ENCOURAGING RESIDENTIAL REVITALIZATION: A METHOD FOR THE SELECTION OF TARGET NEIGHBORHOODS

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REFERENCES

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Revitalization plans for urban areas, whether by the private sector or by the public sector, may require a rational selection of the appropriate target neighborhoods. This selection should reflect the planning objectives. In this paper, a general quantitative method for the selection of neighborhoods for urban revitalization was developed and applied to Downtown Haifa, Israel. The proposed method links the strategies, the problems and opportunities in the area, and the desirable interventions to achieve revitalization. A selection procedures is proposed, which is based on grading candidate neighborhoods in the area on revitalization related indexes. These indexes were developed based on the available literature. The grades are weighted according to their relative importance in the strategy adopted by the authority. Different strategies will therefore lead to a different selection. There is a built in flexibility in the procedure which allows for the implementation of changes in strategy or planning objectives. Different indexes and measures may also be easily applied. The data base used for the indexes provides an assessment of the problems and opportunities in a given area and may thus guide the choice of appropriate interventions to achieve revitalization. The method may become part of the planning process and may be used in any area.

INTRODUCTION

The "Back to the City" movement gained considerable attention in the past decade (Laska et al., 1979; Home, 1982; Lang, 1982; Fainstein et al., 1983; London et al., 1984; Schill et al., 1983). The numbers are not dramatic and, generally, suburban areas continue to grow more than the cities (Gale 1984). But the new trend is very important to most players in the urban game -- residents, businesses, and governments, who are affected by the revitalization of central city neighborhoods. In many cases, gentrification is a secondary process that is triggered by primary processes involving urban reinvestment.

In many cities -- such as Washington (Gale, 1979a; Henig, 1982), Boston (Gale, 1979b), London (Williams, 1984), and Melbourne (Logan 1983) -- resettlement has been spontaneous, without prior public involvement. Most of the resettled neighborhoods are accessible to downtown activities, the buildings are well built, are architecturally and/or historically attractive, and their prices, at least in the beginning of the process, are low (Feagin, 1981; Laska, 1979; Gale, 1984). In many instances the revitalization process starts in one or two neighborhoods and may spill over to neighboring areas. De Giovanni (1983) described the typical process as starting with a few pioneers, usually young and single, who settle in a run-down, inner city neighborhood. The second stage is more substantial and includes families with children. Real estate values increase and speculation starts, i.e. the process of gentrification occurs. As more middle class households move in, displacement of the incumbent households starts. In the third stage, improvements in housing and public services are substantial. With the increase in taxes and real estate values, which result from wide middle class settlement, most of the incumbent residents are forced to move out.

The forces behind the process are: (1) demographic -- the increase in the 25-34 age group coupled with a higher age of marriage (Gale, 1984; De Giovanni, 1984; Williams, 1984), (2) economic -- the growth in downtown service employment, and the high cost of housing in the suburbs (Webman 1980; Damesick, 1982; ULI, 1980; Williams, 1984), and (3) cultural -- changes in attitudes that lead to the pro urban values of cultural diversity and pluralism (London, 1984; Williams, 1984). This combination of factors was powerful enough to start a process of private reinvestment in several central city neighborhoods throughout the world, such as Washington D.C., New Orleans, Stockholm, London and Paris (Gale 1984).

Major advantages accrue to the city when rundown central neighborhoods are revitalized and resettled: reuse and longer use of the existing stock of buildings and the existing infrastructure and services; an increase in the tax base; an increase in the safety of the area; increase in business activity; and improvement of the local image. Both the newcomers to the revitalized areas and local property owners usually benefit from the process. However, many of the incumbent residents, especially low income renters and minority groups, pay the price when they are forced to move (Hartman, 1984; Gale, 1979; London, and Palen, 1984).

The benefits of inner city revitalization and the need to mitigate the adverse effects of gentrification, led to the intervention of local authorities in the process. Various strategies have been proposed for planned revitalization, usually aimed at attracting a diversified mix of income groups while minimizing displacement (Downs, 1979; Gale, 1979; Lang, 1982). Some impressive successes have been reported in the United States (Brambilla, 1979; McNulty, 1985), Great Britain (Williams, 1984; Garrison, 1986), and France (Ebel, 1982). Many measures have been proposed to achieve revitalization -- ranging from zoning amendments and tax abatements to massive public investments in infrastructure and services. Most strategies

focus on the cooperation between the public sector and private investors in order to carry out the revitalization process without heavy public investments.

A municipal authority, having decided to allocate funds for a downtown revitalization plan, is faced with a selection problem: the selection of the most appropriate neighborhoods for reinvestment. Since "appropriateness" is based on economical, social, and political criteria, there is a need for an analytical selection method which will take into consideration the various variables involved. The planning literature includes several such qualitative selection methods.

This paper proposes a quantitative planning tool to be used by those interested in investing in order to encourage a revitalization process in central city neighborhoods. An algorithm for the selection of neighborhoods for revitalization is introduced. An application of the method to downtown Haifa, Israel, is demonstrated.

METHODS FOR THE SELECTION OF NEIGHBORHOODS FOR REVITALIZATION

The planning literature includes several methods for the selection of neighborhoods for revitalization. Little's (1966) guidelines for the selection of renewal program areas were based on several criteria: contribution to renewal goals; financial limitations; "strategic" location (relationship to downtown, major institutions, circulation pattern, etc.); minimization of potentially undesirable results, such as relocation; and the selection of neighborhoods which will otherwise deteriorate.

The process of targeting areas for Urban Development Action Grants (UDAG) was based on identifying levels of distress according to six different measures: percentage of housing units constructed prior to 1940; net increase in per capita income; population growth; unemployment rate; growth in retail and manufacturing employment; and percentage of the population at poverty level (Gist, 1980). Since meeting only three of the criteria constitutes eligibility, Beverly Hills, a very affluent area, qualified for federal grants (Time, 1987). An "impactation" formula was developed in 1977 stating that HUD shall select such "feasible and effective proposals" on the bases of the comparative degree of physical and economic distress, as a primary criterion. In the selection process, the words "feasible and effective" came to mean "having strong private financial backing." Priority was given to private investment over distress as a selection criterion.

The sensitivity of the selection process to social and economic considerations was recognized by Lang (1982). He suggested that the process be based on several variables and the interrelations and tradeoffs between them. Lang proposed the use of the Strategic Choice technique, which allows the decision makers and the public to see clearly all the choices open to them and to clarify the value assumptions that underlie these choices. Obviously, some decisions will be affected by these value assumptions. Strategic choice opens them to public scrutiny and thus increases the chance that the final choice will be based on widely shared values.

In line with Lang's suggestions, the use of the Strategic Choice technique for the selection of target neighborhoods is further developed here into a quantitative planning algorithm. This tool may be used by those interested in investing in order to encourage a revitalization process in central city neighborhoods.

THE PROPOSED METHOD

The point of departure is a decision to invest in the revitalization of central city neighborhoods in order to increase and diversify the population by adding newcomers of higher socioeconomic status to a thinning incumbent population, while improving the existing buildings and infrastructure. Having made such a fundamental decision, the public authority is confronted with two sets of decisions, relating to the basic one:

1. The selection of an *investment strategy*, based on political values and preferences and the resources available for the revitalization effort; and

2. The selection of the *target neighborhoods* for revitalization according to the adopted strategy;

The proposed method is based on a grading system of the various neighborhoods in the area considered for revitalization. Neighborhoods are evaluated and graded according to various indexes, which reflect the existing situation. The method guides the decision makers to choose a preferred strategy, according to which the indexes are weighed. Weighting reflects the relative importance of each index.

A rational selection of neighborhoods for revitalization in a given area requires a basic decision on the appropriate planning strategy. The revitalization strategy is usually selected by the policy makers. The planner may help the decision makers in formulating alternative revitalization strategies which may have different emphases, such as: minimizing the use of public funds, and/or investing in the most deteriorated areas, or revitalizing areas that are in close proximity to the Central Business District. The choice of indexes and their weighting is determined based on the selected strategy, since different strategies may have different selection criteria: one may require the use of a single index, another may use several equally weighted indexes or weigh them differently. Thus, an objective assessment of the existing situation, which is provided through the use of the indexes, is separated from value assumptions associated with a given policy, which are expressed in the weights. The objective evaluation of the neighborhoods provides the decision makers with a data base which may be used for different strategies and as a basis for formulating revitalization plans.

The proposed algorithm for the selection of neighborhoods for revitalization is based on the indexes' grades for each neighborhood, multiplied by the weights which reflect their priority according to the selected revitalization strategies. Neighborhoods which receive the highest grade are the most appropriate for the given strategy. The total grade $I^t_{j,k}$ for each neighborhood is the sum of the weighted indexes as follows:

(1) $I^t_{j,k} = {}_i\Sigma\ W_{j,i} * I_{i,k}$

where:
$I_{i,k}$ is the value of index i for neighborhood i, which is based on its present state;

$W_{j,i}$ is the weight given to index i reflecting the relative importance of that index in strategy j.

Each index may include several measures on which the neighborhoods are scored. The index grade is the sum of the scores for the measures within the index. Some measures, such as those related to socioeconomic data, may be easily quantified. Others may be based on value assumptions that are intangible. In such cases, comparative grading that reflects the status of the

measure relatively to other city neighborhoods is proposed. The indexes' grades should be normalized so that the index range would not change its weight in the equation.

The selection process is based on the premise that a defined revitalization strategy has been adopted by the policy makers. Planners will then use the proposed procedure, which is based on the following steps:

1. Identify the indexes to be used, according to the chosen strategy or strategies and determine their measures. The question of equal or different weights to the measures within the index should be determined by the planners and decision makers.

2. Collect the data required for evaluating the indexes ($I_{i,k}$) for all neighborhoods within the area considered for revitalization. Neighborhoods will be graded for each index, based on their scores for the measures. The grades will then be normalized (divided by the maximum possible grade).

3. Determine the indexes' weights to reflect their importance in the chosen strategy (j). The weights $W_{j,1}$, $W_{j,2}$...., $W_{j,n}$ will receive values ranging from 0 to 1, according to their relative importance. At this stage the decision makers ought to be consulted.

4. Substitute the values for the indexes ($I_{i,k}$) and the weights ($W_{j,i}$) into the selection equation (1). Each neighborhood (k) will receive a total grade ($I^t_{j,k}$) for strategy j. The values of $I^t_{j,k}$ will be arranged in a descending order. The selected neighborhoods will be those with the highest grades.

The use of this procedure in a case study is demonstrated in following sections.

REVITALIZATION RELATED INDEXES -- A PROPOSAL

According to the proposed method, target neighborhoods for revitalization will be evaluated by the city planner using indexes that are based on revitalization related criteria. Based on the literature survey, the use of three principal indexes is proposed to assess the existing situation with respect to revitalization: (1) the neighborhood attractiveness to target population; (2) the development potential and cost; and (3) the need for renewal, based on the state of social deterioration. Each index is composed of several measures, which provide the quantitative evaluation of the neighborhood's present status from a specific point of view. The data base used for these indexes provides an assessment of problems and opportunities and thus may guide the planner in the choice of the appropriate interventions to achieve revitalization. Other indexes may be used in accordance with the selected strategy. In adding up the quantitative evaluations, one is confronted with the question of weighing the indexes. One may or may not allocate different weights to the various measures within each index; however, the different indexes call for different weights, which will be determined according to their relative importance in the selected investment strategy.

The Neighborhood Attractiveness Index

The following six measures constitute the Attractiveness Index (see also table 1):
   - attractiveness of the building and neighborhood;
   - the low price of buildings relatively to other areas in the city;

- the investment potential;
- accessibility to services and employment;
- quality of environment and adequacy of services; and
- the existing land uses.

The first four measures are based on research regarding factors which encourage gentrification (Gale 1984; Feagin 1981; Laska and Spain 1979). The fifth was proposed by Ahlbrandt (1975) and Laska and Spain (1979) and the sixth was emphasized by Jacobs (1961) and proposed by Laska and Spain (1979):

The measure of *buildings and neighborhood attractiveness* is comprised of two components. The first is the architectural quality of buildings, which is enhanced by style, historical character, and details that are not to be found in contemporary architecture. The fascination with older buildings stems from changes in preferences and the nostalgia to the past. The second component is the neighborhood attractiveness, which is based on the characteristics of good urban streets and neighborhoods according to planners. Jacobs (1961) advocated urban diversity in terms of the coexistence of different land uses which creates the urban vitality throughout the day. The diversity in the physical environment, also advocated by Jacobs, is reflected in a variety of building heights and styles, diversity in structure in terms of age, state, architecture, and short blocks. Various other characteristics that add to the human scale, such as a variety of happenings (that may be enhanced by high population densities), colorful components, special designs, and landscape were emphasized by Israeli planners (Wolfson, 1983). A safe and convenient pedestrian environment improves the street's attractiveness. Neighborhoods are graded for each component relatively to other areas in the city.

Important reasons for resettlement are the *low price* of houses in central city neighborhoods as well as their *investment potential*. Neighborhoods where the price of housing is relatively low and the investment potential is perceived as high score well on these measures. Three submeasures are proposed for the investment potential measure. The first is the prevailing perception of the neighborhood's future, which relates to existing municipal plans for the area that may improve its image, the nature of the existing demand, and the nature of new uses in the area (whether or not they are more prestigious than existing uses). Two additional submeasures are based on the socioeconomic status of the existing population and that of the new residents. Since the proximity to lower classes tends to create an exodus of the middle class, a low socioeconomic level of the neighborhood's residents will reduce its attractiveness. Both the existing population and the new residents should thus be compared to city averages on several socioeconomic factors, derived from census data, such as years of education, home ownerships, residential densities (persons per room), and car ownership. The proposed definition of that relationship, which is provided in table 1, maximizes the score when the socioeconomic level is close to the city's average.

Accessibility or convenience to the various downtown activities such as employment, shopping, and cultural amenities is often cited as an important reason for living in a center city neighborhood. Growth in downtown office employment may result in an increase in the number of households with two members who are employed downtown. In these cases, commuting time to the Central Business District (CBD) becomes very significant. We propose that accessibility be measured in total travel time (walking and/or driving) -- neighborhoods within a short travel time to the CBD will score high on this measure.

The nature of *existing land uses* is an important locational preference factor. We assume that a "good" urban street will have a diversity of land uses. However, its attractiveness to settlers will increase when those uses are more compatible with the residential use. Accordingly, neighborhoods score high when their character is more residential and other existing land uses are compatible. The variables are therefore, the extent of existing residential use in the area and the compatibility of other existing land uses.

The quality and adequacy of various *services*, such as schools, parks, retail, and public transportation in particular, as well as the *environmental quality* are also important factors of locational preferences. We propose several components to this measure to assess the quality of availability of public services, maintenance, private services, public open space, schools, parking, public transportation, and noise and pollution relatively to other city neighborhoods.

The Development Potential Index

This index is based on the rationale that it would be easier to revitalize a neighborhood, when the level of the necessary (public) investment is relatively low and the feasibility is high. This index includes two measures. The first -- *cost*, is an attempt to estimate the extent of investment required for the development of the neighborhood to the level of an urban area that is attractive to settlers. A neighborhood will score high on this measure when the extent of necessary investment is relatively low. While some areas may be in need of restoration work, others may be dilapidated to the extent that redevelopment would be appropriate. The second measure is the *feasibility* of adding the various required services, modifying the existing land uses or implementing the physical improvements that will be required to enhance the quality of life. This may be influenced by (1) the availability of land for redevelopment, and (2) the ownership of those available properties. Publicly owned land may be easier to develop. In the case of abandoned areas, consolidated ownership will allow for comprehensive development. This index also involves comparative grading.

The Social Deterioration Index

This index is based on the rationale that a deteriorated neighborhood may have a higher public priority for renewal or revitalization, whether for reasons of social policy or political considerations. In many cases, social deterioration is accompanied by the physical deterioration of the area.

Four measures are proposed for the Social Deterioration Index, all based on census data. In Table 1 we propose definitions for these measures, through which every neighborhood is compared to the city's average, with the exception of the Population Decline Measure. The highest scores will be gained by neighborhoods that show a maximum of social deterioration, while those rating better than average will get no points.

The *population* decline measure indicates the decline in the number of households. We propose using households, rather than people, since population decline in many western cities is not necessarily followed by decline in the formation of households. A comparison between the most recent census and the previous one will provide us with the rate of population decline. Neighborhoods that lost a relatively high portion of households will maximize their score while neighborhoods with a growing population will minimize their score.

TABLE 1. The proposed indexes, their related measures, and their scores.

Index/measure/component		possible score - grade	
1. Neighborhood Attractiveness			0-1*
1.1 Attractiveness of Buildings and Streets		0-24	
Architectural/historical attractiveness of buildings	0-12		
Attractiveness of Streets in the Neighborhood in terms of:	0-12		
Diversity of uses	0-3		
Building diversity	0-3		
Human scale	0-3		
Vehicular/pedestrian balance	0-3		
1.2 Existing Real Estate Prices		0-24	
The cost of housing relative to other neighborhoods			
1.3 Investment Potential		0-24	
This index is rated in terms of:			
The prevailing perception of the neighborhood's future	0-8		
Socioeconomic level of incumbent residents:	0-8		
$M,k = (8/n) S Sl,k/Sl,c$ but $0 \le Ms,k \le 8$			
where: Sl,k is the neighborhood average for factor I;			
Sl,c is the city average for factor I			
Socioeconomic level of the newcomers to the neighborhood,	0-8		
(same as above but for new residents)			
1.4 Accessibility to Downtown Activities		0-24	
Travel time to downtown centers of activities			
1.5 Quality of Services and the Environment		0-24	
Quality and availability of the following:			
public services	0-3		
schools	0-3		
maintenance/sanitation	0-3		
private services (retail)	0-3		
public open space	0-3		
parking	0-3		
public transportation	0-3		
noise and pollution	0-3		
1.6 Existing Land Uses		0-24	
Compatibility of existing land uses to inner city living:			
extent of residential land use in area	0-12		
compatibility of other uses	0-12		
2. The Potential for Development			0-1*
2.1 Cost of Development		0-12	
Assessment of the required investment to attract settlers			
2.2 Feasibility of Development		0-12	
Availability of properties for development and their ownership			

TABLE 1. Continued.

Index/measure/component	possible score - grade
3. The Social Deterioration	0-1*
3.1 Population Decline Rate of decrease in the number of households $Mp,k = 8P1/P2 - 4$ but $0 \leq Mp,k \leq 12$ where: P1 is the number of households in the previous census; P2 is the number of households in the last census	0-12
3.2 Rate of Elderly Rate of elderly in the neighborhood relatively to the city: $Me,k = 4(2Ek/Ec-1)$ but $0 \leq Me,k \leq 12$ where: Ek is the percentage of elderly in the neighborhood k; Ec is the percentage of elderly in the city	0-12
3.3 Socioeconomic Level of Existing Population Socioeconomic level of the population, relatively to city: $Ms,k = 2(7-5/nS$ $Sl,k/Sl,c)$ but $0 \leq Ms,k \leq 12$ where: Sl,k is the neighborhood average for factor 1; Sl,c is the city average for factor 1	0-12
3.4 Socioeconomic Level of New Residents Socioeconomic level of the new residents, relatively to city (same as 3.3 but for new residents)	0-12

* Normalized grade

The *elderly* measure indicates the percentage of elderly (over 65) in the neighborhood relatively the city average. A high rate of elderly in the neighborhood may bring about a thinning of the population. In many cases, the maintenance level is lower in buildings inhabited by the elderly.

The third and fourth measures reflect the *socioeconomic level* of the *existing population* in the neighborhood and that of *new residents*, respectively. Both measures are based on census data concerning (1) levels of income, (2) education, (3) home ownership, and (4) residential density, which are compared to city averages. A low socioeconomic status is a symptom of social deterioration. A comparison of the level of the new residents with the incumbent will show us the direction in which that particular neighborhood is heading without intervention. HUD used the criterion of "the percentage of the current population in poverty" for the UDAG selection.

Scoring and Grading

Table 1 lists the proposed indexes and their related measures. The measures are defined and possible scores are suggested. In the Attractiveness and the Development Potential Indexes, higher scores on the measures represent a more favorable situation for revitalization. In the Social Deterioration Index the higher scores represent a higher degree of social deterioration. For lack of information regarding the relative importance of each measure within the index, they are equally weighted here. The index grade, which is the sum of the scores within the index, must be normalized so that its range of points does not affect its weight in the equation.

SELECTING AND WEIGHTING INDEXES FOR SPECIFIC STRATEGIES

The use of the selection method for various strategies is presented. The strategy is described and weights are proposed for each index in accordance with its relative importance in the strategy.

A Strategy of Minimum Public Investments

This strategy, which strives to maximize economic efficiency from the public point of view, is based on The Opportunity Oriented Strategy proposed by Downs (1979). The limited public resources are concentrated on particular projects that bolster housing demand by the middle class in areas where it shows weakness. The Strategy takes into account a secondary gentrification process that may take place in the surrounding areas as a result of a "spill over" effect. This strategy is thus built upon "strength" and permits an effective use of resources. The most important factor is the Neighborhood Attractiveness. The Development Potential Index is also important but to a lesser extent. Other indexes are rejected for this strategy. The following weights are proposed for the indexes:

Attractiveness: $W_{1,1} = 1.0$
Development Potential: $W_{1,2} = 0.5$
Social Deterioration: $W_{1,3} = 0.0$

Selection Based on the Level of Deterioration

This strategy strives to maximize social justice and equality by allocating funds to the weakest segments of society. A major commitment of public resources will be required since deteriorated (and unattractive) areas are selected. In many cases, social deterioration brings about a physical deterioration, and thus development cost will be high, but the benefits may also be high: distressed incumbent households will gain major improvements in their living conditions, while the enhanced appearance of the area may improve the city's image. The important factor is that of social deterioration, which includes the measure of population (or household) decline. The Development Potential Index must also be used so that cost and feasibility are taken into account to some extent. When a central location is also a priority, a fourth index may be introduced to measure the comparative centrality of each neighborhood. Thus:

Attractiveness: $W_{2,1} = 0.0$
Development Potential: $W_{2,2} = 0.5$
Social Deterioration: $W_{2,3} = 1.0$
Location: $W_{2,4} = 1.0$

A Gentrification -- Urban Decline -- Policy Proposal

This two phased strategy was proposed by Lang (1982). The first stage -- a Neighborhood Indexing Program -- calls for the development of neighborhoods that have a high potential for gentrification. These will provide economic support for nearby neighborhoods that are less threatened by the process and where current residents will be protected. Government policy for the selected "growth" areas will be to attract private reinvestment. The important index is Attractiveness. The Social Deterioration Index is not taken into account:
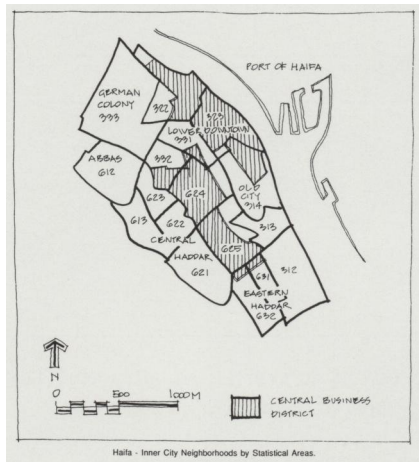
FIGURE 1.

Attractiveness: $W_{3,1} = 1.0$
Development Potential: $W_{3,2} = 0.1$

In the selection of the "Controlled Growth Areas," indexes must be weighted based on the policy. For instance, if the intent is to increase the supply of housing, the Development Potential Index will be important. The Social Deterioration Index must also play an important role here.

The second stage of this strategy, The Neighborhood Indexing Program (or Triage), deals with neighborhoods selected for abandonment since they are not candidates for eventual gentrification and face a bleak future of disinvestment. Since the land will be acquired via eminent domain proceedings (for future development or public open space) the size of the existing population is important. In this case, the fourth index is used to reflect the population size based on the number of households in the area, with the highest score for the smallest number. The Attractiveness Index received a negative sign, since the least attractive areas must be selected. The Social Deterioration Index is also important, thus:

Attractiveness: $W_{3,1} = -1.0$
Social Deterioration: $W_{3,3} = 1.0$
Population Size: $W_{3,4} = 1.0$

APPLICATION TO DOWNTOWN HAIFA, ISRAEL

The proposed method was applied to downtown Haifa. With a population of 225,000 within the municipal boundaries, Haifa is the third ranking city in Israel. Located at the meeting point of Mount Carmel and the Mediterranean, its central area is divided into two distinct business centers (Soffer, 1980). The downtown serves as a financial center with additional activities relating to the adjacent port; its residential areas are inhabited mostly by the Arab minority, that constitutes 17% of the city's (as well as the state's) population. The uptown business district (the Haddar area), specializes in commerce and other personal services and is inhabited mostly by Jews. The study area, which includes seventeen statistical areas (see Fig. 1), comprises both the uptown and the downtown neighborhoods. These statistical areas (SA) approximate the boundaries of established neighborhoods. All neighborhoods within the study area were popular residential areas in the past and have been losing population in the last thirty years.

While the Haifa Outline Plan of 1967 assumed a 15% reduction in the population of the Central City neighborhoods between 1967 and the year 2,000 (from 82,500 to 75,000), the 1983 census had already shown a 52% decline, to 39,600 persons. The percentage of the city population residing in central city neighborhoods declined from 36.6% in 1961 to 14.2% in 1983.

Like other western cities (Gale 1984), Haifa has not experienced population growth in the past decade, although there was a 15% increase in the number of households. There are currently

TABLE 2. The minority population measure.

Index/measure/component	possible score - grade	
Minority Population		0-24
Minorities in Neighborhood: Percentage of minorities in neighborhood.	0-12	
Minorities among new residents: Percentage of minorities among residents who settled in the neighborhood within the last five years	0-12	

no signs of a spontaneous resettlement process. The city is interested in attracting young households to inner city neighborhoods and is pondering ways of doing so.

Evaluation of Haifa's Inner-City Neighborhoods Based on Revitalization Related Indexes

Information for the various indexes on the seventeen statistical areas, which constitute the inner city, was obtained from the following sources: census data; interviews with municipal planners, realtors, officials in the city, and officials in The National Land Administration; follow up of newspaper ads; literature concerning buildings of historical and/or architectural importance; and the list of buildings recommended for conservation by the city.

Questionnaires were used in interviews with municipal planners as well as realtors. The questionnaire for the planners reflected the measures used in the Neighborhood Attractiveness Index. It guided the planner to evaluate each statistical area relatively to other city neighborhoods for each measure. The questionnaire to the realtors dealt with relative housing prices, existing demand for housing and businesses, population characteristics, and various perceived attitudes of buyers (minority population, architectural or historical values, and preferences of households with children).

The results of the application of the proposed method to Haifa indicate a need for an additional measure in the Attractiveness Index. From interviews with several realtors and planners, it has become apparent that Jewish residents tend to leave neighborhoods when minorities (Arab Christians and Moslems) move in. The existence of the minority population renders such areas unattractive to the majority population. This may be caused by either the lower socioeconomic level of the minority population (a factor which has already been taken into account in the attractiveness index), separatism trends or ethnic/religious discrimination. It has also become apparent that the minorities in Haifa prefer living amongst their own. The existence of the Arab population in Haifa is therefore considered a negative factor in the attractiveness index for Jews and a positive one for Arabs. A Minority measure was therefore added to the Attractiveness index, according to which neighborhoods with a high ratio of minorities receive a maximum score that is used as negative for a Jewish target population and positive for an Arab target population. Table 2 summarizes the new measure.

A study of the accessibility to major CBD activities demonstrates that most of the study area is within a short walking or bus ride distance. Differences in commuting time are negligible. The accessibility measure is therefore not used in this case. However, further research into local conditions indicates that it may be important to first develop centrally located, high visibility areas. Also, a major municipal goal that is stated in The Haifa Outline Plan 1967 is to create a

TABLE 3. Indexes grades* for statistical areas in Haifa.

| SA | Attractiveness | | | | Development Potential | | Social Deterioration | | Central Location | |
| | Jews | | Arabs | | | | | | | |
	score	normal	score	normal	score	normal	score	normal	score	normal
312	40.4	0.441	72.4	0.627	12.0	0.5	37.2	0.956	0.2	0.2
313	65.4	0.714	73.4	0.636	12.0	0.5	37.2	0.956	0.4	0.4
314	47.4	0.517	79.4	0.688	12.0	0.5	38.9	1.0	0.8	0.8
322	36.8	0.402	84.8	0.735	18.0	0.75	32.3	0.83	1.0	1.0
323	32.8	0.358	72.8	0.631	6.0	0.25	35.1	0.902	1.0	1.0
331	53.0	0.579	101.0	0.875	18.0	0.75	25.9	0.666	0.8	0.8
332	67.4	0.736	115.4	1.000	6.0	0.25	30.4	0.781	0.8	0.8
333	72.1	0.787	104.1	0.902	24.0	1.00	25.7	0.661	0.2	0.2
612	63.8	0.697	95.8	0.830	20.0	0.83	25.6	0.658	0.2	0.2
613	70.1	0.765	86.1	0.746	12.0	0.50	30.1	0.774	0.4	0.4
621	76.7	0.837	76.7	0.665	12.0	0.50	32.8	0.843	0.6	0.6
622	91.6	1.000	91.6	0.794	12.0	0.50	32.9	0.846	0.6	0.6
623	69.5	0.759	85.5	0.741	12.0	0.50	32.8	0.843	0.6	0.6
624	47.8	0.522	87.8	0.761	20.0	0.83	35.8	0.920	1.0	1.0
625	59.7	0.652	75.7	0.656	6.0	0.25	35.7	0.918	1.0	1.0
631	75.8	0.828	83.8	0.726	6.0	0.25	36.9	0.949	0.4	0.4
632	72.2	0.788	72.2	0.626	6.0	0.25	36.1	0.928	0.4	0.4

*The first number for each index is the cumulative score of all measures comprised in the index, as described in table 1. The second number reflects the normalized grade, which was computed by dividing each score by the highest score that was achieved for the index.

continuous Central District Business by developing areas between the two CBD's. A fourth index is therefore used, according to which each statistical area is graded based on its location with respect to the two Central Business Districts.

Table 3 summarizes the indexes grades obtained for the seventeen statistical areas, which comprise the central Haifa neighborhoods. With the inclusion of the Minority Measure there is a definite distinction between areas that score high for Jews and those scoring high for Arabs on the Attractiveness Index. The German Colony neighborhood, with 33% of the population Arabs and 67% Jews, rates high for both segments of the population. While uptown neighborhoods in Central Haddar (statistical areas 621, 622, 623, 623) and Eastern Haddar (631, 632) are attractive for a Jewish target population, it is mostly the downtown neighborhoods (statistical areas 323, 333, 331, and 612 respectively) that score high for an Arab target population.

Most of the inner city neighborhoods show a clear social deterioration, with scores reaching up to 38 points. Note that a total score of 16 points represents a neighborhood that is comparable to the city's average; higher scores indicate deterioration. The only exception is the Abbas neighborhood, which with a large upper class Christian Arab population, scores relatively high (7.2 points) on this index.

Most of the land in the Lower Downtown, the Old City, and the German Colony is state property, while the Uptown -- Haddar, where land is mostly privately owned, suffers from shortage in public properties. Several buildings that were used in the past for public local services, are being reused mostly for city-wide services rather than catering for a diminishing local population. The provision of additional public services in Haddar is perceived as a significant problem.

Application of Alternate Investment Strategies

The following is a demonstration of the use of the selection method for two strategies: a strategy of Minimum Public Investment and a strategy based on the Social Deterioration. The weights for the indexes are assigned in accordance with the adopted strategy, as previously described. The normalized grades in Table 3 are multiplied by the weights proposed for each strategy, in accordance with the selection algorithm. The calculation is performed separately for Arabs and Jews because of the different scores obtained by each group on the Attractiveness Index. The results are illustrated in Figure 2.
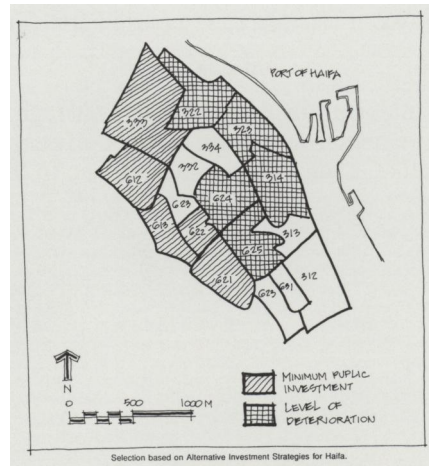

FIGURE 2.

The Strategy of *Minimum Public Investments* strives to maximize economic efficiency from the public point of view. The indexes of Attractiveness and Development Potential are used with weights of 1.0 and 0.5 respectively. Areas selected for an Arab target population are the German Colony (S"A 333), Abbas (S"A 612), and Lower Downtown (S"A 331). For a Jewish target population the German Colony (S"A 333) attained the highest grade, followed by Haddar neighborhoods -- (S"A 622, 612, 621, 613). Since the proposed strategy assumes a "Spill Over" effect on adjacent neighborhoods, this must be another consideration in the selection. The German Colony (S"A 333) is a mixed community bounded by Arab neighborhoods. Since that area's scores on the Attractiveness Index are higher for Arabs than Jews, it is assumed that any "Spill Over" effect will result in an Arab secondary gentrification. It is therefore recommended that for the Jewish target population the plan should concentrate on the selected Haddar neighborhoods, which create a territorial continuity (S"A 622, 621, 613).

When the selection is based on the *Level of Deterioration*, the most deteriorated areas are selected for revitalization. The indexes of Development Potential, Social Deterioration, and Central Location are used with weights of 0.5, 1.0, and 1.0 respectively. The selected neighborhoods are statistical areas 624, 625 in Central Haddar, populated mostly by Jews, S"As 323, 322 in the lower downtown, which are populated mostly by Arabs, and S"A 314 in the Old Town, which is almost deserted.

The Use of the Indexes to Develop a Revitalization Plan

The data base for the indexing may be used to develop the revitalization plan, based on the selected strategy. The following is a demonstration of the use of that data. Several interventions are proposed in order to promote private reinvestment in the areas selected for the first strategy.

The selected Haddar area offers some important urban amenities that add to its attractiveness: the Municipal Theater, the Municipal Library, the Science Museum (housed in a landmark Building), and two small parks. The area lost 12% of its households in the past decade and about half of the current households are comprised of elderly. About half of the residents are homeowners and almost all the rest are protected tenants. As a result, there is no immediate danger of displacement. On the other hand, some major changes may be required to bring

about the settlement of hundreds of new households. The attractiveness index provides a list of problems and opportunities in the area, and may direct the choice of measures.

A major problem is the relatively high cost of housing, caused by the demand from businesses (apartments are being used as offices). Interventions that may increase the supply of housing include a limit on commercial use to the first floor, and additions to existing buildings through the construction of penthouse units. Loans and subsidies may effectively lower the price for the target population. Other problems identified by the study are the relatively low image as well as the quality of the environment. Streetscape improvements that include the use of the "Woonerf," as well as upgrading of the existing neglected small parks will increase the availability of public open space and change the visual and environmental quality. Historic area designations as well as publicity may also improve the image of the selected area.

The areas selected for Arab resettlement form a territorial continuity on the western area of the city center. Given the problems in these areas, as identified through the indexes, more fundamental interventions are required. The provision of public services must be increased, and public open spaces must be developed. Improvements to buildings and infrastructure are also highly desirable. Incompatible uses, such as industrial uses, should not be permitted in the residential area. While the current trends of separatism are recognized, it is recommended that revitalization plans be used to encourage coexistence through mixed neighborhoods, wherever possible.

Evaluation of The Existing Revitalization Plan for Haifa in Light of the Proposed Method

The City had prepared a revitalization plan for Wadi Salib (S"A 314), an abandoned downtown neighborhood. The new plan envisions a mixed use area, inhabited by artists and designed to be a center of cultural activities and entertainment. Wadi Salib's location (between the two CBD's) and the fine Arab architecture of the remains of the neighborhood are the two main assets of the area. With the idea of developing the area solely through private investment, it was decided to charge a "real" price, including the cost of new infrastructure, for every piece of property in this publicly owned land. The resulting price of a residential unit in the area planned for revitalization was not lower than that of a similar size unit in the better neighborhoods in Haifa. To the city's dismay, there was no public interest in the plan, although it was widely advertised. None of the properties were purchased and development plans were postponed indefinitely.

Since decision makers in the city had, in effect, adopted a strategy of minimum public investments, which was tested in our case study, we can evaluate the city's actions relative to the scores attained for Wadi Salib (S"A 314) in Table 3. That area received a particularly low score on the Attractiveness Index for both Jews and Arabs. If the strategy based on Social Deterioration were adopted, that area would, in fact, have been selected. However, that selection would entail major public investments in infrastructure and subsidies to overcome the unattractiveness of the area. Unfortunately, all the city could offer was a plan and a new set of prices, that were actually much higher than those in the surrounding areas, thereby further reducing the attractiveness of Wadi Salib. The lack of compatibility between the municipal strategy, the characteristics of the selected target area, and the measures used for revitalization was the cause for the failure of the plan.

SUMMARY AND CONCLUSIONS

Revitalization processes are applied in many cities throughout the world, and usually start as a result of public reinvestment in the area. The literature survey shows several qualitative methods for the selection of target areas for revitalization. A quantitative selection algorithm was developed according to which, candidate neighborhoods for revitalization are graded to determine the most appropriate for a given strategy. The grading is based on the assessment of the current situation of each neighborhood in a given urban area with respect to several revitalization related indexes. The indexes are weighed in accordance with their relative importance in the selected revitalization strategy.

The method was applied to the center of Haifa. A study of the current situation, through the indexes and their measures, shows a state of deterioration that, in some cases, verges on abandonment. It is demonstrated that without proper intervention deterioration may escalate resulting in the disappearance of other uses as well. The results are used to identify areas that will be more attractive to settlers, areas with a high development potential, and those with the highest state of deterioration. The differentiation in the attained grades further reinforces the need for a strategy that will identify the important indexes to be used. The method was tested for various strategies and the results indicate a different selection of neighborhoods for different strategies. A study of the recent city sponsored revitalization plan, in the light of the proposed method, explains the reason for its failure. It supports our assertion that in order for a revitalization plan to succeed compatibility between the strategy, the target area, and the interventions is required.

The proposed method for the selection of neighborhoods for urban revitalization is generic and can be applied to other cities. Its principal advantage lies is in the flexibility of adding indexes and measures and weighing them in accordance with the selected strategy. The indexes grades further provide the city with information regarding problems and opportunities in each neighborhood. Accordingly, the appropriate interventions for inducing revitalization may be chosen. The method separates between the professional evaluation of the existing situation and the value laden choice of a strategy, which expresses a policy of the decision makers. The information base which is created by the planners, may be used for the advancement of different objectives and strategies. Decision makers can thus easily change the goals, or consider the importance of various strategies and objectives, through the use of the tools and data, given to them by the planners. Using this method, a city can select the appropriate neighborhoods for revitalization, for any given strategy.

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