reforms could be instituted that would transform into insurable risks some of the uncertainty which contributes to the disinvestment process and possibly the risks themselves could be reduced. Since new automobiles, which depreciate faster than old homes, are cheerfully accepted as collateral for loans, any piece of real property which has market value should be acceptable as security for a loan, whether it is located in a declining area or a growing one and whether it has three years' or thirty years' remaining useful economic life. By the same token, one cannot reasonably expect mortgage lending institutions to commit their funds to neighborhoods which the local government has seemingly written off, a point given central importance in the Neighborhood Housing Services Program.[1]

Public Policies and Programs

Analysts of widely differing political persuasions have argued that the public sector itself is partially responsible for neighborhood decay. It is useful, nevertheless, to treat the full array of views in outline form here, offering our own conclusions, based primarily on the work of others, about the merits of each allegation. There are eight areas of criticism that we have been able to identify.

1. Rent control: The argument is twofold: (a) that controls prevent landlords from undertaking adequate maintenance and therefore lead to structural deterioration and abandonment; and (b) that they discourage new construction. In theory, however, there is no reason that well designed controls should have these effects. Moreover, since New York City was the only community having rent control regulations during the 1960s

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[1] See Roger S. Ahlbrandt, Jr. and Paul C. Brophy, An Evaluation of Pittsburgh's Neighborhood Housing Services Program (Washington: U.S. Department of Housing and Urban Development, 1975), 41 and passim.

and 1970s when housing abandonment became a serious national concern, controls would hardly seem to have been a contributory factor. Still further, in New York itself, because of the particular features of the rent control ordinance, market rents in the worst sectors of the stock were frequently below the levels which the controls allowed. Additionally, over a period of time nearly all structures subject to controls exchange ownership, and the expectation of control is capitalized. There are serious questions which could be raised about rent control, particularly with respect to its potentially depressing effect on the volume of new construction, hence on housing quality over the long term. The view, however, that controls necessarily lead to under-maintenance and abandonment seems unsustainable, even though other arguments against controls could reasonably be raised.

2. Code enforcement: Here the reasoning is simply that for many structures the cost of required repairs may be so great relative to expected rents that landlords would prefer to close down rather than fix up, thus aggravating the shelter problem for lower income groups while at the same time contributing to the visual decline of the neighborhood. An analysis by Schaaf, however, suggests that if the choice is fix up or close up, landlords might be willing to undertake much greater repairs than commonly thought, rather than lose the entire income flow from their buildings.[1] If the cost of repair is less than the discounted expected net revenue over the life of the repairs, landlords should be expected to fix up. Nevertheless, it is true that in depressed markets where required repairs, though relatively modest, have approached the value of the structures and the appropriate discount rate is quite high, the rational response to enforcement has been abandonment. Our principal reservation concerning the code-enforcement argument, however, is that except for a few sporadic bursts of activity, cities have not enforced housing codes either vigorously or uniformly across their housing inventories. The amount of neighborhood decay caused by enforcement, therefore, must be slight, and favorable effects of appropriate enforcement has come from responsible landlords whose investments are frequently threatened by their less responsible neighbors, both home owners and investors.

3. Real property tax: There are two quite different criticisms that have been made. The first is that because the tax is ad valorem, owners are not encouraged to keep their structures in repair or to upgrade already deteriorated structures, because such action invites higher tax assessments and tax bills. Conceptually, the argument is without foundation and no empirical support for it has been found. Proper maintenance or modest repairs to deteriorated structures rarely

[1] A.H. Schaaf, "Economic Feasibility Analysis for Urban Renewal Housing Rehabilitation", Journal of the American Institute of Planners, November 1969, pp. 339-404.

result in higher assessments because they do not affect basic value and ordinarily do not even come to the attention of a tax assessor. Even if they were expected to have a measurable effect on value, they would be undertaken without fear of a higher assessment. And no clear-headed owner would allow his buildings to become unrentable in order to avoid higher property taxes. His loss of current income and equity would far exceed any tax saving that might eventually be realized. The real estate tax may retard significant upgrading for reasons described below, but certainly not normal maintenance or remedial repairs.

The second criticism is that the real-property tax is so high, typically accounting for at least 15% of gross housing expense, it is comparable in effect to an exhorbitant sales tax, discouraging housing consumption among the very groups whose housing conditions are of greatest public concern; and further, that it is adjusted downward too slowly in neighborhoods experiencing declining values. The argument is valid, and various compensating measures, i.e., exemptions for certain groups and tax abatement tied to upgrading, have been adopted in a number of states and cities. Additional measures, such as graduated tax schedules, have been proposed. How rapidly tax reform will continue and what forms it will ultimately take are difficult to predict.

4. Federal income tax: For a period of time, there was a body of opinion to the effect that accelerated depreciation of newly constructed buildings, allowed under the Internal Revenue Code, encouraged shoddy construction. Because investors expected to dispose of their buildings after six or seven years when the tax benefits of accelerated depreciation had been exhausted, they used cheap materials and equipment that would require expensive replacement after ten years or so. A somewhat similar argument has been applied with respect to older existing structures. Empirical support for this argument consists of rotting, recently built structures. These appear to be rare exceptions, and in the exceptional cases, the buildings have been occupied by lower income subsidized families. There is also no empirical evidence that the Internal Revenue Code has encouraged slum formation in older neighborhoods.

5. Federal housing and transportation policies that encourage urban decentralization: Critics of the urban scene have blamed the decline of central cities on the encouragement which FHA underwriting practices, highway subsidies, and related federal policies have given to suburban investment. It is alleged that the "flight" to the suburbs would not have occurred or been so pronounced but for federal support. The argument fails to recognize several salient facts about suburban growth and the thinning out of central cities. First of all, most of the expansion that occurred in the suburbs could not have easily taken place within city borders. It was growth that

simply spilled over municipal boundaries. One might criticize the configuration of this growth as being ugly sprawl or unnecessary scatteration, but the inevitability of the growth is beyond question. What hurt cities was the fact that, for reasons outlined earlier in the essay, suburbanization meant a loss of upper income groups. Second, to the extent the argument is concerned with absolute losses of population and employment, not simply differential growth rates, it ignores the long history of urban deconcentration. The thinning out of the inner areas of central cities began prior to the turn of the century but was obscured by corresponding growth in outer areas of the cities. Federal transportation policy may, however, have accelerated the process. In addition, it should be noted that throughout the latter part of the 19th century and the first half of the 20th century, urban experts were constantly stressing the need to decant crowded slum areas. Parts of British and American cities were considered unlivable at then existing densities. If federal policy can be assigned part of the blame, perhaps it should also be given some kudos as well. Whether in our federal system of government and within reasonable federal budgetary constraints a better growth management program could have been devised is the question.

6. Lax FHA underwriting practices: Curiously, since the federal government has been severely criticized for failing to do more to eliminate redlining and has even been itself guilty of direct and indirect redlining, a number of analysts blame decline in some racially changing neighborhoods on the availability of FHA insured loans on excessively liberal terms. Easy credit and unrealistically high property appraisals have, it is charged, permitted black households to make purchases at prices which cannot be sustained over the longer term. In some cases, the high appraisals have been the result of actual collusion, whereas in other instances they simply ignore the fact that demand from black households is often not great enough to offset totally the loss of white demand that racial change entails. In either case, however, once home values begin to slide, defaults and abandonment occur at a significant scale, seriously weakening neighborhood stability. As an explanation of neighborhood decline in specific situations, the argument appears to have considerable merit. How widespread such situations are, however, we do not know.

7. Federally subsidized new construction: Since, by definition, the excess of newly-built dwellings over household formation in a given time period must equal inventory loss plus net increase in vacant units (with usually minor adjustments for conversions and mergers), the large expansion of federally subsidized new construction in the late 1960s and early 1970s has been blamed by a number of observers for the housing abandonment and related decay that occurred in inner-city areas at that time. Public assistance to housing construction is felt to have created unneeded inventory and to

have siphoned demand away from marginal neighborhoods that needed such demand to remain healthy. This result might have been avoided through sensitive placement of subsidized units accompanied by collateral neighborhood programs and appropriately placed demolition, but fine-tuning of this sort was impossible.

Appealing as this argument may seem, it runs into difficulty from several analyses indicating that construction subsidies did not have much effect on total volume of housing starts because of strong substitution effects.[1] If, however, there is any validity to the notion that a small amount of decay and abandonment may in some instances trigger further decline, even the modest increment to home building for which the subsidies were evidently responsible may have had serious consequences in certain communities. Also, substitution effects were probably not uniform across market areas, and within market areas the impact of small amounts of additional construction may have been highly localized.

Regardless of what one may conclude with respect to the consequences of past subsidies, a larger question remains. To the extent that construction subsidies are used not only to assure enough home building to accommodate population growth but also to enable households in substandard accommodations to move to better units, and to the extent such subsidies are efficacious in this regard, they will create inventory excesses and thereby depress prices and rents somewhere in the market. That "somewhere" may easily be the "wrong where", if adjustment to the injection of extra supply is left entirely to the private market to accomplish.

8. Decline in Level of Public Services and Protection: It is alleged that since political clout is somewhat proportional to income and wealth, once neighborhood succession reaches a certain point, the public sector reduces its expenditures for neighborhood housekeeping, social services, and maintenance and replacement of infrastructure. It also becomes more relaxed about enforcing local codes and preventing the intrusion of land uses that would be regarded as nonconforming in other neighborhoods. This general premise of public neglect appears to underly the NHS program. The opposing view is that lower income households make more demands on the system and that their neighborhood infrastructure, being quite old, requires greater than average maintenance outlays, so that on balance public-service inputs in lower-income neighborhoods are higher than they are in other neighborhoods even though the outputs may be inadequate. We have no data which would resolve this issue.

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[1] Michael P. Murray, "Subsidized and Unsubsidized Housing Starts, 1961-1977," unpublished paper, U.S. Department of Housing and Urban Development, August 1979. Also Craig Swan, "Housing Subsidies and Housing Starts," American Real Estate and Urban Economics Journal, Vol. 1 (Fall 1973), pp. 110-140.

Racial Prejudice and Discrimination:

The racial dimension of neighborhood succession compounds the problem of decline due to low income alone for two reasons, both of which have been extensively discussed in the literature for more than 20 years. First, lower-income blacks appear to be more deprived than their white low-income counterparts. The blacks, as a group, have less wealth, frequently pay discrimination-related premiums for goods and services, and more often are beset by problems that absorb a large proportion of their earnings. Greater participation by blacks than whites in the Experimental Housing Allowance Program is probably a reflection of this extra deprivation.

Second, neighborhood racial change, especially where it is rapid or where increased black demand from inmigrating households does not totally offset declining white demand, often weakens both market and social institutions in the affected areas, despite the best efforts of neighborhood groups to achieve an orderly transition. Aversion of whites to racially changing neighborhoods is by itself a possible source of instability through the extra impetus which it gives to the thinning-out process, even if the neighborhoods experiencing racial transition remain strong. The possibility that reduction of housing discrimination prior to the diminution of prejudice would accelerate the outward movement of white families was predicted some years ago, but whether this has actually happened on a significant scale is unclear, since whites have suburbanized in large number even in metropolitan areas having relatively low concentrations of blacks.

Thinning Out of Central Cities

This phenomenon, widely sought as an objective in the early part of the century when cities were crowded, is now felt by many observers to add an extra dimension to the residential disinvestment process, both accelerating the process and being a partial consequence of it. Whereas in prior years landlords could count on a steady demand for inexpensive, substandard accommodations and therefore found ownership of inner-city residential real estate quite profitable, today they perceive neighborhood decline as a precursor of permanently high vacancy rates and related problems. As a consequence, values of their properties are quite low in relation to rents, the incentive to maintain is eroded, and abandonment is a more certain consequence of code enforcement, vandalism, or fire. As deprived low-income households follow more well-to-do families outward, the process of decay feeds upon itself, producing more decline, more abandonment, and hence more outward movement than would occur in an efficiently functioning market. Decline brings about additional new construction rather than the reverse, as commonly argued.

It is our impression that in most instances, phrases such as market instability, galloping decay, self-aggravating forces of decay, and the like, refer to situations of thinning out. Implied in these references is a conclusion that unnecessary and undesirable succession is occurring, succession that can and should be thwarted through neighborhood stabilization efforts. Were such resistance to low-income entry to be mounted in the face of a quantitative housing shortage for lower income groups, it would merely move the problem around, whereas if thinning is occurring, it may reduce or localize negative effects.

Thinning-out has probably occurred primarily because of rising incomes and the emergence of the automobile society, but not because of the urban decline which ensued. Absent the low-income factor, it could quite possibly have progressed without much neighborhood deterioration. If low- rather than high-income households suburbanized, the boundaries of decay and abandonment would not spread, and loss of central-city population due to deteriorating environmental quality would not occur.

Again the argument is difficult to assess. In some communities -- for example, South Bend, Indiana -- deconcentration appears to have proceeded in an orderly fashion, and selective demolition in a neighborhood of single-family detached homes in one of the community's inner-city neighborhoods has resulted in a more pleasant physical environment than previously existed even though the neighborhood remains predominantly low income. Quite different results are more typical. None of the inner-city examples one could cite, however, illuminate the question of whether an added increment of decay and thinning out might occur were low-income and problem populations not present. Here we have to look elsewhere for insights -- to shrinking farming and mining communities and to the boarding-up of residential structures that occurred in many neighborhoods during the 1930s. In all of these cases it is our impression that the amount of deterioration of the remaining occupied structures had been and is fairly moderate, and although some depopulation may very well have precipitated further outmigration, abandonment has not been viewed with the same sense of alarm it evokes in urban centers. Unfortunately, one can accept all of these observations without moving any closer to an understanding of how to deal with thinning-out in the usual circumstances where the residual population includes a large number of deprived households. In the next and final section of the essay, therefore, we explore the process in more detail.

NEIGHBORHOOD DETERIORATION AND ABANDONMENT

To borrow an academic aphorism, it is not the questions for housing policy that change through time, only the answers. To this generality there is a notable exception, the issue of

housing and neighborhood abandonment.[1] Fewer than 20 years ago it was not this phenomenon but its obverse that vexed students and makers of housing policy. Reasoning that old housing was equivalent to bad housing, they fretted that the rate of withdrawal of aged structures from the housing stock was too slow; houses continued to be occupied long after they had ostensibly ended their "useful economic life." Beginning around 1960, however, events overtook this perception. Abandonment became common, then in some cities almost epidemic: "In New York, between 1965 and 1968 it has been estimated that sufficient units were abandoned to house more than 300,000 persons. A similar if less extreme situation exists in most large eastern and midwestern cities."[2] By the early 1970s few serious observers disputed that "If the forces producing unnecessary boarding-up are not arrested, 'any achievable program of new construction will continue to be swamped by the hemorrhaging that is now bleeding our supply of existing housing ...' and efforts to renew the inner city will be overwhelmed, as they already have been in New York and Philadelphia."[3]

The characteristics of an abandoned neighborhood are plain enough:

> "An abandoned neighborhood is virtually devoid of residents. There are few renters, only squatters, transients and people on the lowest rung of the social ladder. These few remaining residents are marked by futility, apathy and fear.
>
> "Buildings are severely dilapidated and many are completely abandoned. Many demolitions, both voluntary and involuntary, have occurred, leaving vacant littered lots. Abandoned cars are numerous and crime and fire are common. The area is generally decayed and has a bad reputation. City services are totally inadequate with bulk trash and garbage piled everywhere. A very few heavily guarded private stores may still exist."[4]

What factors bring neighborhoods to this grim condition? Can the process of which abandonment is the alleged culmination be halted before it runs its course and if so how? Is the ailment contagious, spreading more or less indiscriminately from one neighborhood to another or can contiguous neighborhoods be immunized from it?

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[1] For our discussion here, we do not feel it is necessary to define "abandonment" but we do recognize the existence of several different operational definitions, each of which is useful in particular research contexts.

[2] Grigsby and Rosenburg, op. cit., p. 157.

[3] Ibid., p. 158.

[4] Public Affairs Counseling, op. cit., pp. 29-30.

The literature offers no single theory of the abandonment process. One viewpoint, rather widely shared, is that abandonment is the virtually inevitable terminal stage of a neighborhood "life-cycle."[1] Alternatively, it is argued that abandonment is correlated to one degree or another with such variables as tenure status and tax avoidance operations, suggesting that abandonment can be prevented.[2] And yet another theorist argues that abandonment is indeed contagious but is susceptible of containment.[3]

The difficulty here is not merely that different theorists offer differing explanations for abandonment. More than that, each explanation is based upon observations made in neighborhoods already in an advanced state of abandonment, which means that none gets at the factors that start the process. Moreover, each begins with the tacit assumption that abandonment occurs only after a neighborhood has undergone substantial deterioration, an assumption clearly at variance with widespread experience.

This latter point requires embellishment because it is what makes important an inquiry into the causes of and remedies for abandonment. There are many kinds of change which may produce permanent vacancies in parts of the housing stock, vacancies which cause owners to board-up or abandon the structures. Most such changes -- population decline, new construction in excess of household formation, shifts in housing preferences or employment locations, rise or fall in real incomes -- express themselves through the process of neighborhood succession in such a way that abandonment should occur almost entirely at the lowest level of neighborhood quality and be limited to the properties in worst condition, or least in demand for other reasons. Except for adverse spillover effects, abandonment under those circumstances would be a manageable problem. But as has been observed, "The fact is that abandonment occurs across value and quality ranges. While less valuable properties in lower income areas are most likely to be affected, within any given area many of the worst properties will not be abandoned, and among those which are, will be included properties of seemingly better quality than many which remain inhabited."[4]

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1 See especially Ibid, p. 18 ff. Sternlieb and Hughes, op. cit., pp. 7-9, among several others explicitly endorse the life-cycle notion and describe the cycle's stages in some detail.

2 George Sternlieb and Robert W. Burchell, Residential Abandonment: The Tenement Landlord Revisited (New Brunswick, N.J.: Center for Urban Policy Research, 1972).

3 Michael Dear, "Abandoned Housing," Dept. of Regional Science, University of Pennsylvania (Philadelphia, 1973), mimeo.

4 Sandra Featherman, "Residential Abandonment: Its Early Stages of Development," J. Environmental Systems, Vol. 7 (1), 1977-78, pp. 2-3.

What needs explaining, therefore, is how the process gets started? Why are the first units abandoned? As a corollary, do these abandonments precipitate deterioration and further abandonment or does most of the observed decay and boarding-up in major urban areas stem mainly from other causes? "Most theories purporting to explain housing abandonment ... suggest single causes which are not operative in all cases of abandonment."[1] They include racial transition, "problem" tenants, unusually high vacancy rates, rigorous code enforcement, negative or inadequate rental income of landlords, inability of owners to borrow for repairs or renovation, inadequate public services, and absentee ownership.

In her pathbreaking inquiry into this issue Sandra Featherman focused on three adjacent census tracts, with differing socio-economic characteristics, in Philadelphia. These tracts were chosen because 1972 estimates of their long-term-vacancy rates, while low, indicated the possibility of incipient residential abandonment.[2] Relevant data were assembled from a mixture of sources -- published materials, field observations and interviews with owners, tenants, brokers, and public officials. Featherman discovered for one thing that:

> "The properties found to be among the first abandoned within the study area [a marginal but not badly decayed neighborhood] were generally those which were older and much larger or smaller than the pervailing neighborhood pattern, such as two-bedroom and six-bedroom houses. The difficulty in selling properties such as these which are too large or too small for the type of demanders being drawn to the neighborhood evidently make the properties more prone to abandonment. ....Since the demand for them is low, such properties are more likely than others in the area, when placed on the market, to be vacant for long periods of time. While vacant they are at risk to vandalism. In the study area almost all of the abandoned properties has suffered from severe acts of vandalism.[3]

Each year a few houses throughout the inventory, even houses in high-quality neighborhoods, suffer extensive property damage. In most cases, necessary repairs are made promptly. In the neighborhoods Featherman studied, however, "The high costs of repairing the damage was generally what had precipitated the owner's withdrawal of maintenance from the property. Though in many cases it might have been economically feasible to rehabilitate and resell the houses, fear of further acts of vandalism inhibited owners from reinvesting in these properties."[4] She goes on to report that in the eyes of many owners of vandalized houses, "Rehabilitation is seen...as an inordinate risk. They know that by not rehabilitating they lose the entire value of the property, but rehabilitation

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[1] Ibid., p. 3.

[2] Ibid., p. 2.

[3] Ibid., pp. 10-11.

[4] Ibid., p. 11.

does not guarantee a sale and would risk the loss of funds put into improvements if the property is revandalized before it can be sold and its title transferred."[1]

More generally, decisions to abandon damaged properties reflect an unfavorable relationship between prevailing market values and the cost of necessary repairs. When estimated restoration expenses approach or exceed the resale value of the repaired building, the individual investor has little or no incentive to make the outlays. If, in addition, individual investors are pessimistic about the neighborhood's future -- in particular, about prospective rents and resale values -- they are even less likely to make extensive repairs and more likely to board up the damaged building. An owner may well reason that it is wiser to take a tax loss on the property and invest any proceeds from insurance elsewhere.

Abandonment in Featherman's study sample was, then, not initially the consequence or terminal point of a long period of neighborhood decline and decay. If her findings are representative rather than idiosyncratic (to date the study has not been replicated), abandonment can and does occur in neighborhoods of sound quality overall, because despite their acceptable physical condition, the housing units within them have, as a group fallen in value to "the point of no return", that is, the point at which the expense of unsubsidized rehabilitation or new construction cannot be recovered, given current income levels of residents, rent/income ratios, and gross rent multipliers. A neighborhood at the point of no return is not necessarily doomed to decay, but it is vulnerable to that fate for two reasons. First, any new construction or major upgrading of existing structures undertaken elsewhere in the community will further depress relative housing values in this particular neighborhood and thereby further discourage new construction or rehabilitation within its boundaries. Second, owners who suffer major property loss from vandalism, fire or other disaster will have little incentive to restore their holdings to habitable condition. Moreover, if badly damaged and abandoned buildings in the neighborhood are not promptly demolished or returned to good condition through some form of governmental intervention, their presence may provoke greater disinvestment than would otherwise have been the case.[2]

Although there are circumstances where abandonment of housing is unnecessary, undesirable and avoidable, we recognize that much abandonment reflects an absolute excess of low-quality, obsolete dwelling units in low-quality, obsolete neighborhoods. Under the influence of rising real incomes

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[1] Ibid., pp. 12-13.

[2] Michael Dear, op. cit.

in the population generally and of declining inmigration from rural areas, the demand for inner-city residences has dropped substantially -- an outcome foreseen by some housing analysts as early as the 1950s. What was not anticipated was the actual spatial distribution of abandoned units. Because so many older dwellings are so much alike, the gradually increasing supply of obsolescing or obsolete dwellings is spread over a large area rather than being concentrated in a few blocks. So instead of neighborhoods dying quickly, one or two at a time, a large number of them are abandoned slowly and painfully.

Recycling abandoned structures in early abondonment areas under these conditions, without concurrent efforts to raise overall demand for housing in the affected neighborhoods, will usually prove fruitless, as several abandoned-house programs have shown. Whether simply removing the units would be any more effective in forestalling further abandonment and preventing incipient decay from gaining momentum is also uncertain. If, as Featherman's findings suggest, early abandonment often precedes decline, it may also precede low-income entry, but removal alone will not basically alter either immediate or overall market conditions that position the neighborhood for such entry. Strategies to concentrate abandonment have been suggested but appear extremely difficult to implement.[1] Traditional redevelopment, which potentially could make the process of thinning out much less painful, is eschewed, presumably because of its unpopular history and the lower cost of triage, i.e., simple neglect.

CONCLUSION

Several pertinent policy conclusions emerge from our discussion. First, given the way in which residential neighborhoods are formed in American cities, and given the necessity for urban structures to adapt continuously to economic growth and change, it is inevitable that socio-economic succession of a large proportion of neighborhoods occurs.

Second, succession in a particular situation may stem from any one or more of a variety of causes, not just decay or obsolescence as is so commonly assumed. Some of the factors causing succession may initiate within the neighborhoods themselves but more often the prime movers of both succession and decline are embodied in the larger urban context that envelopes each neighborhood.

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[1] James Heilbrun, "On the Theory and Policy of Neighborhood Consolidation," Journal of the American Planning Association, Vol. 45, No. 4, October 1979, pp. 417-426.

Third, because succession is inevitable, decline of individual neighborhoods is also unavoidable as long as there exists a deprived sector of the population to inherit the neighborhoods when they near the bottom of the socio-economic ladder. Decline is, in other words, most often the reflection of a rational rather than a perverse market process. Moreover, it may be the logical consequence of a general upgrading of housing and neighborhood conditions within an urban area.

Fourth, a number of factors other than low income -- particularly racial prejudice and discrimination, investment policies of housing suppliers and market intermediaries in neighborhoods of incipient decline, behavioral characteristics of certain portions of the lower income population, the thinning out of central cities, and public policies themselves -- may in certain circumstances contribute to the process of decline, increasing the number of neighborhoods that experience decay as well as the amount of decay within neighborhoods. Since decline could occur even in the absence of these factors, their importance, individually and collectively, is uncertain. The circumstances in which they may lead to market instability, i.e., a condition in which an imbalance between supply and demand becomes self-aggravating rather than self-correcting, is equally unclear.[1]

Finally, since decline for parts of the stock is a certainty, even though the amount of such decline is not, the appropriateness of measures to arrest deterioration in individual neighborhoods and in neighborhoods as a whole is difficult to assess. Ultimately the basic issue is whether, given the distribution of income in America, one can justify the scale of observable neighborhood decline in American cities. If yes, then the argument that decline reflects market efficiency is valid and policies should be directed at the consequences of decline. If no, -- if social and physical problems move unnecessarily from one neighborhood to another or deepen unnecessarily within neighborhoods -- policies should focus on housing-market and other variables that cause this to be so.

Although throughout this discussion we have stressed the essentiality for policy-making purposes of pinpointing the causes for neighborhood succession and decline, we also agree that "...somewhere along the line the question of what causes [a problem for policy] becomes irrelevant; ...policy must deal with its consequences, not with its causes."[2] If the various forces causing decay have run their course, it may be possible now to deal with the problem as it now exists and as it will be affected by a new set of forces now emerging.

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[1] On this point see especially Anthony Downs, "Key Relationships between Urban Development and Neighborhood Change," in ed. Michael A. Stegman, "Neighborhood Revitalization," Journal of American Planning Association, Vol. 45 (No. 4), October 1979, pp. 462-72.

[2] Henry A Kissinger, White House Years (Boston: Little, Brown, & Co., 1979), p. 569.