

AN EVALUATION OF SELECTED SOCIAL CHARACTERISTICS
IN THE PLANNING OF A NEW TOWN

no

by

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CHAPTER I
INTRODUCTION

PURPOSE OF THE STUDY

The new towns are one of the great achievements of the last two or three decades in Europe. They are comprehensively planned communities. They are examples of modern urban planning where an attempt is made to provide opportunities for people to live and work in pleasant surroundings and under conditions favorable to industrial growth.

There are some related concepts always being associated with the idea of new towns since its inception. It has always been assumed that a new town is an independent, relatively self-contained, planned community of a size large enough to support a range of housing types and to provide economic opportunity within its borders for the employment of its residents. It is large enough to support a balanced range of public facilities and social and cultural opportunities.¹ These concepts appear so often in connection with the term "new town" that they have been almost inseparable. According to one typical definition, for example, the expression "new town" means "a town deliberately planned and built, and a self-contained town: a town which provides in addition to houses, employment, shopping, education, recreation, culture---everything which marks the independent satisfying town."²

These concepts have been used in connection with proposals for new towns in many major countries including the United States. ---even when the proposals are for new towns on the edge of existing cities or in the central city (new town in-town).

My purpose of this research is to examine each of these concepts in terms of the actual experience of new towns in several different parts of the world, primarily Great Britain and United States. For each of these concepts, I shall explain the origin, philosophy, and purpose behind it. Much of this discussion deals with the ideas of Ebenezer Howard, considered the father of the new-towns idea.³ Howard and his disciples (notably Raymond Unwin, Thomas Adams, C.B. Purdom, and F.J. Osborn) were responsible for developing the concepts underlying the British new-towns program, principles that profoundly affected the planning and building of new towns all over the world. These principles were, in the main, formally adopted by the British New Towns Committee, which was set up in 1945 to develop the guidelines and procedures for the postwar new-towns program.

In this study, I shall also examine the extent to which actual events have corresponded with the original concept in the new-towns planning, including a description of the changes and adaptations, if any, that have occurred in applying the concept. My concern here is to discover whether and to what degree each of the concepts can still be applicable today.

The focusing statement of this study is based on examining the past experiences of new town planning in terms of population

size, self-containment, population balance, and integration to discover the applicability of these concepts for the present time; therefore, we can draw some recommendations from this analysis which may contribute to more successful new town development in the future.

THE HISTORY OF NEW TOWN

New town planning and implementation is one of the oldest concepts in the history of human settlements. The civilizations of ancient Egypt, Greece, Rome, China, and Renaissance Europe planned and constructed new towns in order to meet various specific goals and objectives. Their motives involved military, economic, transportation, or religious requirements; the desire to exploit natural resources, build new capital cities, increase regional development, or relieve urban congestion; and the need to improve social, economic or physical environment. Many philosophers, architects, planners, social scientists, politicians, and others have contributed to the application of the new town idea, either by their utopian ideas or by participation in the actual implementation of new settlements.

It was only at the turn of this century that new towns were conceived as a comprehensive, unified concept. Sir Ebenezer Howard (1850-1928), who first put forward the concept of new town as an instrument to improve human environment, in his book Tomorrow---A Peaceful Path to Real Form, published in 1898. He formed the Garden City Association in England in 1899 and revised his book as Garden Cities of Tomorrow in 1902. Howard and his disciples combined all the positive elements of ancient historical dreams into one integrated philosophy which include:

1. Built according to a predetermined plan of development.
2. Small in size, so that people can know each other and reach

work and services easily.

3. Independence: free from any constraints of existing populations, and particularly of the central city.
4. Self-Containment: a minimum of in-and-out commuting, and adequate jobs for all resident workers.
5. Balance: not only in regard to economic diversity but with population heterogeneity---with respect to age, occupation, income, and ethnicity.
6. A plan and design to accommodate all these features, with closeness to nature and pleasant living and working conditions.

Since then new town principles have had an increasing influence on the process of planning and development throughout the world. It is mainly since World War II, however, that an effective, defined new town movement has actually come into being.

THE BRITISH NEW TOWNS

Britain, being the birthplace of the Industrial Revolution, was the first country to reach an advanced stage of industrialization and to realize its adverse effects on large metropolitan cities. After World War II, London's population had already reached the ten million mark. The city was mercilessly damaged by bombs in the war and ready for major change with devastation all around. It considered plans for reconstruction. Therefore the New Town movement gained great momentum, and the region of London was its principal focus. The experience of the earlier

garden cities of Letchworth and Welwyn was before the people for comparison with existing large metropolitans. The British people realized the benefits of small communities as a better way of living. The planning program of 1945 for Greater London, covering an area of 2,600 square miles, was directed towards a dual objective: rebuilding the war-destroyed city and relieving the intolerable over-crowding and congestion of the city.

The adoption of the policy that more than a million people must be removed from the central districts of London led to the adoption of the New Town Act of 1946 and the subsequent creation of a ring of New Towns around London under the Greater London Plan. The 1946 Act, which was re-enacted with modifications in 1962, gives the Minister of Housing and Local Government power to publish draft orders for designating New Town sites and development. After the New Town program was initiated in 1946, fourteen New Towns were started in the late 1940's; only one more in the 1950's; and several others have been launched since 1962. (see Table 1) The early New Towns were smaller, ranging from 25,000 to 100,000 people. Since 1962 the New Town program has been expanded substantially. The later New Towns, with ultimate populations ranging from 80,000 to 500,000 (the latest and largest one with a proposed population of half a million was announced in January 1969), will take a sizable share of the larger population growth predicted for the major city regions. The first period of new towns was initiated primarily to absorb overflow population from congested metropolitan centers such as London

Facts & Figures of British New Towns

New Towns	Date of Designation	Original	Population Proposed ¹	Dec. 1974
LONDON RING				
Basildon	1/49	25,000	103,600 134,000	84,900
Bracknell	6/49	5,149	55-60,000 55-60,000 ²	41,300
Crawley	1/47	9,100	n.a. ² 85,000	71,000
Harlow	3/47	4,500	undecided	82,250
Hatfield	5/48	8,500	n.a. 29,000	26,000
Hemel Hempstead	2/47	21,000	65,000 80,000	73,000
Stevenage	11/46	6,700	80,000 100-105,000	74,800
Welwyn Gdn City	5/48	18,500	n.a. 50,000	40,000
Total:				
London Ring		98,449	—	493,250
OTHERS IN ENGLAND				
Aycliffe	4/47	60	undecided 45,000	25,000
Central Lancs.	3/70	235,638	420,000 not estimated	242,500
Corby	4/50	15,700	undecided 83,000	53,750
Milton Keynes	1/67	40,000	200,000 250,000	64,000
Northampton	2/68	131,120	244,000 260,000	145,400
Peterborough	8/67	81,000	182,000 n.a.	98,000
Peterlee	3/48	200	28,000 30,000	26,500
Redditch	4/64	32,000	70,000 90,000	49,730
Runcorn	4/64	28,500	70-75,000 100,000	48,213
Skelmersdale	10/61	10,000	73,000 80,000	39,000
Telford	12/68	70,000	225,000 250,000	94,200
Warrington	4/68	122,300	201,500 225,000	133,000
Washington	7/64	20,000	65,000 80,000	39,000
Total:				
Others in England		786,518	—	1,058,293

TABLE 1 (continued)

New Towns	Date of Designation	Original	Population Proposed	Dec. 1974
WALES				
Cwmbran	11/49	12,000	55,000 55,000	43,000
Mid-Wales (Newtown)	12/67	5,000	11,500 13,000	6,700
Total: Wales		17,000	—	49,700
Total: England & Wales		901,967	—	1,601,643
SCOTLAND				
Cumbernauld	12/55	3,000	70,000 100,000	38,500
East Kilbride	5/47	2,400	82,500 90,000	71,500
Glenrothes	6/48	1,100	55,000 70,000	32,500
Irvine	11/66	34,600	116,000 120,000	50,100
Livingston	4/62	2,000	70,000 100,000	22,470
Stonehouse	8/73	7,250	45,000 70,000	7,800
Total: Scotland		50,350	—	222,870
Total: Great Britain		952,317	—	1,824,113

1 Two figures are given: the first is the population size when planned migration is to stop; the second is the proposed ultimate population, allowing for natural increase.

2 n.a. — not available.

Source: Town and Country Planning, 43, no.2 (1975).

and Glasgow. They presented most Garden City features except social balance. The second period has additional purposes to stimulate the economy of depressed areas and encourage migration among towns on a regional basis.

It is fair to say that the 30 years of British new town experience represent a considerable success. Building new towns has become a national policy that transcends changes of government. The population of new towns is now around 1.6 million and by the end of the century an estimated 3.5 million people will live in them in an environment of high quality.

NEW TOWNS FOR AMERICA

After World War I the contemporary new town movement came to the United States when a group of progressive thinkers and planners such as Lewis Mumford, Henry Wright, and Clarence Stein, etc. formed the Regional Planning Association of America (1923-33) to promote and discuss regional development and the new town movement. Clarence Stein, as president of the Association, visited England and the British garden cities. He was much impressed by Ebenezer Howard's Garden City concept. In their design of the suburb of Radburn in New Jersey, Clarence Stein, and Henry Wright introduced the neighborhood unit concept as a new approach to residential planning. It was the first attempt at creating a garden city in America made in 1928 in the development of Radburn. During the Depression in the early thirties

the Federal Resettlement Administration built three notable greenbelt new towns: Greenbelt, Maryland; Greenhills, Ohio; and Greendale, Wisconsin. The significance of this development was the advanced idea of resettling the rural poor in planned towns with the Garden City concept at the edge of urban areas. They are still today very fine communities.

Since World War II many planned new towns and large subdivision settlements have been initiated by commercial developers, a few of which have been intended to provide for local industrial employment. Park Forest (1947) near Chicago is one of the best planned communities for industrial development. Another example of an industrial new town is Peachtree City (1960) near Atlanta, Georgia.

In the late fifties planning started to emphasize regional and metropolitan development. In 1961 Washington's "Year 2000 Plan" was adopted as a policy plan or concept plan for the growth pattern of the Capital region. The plan emphasizes the future growth of the city along the corridors radiating from the central city. New Towns would be located along existing and extended diagonal arteries, with major portions entering rural areas reserved as permanent open space. Based on this plan, Reston (1963) and Columbia (1964) were founded as imaginative projects in the Washington region. They are considered to be the real new towns in the United States, based on the modern definition of new towns. Since then many others such as Irvine Ranch in California, Clear Lake City in Texas, and Jonathan in Minnesota

have been under development.

One of the most important moves towards new town development in the United States is Title IV of the Housing and Urban Development Act, passed by Congress in August 1968. This Act authorizes federal guarantees for loans up to 50 million dollars for a single project and establishes guidelines for new towns which must provide sufficient open space, balanced development, equal opportunity for minority groups and include low cost housing. A Community Development Corporation was then created in the Department of Housing and Urban Development to handle the new community programs.

There were some major innovations in the Housing and Urban Development Act of 1970. Title VII of the Act raised the ceiling on loan guarantees to new towns to a whopping 500 million dollars and extended the program to public agencies. A balanced, economically sound community is the goal of the program.

At the end of 1974, 17 new towns, such as Jonathan, Park Forest South, St. Charles, Flower Mound and Maumelle, etc. had received Federal aid for their planning and development. (see Table 2) However, due to the problems on the financing of existing projects, HUD finally made an announcement to phase out its new town program in September 1978.⁴

Since the building of new towns under the free economy of the United States is a private enterprise, the decisions regarding their nature and location are left to private developers and corporations. The new towns are to serve the market, which tends

TABLE 2

NEW COMMUNITIES WITH TITLE VII GUARANTEES,
April 2, 1974

New Communities	State	Federal Commitment		Proposed Population	Employment
		Amount (millions)	Date		
Jonathan	Minnesota	21.0	2/70	50,000	18,150
Park Forest South	Illinois	30.0	6/70	110,000	28,000
St Charles	Maryland	24.0	6/70	79,000	14,890
Flower Mound	Texas	18.0	12/70	64,000	16,450
Maumelle	Arkansas	7.5	12/70	45,000	n.a.
Cedar Riverside	Minnesota	24.0	6/71	31,000	4,600
Riverton	New York	12.0	12/71	25,000	11,180
San Antonio Ranch	Texas	18.0	2/72	88,000	17,990
The Woodlands	Texas	50.0	4/72	150,000	40,000
Gananda	New York	22.0	4/72	55,000	12,890
Soul City	N. Carolina	14.0	6/72	44,000	18,000
Radisson	New York	(1)	6/72	18,000	600
Harbison	S. Carolina	13.0	10/72	23,000	6,100
Roosevelt Island	New York	(1)	12/72	17,000	7,500
Shenandoah	Georgia	40.0	2/73	70,000	29,600
Newfields	Ohio	32.0	10/73	40,000	4,500
Beckett	New Jersey	35.5	10/73	60,000	14,300
Totals	—	361.0	—	969,000	244,750

(1) State projects, eligible for federal grants

Source: Town and Country Planning, 43, no.2 (1975).

to fill them with high and middle income families rather than poor. The future of new town development in the United States will hinge upon the further development of national, state, or regional policies on site location and social balance, in addition to governmental funding and participation.

CHAPTER II
POPULATION SIZE

HISTORICAL AND SOCIETAL ASPECTS

Until the Industrial Revolution of the nineteenth century, most of the world's population lived in small communities---in tribes, villages, or small urban societies. Urbanization has resulted in far larger numbers of inhabitants in a community and it has been virtually impossible to bring all these residents into large-scale socialization. Obviously people have always been more likely to socialize with others who are geographically near than with the great numbers of people in large urban centers.

There are three elements developing human socialization:

1. Tribal kinship and friendship are among the most well-known social associations developed and respected in society.
2. Working-group relationships could have been a good potential setting for socialization and friendship development.
3. Proximity made possible by the neighborhood setting, offers potentially the most promising friendship associations in terms of achieving socialization.

For several thousand years urban planners have known that a city of 30,000 to 50,000 people is of human scale. Plato, Aristotle, Da Vinci, Sir Thomas More, and Ebenezer Howard, along with the ancient Egyptians, Chinese, Indians, and Romans, can

lend us wisdom on the organization of the city of human scale. However, we do not know how to build a livable large city, and whether we like it or not, people will live in large cities.

The idea that a city should have a definite limited size is not new at all: Aristotle firmly maintained that there is a natural size for a city; Leonardo da Vinci mentioned a size limit for the city of Milan; and Ebenezer Howard made this a key element of his garden city plan at the turn of the century. All these and some other savants have argued that city size be limited to what we have called a regional trading center with a population maximum of about 30,000 people. They seem to arrive independently at this estimate by observation of successful cities known to them personally.

Today some modern planners would argue that a city of 30,000 to 50,000 people can meet most normal needs, without being so large to promote a strong sensory overload. On the other hand, some others would find such a small city lacking in variety and services; therefore, they would recommend a city of larger size. (see Table 3)

Most of the British new towns built in this century have less than 90,000 persons; nearly half of Israel's new towns are under 40,000 in population; and the Canadian new towns are even smaller. This planning principle stems from the proposals of Ebenezer Howard and his disciples, who argued for the advantages of a small town as an antidote to overcrowding and other adverse conditions that were then prevalent in the large industrial and

TABLE 3

Comparison of Population Size for Ideal Cities

Year	Proposed By	Area Involved	Proposal	Density Per Gross Acre	Optimum Population
1898	E. Howard	City	Book--Garden Cities	8-12 Dwelling Units	32,000
1924	Le Corbusier	City	La Ville Contemporaine	1,200 persons	3,000,000
1929	Clarence Perry	Neighborhood Unit	Neighborhood Unit Concept	5 dwelling units	5-9,000
1932	Frank Lloyd Wright	City	Broadacre City	1 dwelling unit	no limit
1944	Jose L. Sert	Residential Unit	Book--Human Scale in City Planning	3-5 dwelling units	5-10,000
1945	Walter Gropius & M. Wagner	Residential Unit	Book--A Program for City Reconstruction	4-10 dwelling units	5,000
1946	L. Justement	City	Book--New Cities for Old	10-35 dwelling units	1,000,000
1947	Paul Goodman & Percival Goodman	City	Book--Communitas	100 dwelling units	6-8 million

Source: Dechiaro, Joseph and Koppelman, Lee, Urban Planning and Design Criteria, p.516.

commercial cities of Britain. They objected to the growth of the big city at the expense of the countryside, the crowding and noisy slums, the increasingly long journey to work, and the rootlessness and social problems of the migrants from rural areas.

Howard's original formulation called for a limitation on both the numbers and the areas of a garden city. He recommended 32,000 inhabitants in the initial garden city and its rural surrounding belt, and 58,000 in a later town to be central to an associated group of towns. Moreover these population figures represented maximum levels of growth. Once having reached its ultimate population, the garden city should grow no more, and further growth should take place in additional garden cities.

Nearly 50 years later the Reith Committee suggested an "optimum normal population range" from 30,000 to 50,000, with related districts in the builtup area of the new town totaling from 60,000 to 80,000.⁵

Currently the new towns under review suffer from the well-known economic disadvantages associated with communities of small size. These disadvantages include:

1. A tendency not to be industrially diversified, to be dominated by one or two major industries and thus to experience economic instability. For example:

i) the Canadian new towns are typically based on a single resource-based industry, and tend to have a boom-or-bust character;⁶

ii) manufacturing industry in Israeli new towns is dominated by

the textile industry, which accounts for 34.2 percent of all employees; unfortunately textiles show the least rise in productivity and the least prospects for future growth.⁷

2. A reluctance on the part of some firms to establish themselves in small or medium-sized communities that have not yet gained any status or prestige, where manpower is limited, where there is a lack of ancillary services, and where they feel cut off from the world of information, ideas, and business.⁸

3. A high risk of instability, and limited adaptability. A declining firm can be a local disaster, and new firms are less likely to develop because of the sparseness of linkages. Moreover a dismissed worker has fewer chances for reemployment, and young people have fewer career opportunities. For example: One of the serious problems afflicting Israeli new towns is that there are few opportunities for advancement, a major reason for the high population turnover and the large out-migration, especially of young persons.⁹

4. Small communities tend to have a larger-than-average-sized industrial plant, thus becoming one-company towns with absentee ownership and all the attendant problems associated with them. For example:

In 1964, 8.7 percent of the businesses had 100 or more employees, as against 2.7 percent for the nation as a whole. This phenomenon is due partly to efforts on the part of the state (which provides public loans to new industries) to assist primarily big enterprises, which soon make a notice-

able difference in the labor market. Moreover big industries owned by state or public companies or by powerful overseas investors, having greater technical, organizational, and financial resources behind them, find it much easier to hold their own in the development regions and new towns.

5. Small communities cannot provide industrial agglomeration economies for self-sustaining growth.

6. Small communities cannot provide a wide variety of public services or facilities. If they do, though, the costs are extremely high. For example:

- i) the British new towns during their early stages suffered from a shortage of essential services, facilities, and amenities, due to financial restrictions;¹⁰
- ii) the Israeli new towns are characterized by a lack of essential urban facilities and services, especially cultural institutions---a major cause of their inability to attract and/or hold workers of high socioeconomic status;
- iii) the Canadian resource---based new towns face just the opposite situation---they are characterized by an abundant supply of modern shopping center, churches, schools, libraries, etc. of a size and in number far beyond those found in ordinary communities of the same population size. The "problem" is that these are all provided by "the company", with the result that it tends to produce an attitude of "let-the-company-do-it" and the absence of the usual duties, responsibilities, and freedom of citizenship present in normal community.

Because of these disadvantages in the size of their new towns, current thinking among planners in Britain, Israel, Canada, and Scandinavia is to increase the size of existing new towns, and to plan for larger ones when and if such towns are built in the future.

Many of the British new towns have proved so successful that they have grown at a much faster rate than originally anticipated. As a result the initial population targets of most of the "older" new towns have been substantially increased to provide for second-generation growth. In a few cases---e.g., Basildon, Crawley, and East Kilbride---the revised target population is 100,000 or over. Moreover, plans for the recently built or designated new towns such as Telford and Warrington (see Table 1), called for target populations of up to 250,000.

Harold Wilson, then prime minister, commented on the reasons for these larger target populations:

"...not just because by concentrating our efforts on bigger schemes we can achieve a faster and more economical rate of building---though this is important. Town dwellers today are demanding an ever wider range of urban facilities, and many of them can be provided economically only in larger towns. At the same time, increased mobility has made it possible to think in terms of larger towns without the loss of the sense of community provided in the first generation new towns."¹¹

In the United States, new town size varies more than in any other country and depends mainly on the particular developer of

a new town. New towns in the United States also exhibit a wide range of target populations. Rather than being related to any ideal conceptions as to population size, their target populations appear to be more a function of the particular developer's goals, land holdings, market evaluations, or financial capabilities. Albert Mayer, an American new town planner, discusses new town size in the United States: "American new towns will be of any standard size---they can well vary from 50,000 to several hundred thousand, appropriate to the individual location, function, and outlook. But each will be of an approximately predetermined size modified by tolerance..."¹² As a point of departure, a planner may also describe the acceptable new town in a country by using the average of all cities (excluding the extremely large or small ones) within that country as his prototype. To accomplish this, the following procedure could be used:

1. Cities of the country should be categorized by degrees of self-containment.
2. The category of self-containment desired for the new town should be selected.
3. The size of the selected cities should be determined.
4. Those size should be averaged, and this average considered as the optimum size for the proposed new town.

OPTIMUM SIZE OF A NEW TOWN

There is no ideal or optimum population size for all cities, since the best size for any city is dependent on such variables as composition of population and economic activities, social activities, geographic setting, accessibility and relationship to other towns and cities in the surrounding region, technological developments (especially with respect to transportation and communications), etc. Instead, new towns should be planned to have an adaptive ability, a flexibility to accommodate most scales of activity within a rapidly changing urban or technological society.

THE NEIGHBORHOOD CONCEPT

A new town is like a human body consisting of several organs. Once it is born, it may grow, get stable and prosperous. On the other hand, it may decline and even die just as an organism does. Neighborhood unit is one of the most important organs of a new town body; therefore, we may analyze the organization and optimum size of a neighborhood unit prior to the study of the whole city.

Since the beginning of neighborhood concept in the ancient cities of the world, the neighborhood unit has been of interest to many different professions concerned with urban life. The continuous degeneration of some elements of today's large cities has once again brought sociologists and planners to view the

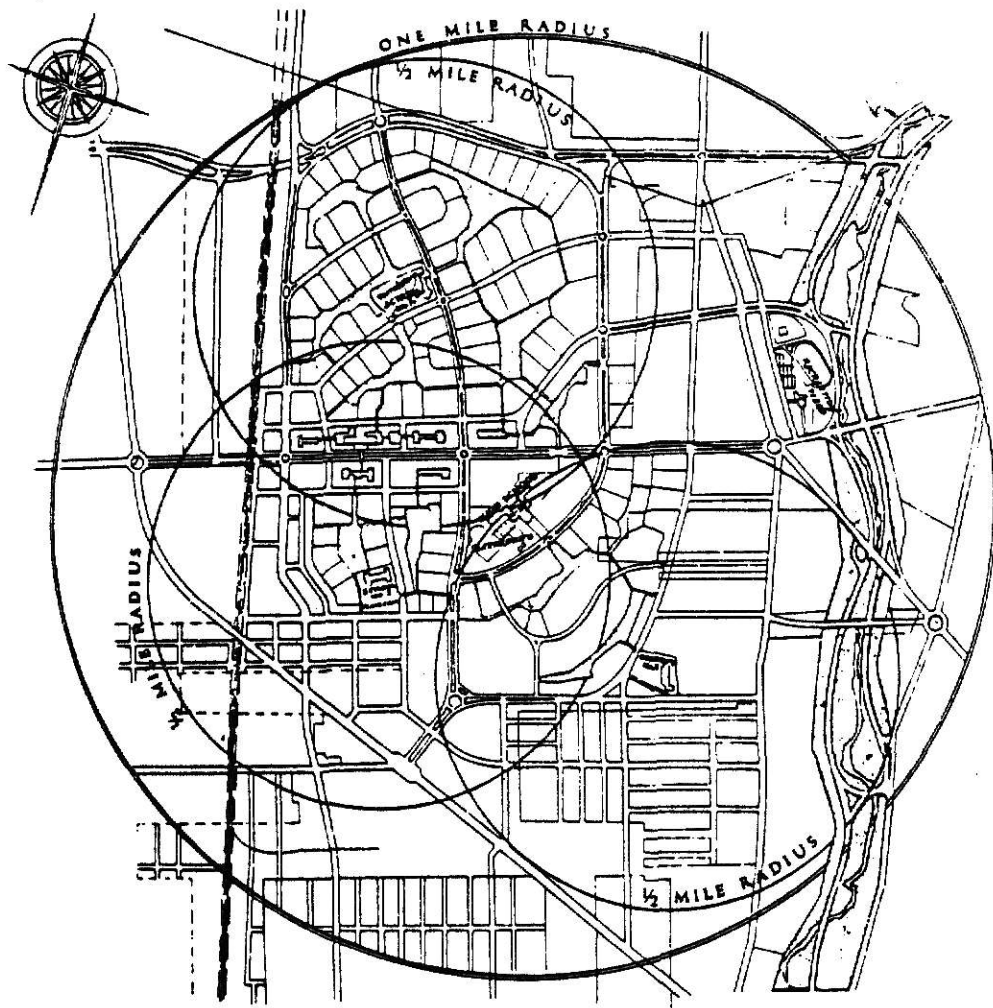
neighborhood unit as one promising solution to degeneration. Social and physical planners in particular have convinced neighborhood as a combination of the preindustrial pastoral village and a means of fulfilling modern planning necessities. Many planners and sociologists indicate that the neighborhood unit may be the means to retain urban culture and establish a new, positive urban social climate. There are several successful new town planning with this concept both in Britian and the United States.

In the late 1920's, the neighborhood unit was a well-developed concept defined in terms of these basic principles:

1. A neighborhood is the area within which residents may all share the common services, social activities and facilities required in the vicinity of the dwelling.
2. A population limited to what will support one elementary school, which is the center of the unit and within a one-half mile radius of all residents in the neighborhood.
3. A well-marked boundary effected by an arterial thoroughfare.
4. Ample recreation and open-space areas.
5. Convenient local shops.
6. An internal street system facilitating the movement of traffic within the neighborhood, but calculated to discourage other uses.
7. The grouping of several neighborhood units (may be called as large neighborhood unit) served by a high school and one or two major commercial centers, the radius for walking distance

FIGURE 1

General Plan Showing Neighborhoods



Source: Dechiara, Joseph and Koppelman, Lee, Urban Planning and Design Criteria, p. 504.

to these facilities being one mile. (see Figure 1)

Since school is a basic, essential community service, a planner should use it as a fundamental requirement and point of departure for basic size calculations. The school building may offer the focal point around which many common interests of families may be organized with minimum need for special physical facilities. An elementary school is the center of a neighborhood, while a high school may be a joint effort between two or more neighborhoods. According to educational authorities, a school district needs a minimum of 1,000 school-age children to adequately sustain a four-year high school with 300 students. Support of such a school requires a group of more than 3,500 people, assuming approximately one pupil per family.¹³

Some planners believe that the population of a neighborhood unit needed to support the basic facilities of a school will be around 5,000. Others think a neighborhood may function with a maximum population of 10,000.¹⁴ Generally, then, a population of 7,000 seems most desirable.

OPTIMUM SIZE

Of the several traditions within urban sociology, the demographic research on optimum city size comes closest to provide a workable remedy. Fenton Keyes is representative of this type.¹⁵ Employing U.S. Census data for 3,890 communities, he examined the correlation between city size and ninety-four different social phenomena. His analysis revealed three

significant breaks: A population of 25,000 marked the "rural-urban" distinction; a population of 100,000 marked the "well-defined city"; and a population of 500,000 characterized the "metropolis".

Meanwhile Otis Duncan in "Optimum Size of Cities"¹⁶ shows that cities with more than 50,000 people have a big enough market to sustain about sixty different kinds of retail shops and that cities with over 100,000 people can support sophisticated jewelry, fur, and fashion stores. He shows that cities of 100,000 can support a university, a museum, a library, a zoo, a symphony orchestra, a daily newspaper, AM and FM radio (see Table 4), but that it takes a population of 250,000 to 500,000 to support a specialized professional school like a medical school, an opera, or all of the TV networks.

Beyond the human-scale city of 30,000 to 50,000, one begins to incur interpersonal social disadvantages not found in smaller cities, and new disadvantages continue to be initiated up to a population 10 times this number. This is not to say that at a population of 300,000 to 500,000 interpersonal problems begin to disappear. They do not. However, such a city begins to acquire compensatory benefits; more and more metropolitan advantages accompany increasing size. Then, beyond a population of 1 million or so, new disadvantages of scale become dominant. This concept is represented roughly in Figure 2.

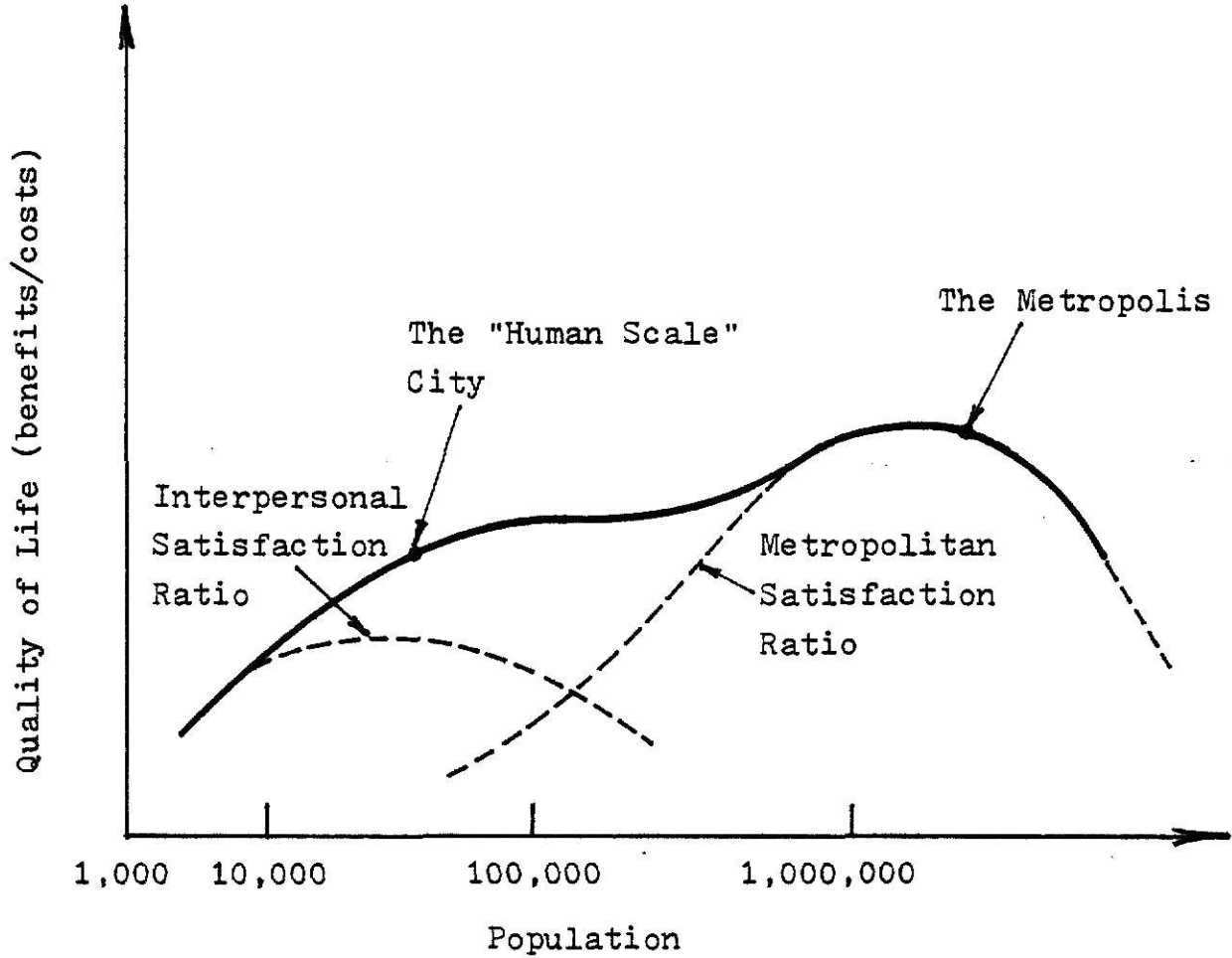
Can we be more precise about these so-called interpersonal advantages and metropolitan advantages? The former vary from

Profile of A City of 100,000

<u>PROFESSIONAL</u>	<u>SERVICE</u>	
ENGINEERS, ARCHITECTS, PLANNERS AND LANDSCAPE PLANNERS	BUS STATION AND NETWORK	BOOK STORE
PHYSICIANS AND SURGEONS	MASS TRANSPORTATION	PHARMACIES
DENTIST	RAILROAD	LIQUOR STORES
OPTOMETRIST	AIRPORT AND TRAVEL AGENCIES	SALVAGE STORES
NURSES	TAXI	SPORTS STORES
LAWYERS AND JUDGES	TRUCKING SERVICE	JEWELRY STORES
TEACHERS	HOTELS AND MOTELS	GARDEN SUPPLY STORE
MUSICIANS	BARBER SHOPS	BUILDING MATERIALS
ACTORS AND SINGERS	BEAUTY SHOPS	FARM EQUIPMENT
PAINTERS	AUTO AND OTHER REPAIR SERVICE	AUTO DEALERS
ARTISANS	GASOLINE STATIONS	PRINTING AND PUBLISHING
RELIGIOUS CLERGY	PLUMBING	<u>WHOLESALE BUSINESS</u>
ACCOUNTANTS	LAUNDRY	CARS
LIBRARIANS	RADIO, TELEVISION, AND TELEPHONE	GROCERIES
HEALTH WORKERS	OTHER COMMUNICATION	DRUGS
TECHNICIANS	THEATERS AND CINEMAS	FARM PRODUCTS
<u>MANAGERS AND ADMINISTRATORS</u>	DANCE HALL, STUDIOS, AND ORCHESTRA	SCRAP AND WASTE DEALERS
SALARIED:	BOWLING ALLEY AND BILLIARDS	FURNITURE
MANUFACTURING	GOLF COURSE	CONSTRUCTION MATERIALS
RETAIL TRADE	SKATING RINK	LUMBER YARD
OTHER INDUSTRIES	COMMUNITY CLUB	<u>MANUFACTURING</u>
SELF-EMPLOYED:	SWIMMING POOLS	BAKERY
RETAIL TRADE	MORTUARIES	DAIRY
OTHER INDUSTRIES	RESTAURANTS	FOOD PROCESSING
<u>SALES WORKERS</u>	NEWSPAPERS	BUILDING MATERIALS PLANTS
MANUFACTURING AND WHOLESALE TRADE	<u>FINANCIAL AGENCIES</u>	BUILDING CONTRACTORS
RETAIL TRADE	BANKS	LAND DEVELOPERS
OTHER INDUSTRIES	TRUST COMPANIES	INDUSTRY
<u>CLERICAL</u>	INSURANCE AGENCIES	CARPENTRY
BOOKKEEPERS	CREDIT AGENCIES	
SECRETARIES, STENOGRAPHERS, AND TYPISTS	REAL ESTATE AGENCIES	
OTHER CLERICAL WORKERS	<u>PUBLIC INSTITUTIONS</u>	
<u>CRAFTSMEN, FOREMAN, AND KINDRED WORKERS</u>	MUNICIPALITY	
AUTO MECHANICS	POLICE	
MECHANICS AND REPAIRMEN	FIRE	
MACHINISTS	POST OFFICE AND TELEGRAPH	
METAL CRAFTSMEN	OTHER GOVERNMENTAL OFFICES	
CARPENTERS	PUBLIC UTILITIES	
CONSTRUCTION CRAFTSMEN	<u>COMMUNITY INSTITUTIONS</u>	
OTHER CRAFTSMEN	SCHOOLS	
<u>OPERATIVES</u>	HEALTH CLINIC	
MANUFACTURING	HOSPITALS	
TRUCK DRIVERS	CHURCHES	
OTHER TRANSPORT EQUIPMENT OPERATIVES	MUSEUMS AND ART GALLERIES	
<u>LABORERS</u>	WELFARE AND NON-PROFIT ORGANIZATIONS	
CONSTRUCTION LABORERS	<u>RETAIL BUSINESS</u>	
FREIGHT, STOCK, AND MATERIAL HANDLERS	CLOTHING STORES	
OTHERS	SHOE STORES	
<u>SERVICE WORKERS</u>	FOOD STORES	
CLEANING SERVICE WORKERS	DEPARTMENT STORES	
FOOD SERVICE WORKERS	GENERAL STORES	
HEALTH SERVICE WORKERS	CANDY STORES	
PERSONNEL SERVICE WORKERS	FURNITURE STORES	
PROTECTIVE SERVICE WORKERS	APPLIANCE STORES	
PRIVATE HOUSEHOLD WORKERS		

Source: Golany, Gideon, New-Town Planning, p.145.

FIGURE 2
Satisfaction Level as a Function
of Urban Scale



Source: Gibson, J., Designing the New City, p.168.

person to person, of course, but interpersonal benefits in a human-scale city of 30,000 might include the following:

1. One would feel that he "knows everyone in town" yet has privacy and some variety. One does not interact daily with the same restricted group, as he must in a village, yet he "spans the space."
2. There are sufficient churches, recreational opportunities, and stores for variety, but a small enough number of schools to give parents a feeling of control over their children's activities.
3. One knows the power structure. It is numerically too small to be able to withdraw behind a wall of assistants and to find its own social life. The mayor, the banker, the superintendent of schools, and other public officials must be part of the mainstream of the city if they are to have any social life at all. Thus they are part of the social fabric of the town.

This feeling of "control" begins to disappear, however, as the city grows beyond 50,000. There appear larger factories with absentee ownership and managers who are oriented toward faraway home offices. Unskilled workers are needed, and class and social stratification takes place. On the other hand, there are more jobs, more money, and more variety. When the population reaches about 250,000, specific new metropolitan benefits begin to be available:

1. Large department stores and small specialty shops can exist.

2. A symphony orchestra, an art museum, and at least occasional live theater are possible.
3. A medium-size university is feasible.
4. More important than these social and educational opportunities, however, is the new kind of job climate that develops in a city as it approaches a population of 1 million. Then there are multiple job opportunities for unskilled and semiskilled persons. A small city acts like a company town to semiskilled people. They have one, or at most a few, job opportunities, and they lack security through diversity. In a metropolitan regime, on the other hand, multiple job opportunities develop.

While in general there is no single optimum population size of cities, both small and big cities have their advantages and disadvantages respectively, the experience of the countries surveyed does provide three important lessons regarding size range:

1. The population sizes for which most of the independent non-metropolitan new towns surveyed were planned and built (30,000-60,000), following the original Howard concept, were too small. As a result, they suffered from the familiar economic, social, financial, and political problems associated with small communities.
2. Based on the recent plans of the new town programs in the countries surveyed and the analysis of this chapter, there is sufficient evidence to suggest that cities in the size

range 100,000-300,000 offer most of the advantages of large size (e.g. agglomeration economics) and none of the disadvantages of the very large metropolis.

3. The advantages of a single large city can be realized by small and medium-sized new communities if planned on a regional basis---that is, as part of a cluster of new towns, including expanded towns and existing towns and cities. With good regional transportation and communication systems making possible interindustry links between small and medium-sized cities within a region, and these cities and the mother city, key elements of agglomeration can be achieved without requiring actual physical agglomeration. This points up the critical importance of regional infrastructure policy in the planning of a new town. It also indicates the need for greater emphasis on the appropriate functions, locations, and sizes of new towns, and on the relationships between new and existing cities within a regional context---an issue now concerning British, Israeli, and Canadian new town planners.

CHAPTER III

SELF-CONTAINMENT

From the writings of Howard and his disciples, it can be inferred that the goal of self-containment had three interrelated aims:

1. A minimum of in-and-out commuting.
2. A level of employment to match the level of job demands from the economically active resident population.
3. A cross section of economic activities so that the new town is not dominated by a single industry or occupation; this would minimize economic instability.

LEVELS OF NEIGHBORHOOD AND COMMUNITY

New towns and their neighborhoods require self-containment for both public services and sound social composition. Some planners view neighborhood self-containment as a concept that has been extended to the new town. The neighborhood is an entity that provides job opportunities for its residents together with daily shopping and social facilities. The difference between the self-containment levels of the neighborhood is a matter of degree and also exists between the new town and the established large city.

A primary neighborhood goal is to provide maximum possible daily services within a short distance from its residents.

This does not mean, however, that a unit should be self-contained and self-sufficient in all services, since even a new town may not be able to reach such independence alone. The decentralization of new-town services among its neighborhoods may not only ease family life within a neighborhood but should also decrease the number of trips taken to the new-town center and thus indirectly solve some traffic problems. Neighborhood unit organization seems the only practical answer to the giantism and inefficiency of the over-centralized metropolis. If the neighborhood unit within a new town provides most daily facilities for all age groups, its effect on the younger generation and on family life as a whole may be beneficial.

If self-sufficiency in providing services for a new town is desirable and the neighborhood concept is accepted, some services will be duplicated between the neighborhoods and the town center while others may be distributed in hierarchies (of size and function) between the two. In any case, neighborhood development should not diminish the social, economic, and administrative roles of the new-town center. A neighborhood shopping center will not, however, provide for all local needs. Thus a new-town center should provide a larger variety of services than a neighborhood. The balancing of the relation between the new-town center and neighborhoods is one of the prime issues facing new-town planners the resolution of which will require the efforts of the entire planning team. The distribution pattern of educational and health-care services may be a key to

this problem.

Although self-containment is suggested here for the neighborhood unit to provide daily, local, immediate services and facilities, it is not the purpose of a neighborhood to be an impractical, totally independent island within its urban surroundings. Instead, the planner should design a neighborhood as an integral coherent segment of the overall new town linked to the new-town tax system, public utilities, services, and especially to its government. Despite its described comprehensive self-containment and self-identity, a total new-town community will be able to use and enjoy those services and amenities provided by any neighborhood unit. A relatively self-contained balanced neighborhood that offers employment opportunities and delivers daily social services is an essential contributor to the formulation of a sound economic base for its new town. It is also clear that friend and family cross-neighborhood relations will form and establish interneighborhood socializing.

THE PAST EXPERIENCES

When new towns are founded independently outside urban regions to capitalize on a natural resource or to encourage the economic development of undeveloped regions as in the case of the Canadian new towns, there are usually enough jobs for their inhabitants. Since these towns are explicitly established for purposes of industrial development, and since they are typically located in geographically isolated areas, the planners provide a direct link between the number of jobs and the number of resident workers.

It is different in the case of those new towns built to help decongest the population of large urban centers and direct metropolitan growth. Here the issue of balance between employment and population has been approached in different ways, judging from the British and Scandinavian experiences.

BRITISH EXPERIENCE

Obviously, achievement of a balance between employment and the working population has been one of the basic principles of the British new-towns program. The objective of self-containment and self-sufficiency was an established policy handed on for implementation to the development corporations that were to build the towns. Consequently each corporation paid particular attention to the two basic elements of "working and living"

---that is, employment and housing---trying to keep these in balance at each stage of town growth, as well as when a town reached its ultimate size.

One way of measuring the extent of self-sufficiency in a community (in terms of employment) is by its job index---the number of jobs per 100 economically active residents, with the ideal index being 100. A commuting or dormitory town would typically have a low index, while an industrial town and the central city of a metropolitan area, typically would have a high index, often greater than 100.

But the balance of jobs and resident workers, as reflected in the job index, does not tell the full story regarding self-sufficiency. The potential of balance can be realized only if the two factors---jobs and working people---are interrelated; that is, if the people who live in the town are those who work in it. If the two factors are not interrelated, there will be cross movement, with residents traveling out to work elsewhere, while jobs in the town are filled by people who live outside.

The effect of these factors can be measured by comparing the number of journeys local to the towns (i.e., total number of employed residents of new town who work in new town), with the number of cross movement (i.e., total number of in-and out-commuters). The ratio of local to cross journeys is called the self-sufficient index. (see Table 5) The higher this index, the greater the degree of self-sufficiency. For all eight London new towns, the index in 1966 was 1.45; that is, the

TABLE 5
Job Indexes and Commuting-to-Work Patterns,
London Ring New Towns, 1961 and 1966

Town	1961		1966	
	Job Index ¹	Self-Sufficiency Index ²	Job Index ¹	Self-Sufficiency Index ²
Crawley	101.3	1.59	111.5	2.05
Hemel Hempstead	79.9	1.72	84.4	1.82
Welwyn G.C.	124.6	1.09	121.5	1.12
Hatfield	59.4	0.66	60.0	0.63
Basildon	82.2	0.96	107.1	0.96
Bracknell	115.3	1.13	126.0	1.02
Harlow	86.0	2.05	97.1	2.05
Stevenage	109.2	2.29	111.5	2.05
Total, London Ring new towns	94.1	1.44	102.8	1.45

$${}^1\text{Job Index} = \frac{\text{number of new jobs in new town}}{\text{number of employed residents in new town}} \times 100$$

$${}^2\text{Self-Sufficiency Index} = \frac{\text{total number of employed residents of new town who work in new town}}{\text{total number of in- and out-commuters}}$$

Source: Ogilvy, A.A., Employment Expansion and the Development of New Town Hinterlands, 1961-1966, Table 3.

persons who live and work in the same new town, is about 1.45 times of the persons who either live in the new town and work outside, or live outside and commute to the new town for work.

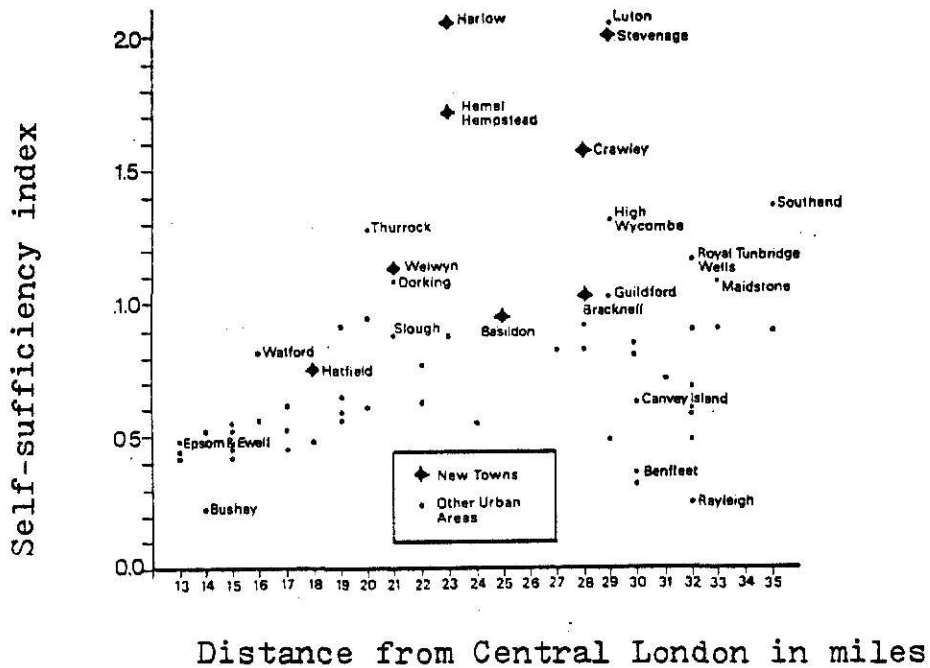
Figure 3 gives self-sufficiency index for London's new towns and other towns up to 35 miles from central London. It shows that the new towns were generally much more self-contained than other towns in the region. Only Luton with a population of 150,000 (more than twice the size of most of the new towns) was more self-contained than most of the new towns.

Between 1961 and 1966 some changes occurred in the degree of self-sufficiency. Welwyn Garden City and Hemel Hempstead became more self-sufficient; in the case of three others, the degree of self-sufficiency remained about the same; only in Hatfield, Bracknell, and Stevenage did it decline. It is significant in view of the employment boom these towns experienced that self-sufficiency in Hemel Hempstead, Harlow, Crawley, and Basildon either increased or remained the same; it means that most of the new jobs were taken up by residents. Indeed in the 1961-66 period the proportion of new-town residents commuting outside for work fell from an average of 29 percent to an average of 27 percent.

Contrary to what might have been expected, it was found that the new towns' in- and out-commuters did not primarily come from or go to London. Instead the work ties were mainly with communities within a radius of about 10-11 miles, with the size of the town influencing the proportion of commuters. The most

FIGURE 3

Self-sufficiency Index in S.E. England
in 1966 by Distance From Central London



Note: the distance of an area from Central London is taken as the airline distance from Charing Cross to the approximate centre of the area in a whole number of miles.

Source: Evans, Hazel, New Towns: The British Experience, p.75

significant change that occurred between 1961 and 1966 was that workers were coming from areas much farther away, as well as from adjacent districts. In short, the new towns had become important employment centers in their own right for workers in surrounding areas.

It would appear, therefore, that increased mobility was a major factor contributing to the shattering of the self-containment concept in the case of the London new towns. As transportation and communications improved, so did closer relations between new towns and those nearby. Many new towns, in fact, became centers of growth for their surrounding regions.

But regardless of evidence to the contrary, the words "self-contained" are still used; they even appear in reports by the new-towns corporations planning the latest round of new towns (the so-called Mark III towns), although these towns, designed for the motor age, must cater to high levels of car ownership and usage, in contrast to the early new towns where the principal means of transport was expected to be the bicycle. An examination of the districts in which the Mark III towns will be located, and the number of jobs available in surrounding towns, suggests that most of these towns will have even larger interchanges of population than do the Mark I towns around London.

SCANDINAVIAN EXPERIENCE

The situation in Scandinavia is unlike that in Britain. The plans for new towns and city sectors developed in connection with the capital cities of Scandinavia are not based on the need for self-sufficiency with respect to employment. Instead the aim has been to provide as many jobs as possible without trying to seek a balance between employment and the working population.

In no instance is there a balance in numbers between jobs and the working residents. In Tapiola it is estimated that only around 25-30 percent of the employed residents actually work in the town; the other residents commute to Helsinki and other nearby places for work.

Similarly, in the Vallingby district of Stockholm, 20 percent of the 25,000 working people there in 1960 worked in the district, 50 percent worked in the center of Stockholm, and 30 percent worked elsewhere. By 1966, however, local jobs had risen from 9,000 to 13,000 so that commuting was less, but still considerable.

Each of the urban-regional plans stresses the importance of freedom of choice offered to their citizens, a principle embodied in choices of place of work, shopping, recreation, and housing. This principle suggests, on the one hand, that the new towns be as balanced as possible to give maximum satisfaction to the needs of local inhabitants, but on the other hand it presumes that they cannot be treated as completely independent units. Of course such freedom of choice can be implemented only where transporta-

tion and communication permit easy travel throughout the entire region. It is for this reason that the planners have stressed the importance of efficient, comfortable means of transportation, especially public rail transportation, and have set maximum acceptable traveling times, which range from a 45-minute radius from the center of Copenhagen to a 30-minute radius from Stockholm and Helsinki.

AMERICAN EXPERIENCE

Columbia, a new town located between Washington D.C., and Baltimore, is a leading new community. Combining a high standard of services with innovative design, Columbia is one of the very few new towns that have tried to build a sound economic base in the United States. The interesting phenomena of Columbia is that the majority of its residents commute daily to work outside, while a majority of the local jobs are occupied by outsiders who commute daily from Baltimore and Washington D.C. metropolitan region.

Columbia illustrates the marketplace value of the new community idea both with respect to jobs and housing. The ability to acquire the General Electric plant in competition with scores of other location alternatives is directly related to Columbia's total new community environment. This manufacturing, assembly, storage, and distribution facility is located on 1,000 acres within Columbia and is planned to provide approximately 10,000

jobs at full development.

Likewise with housing, Columbia has penetrated regional markets deeply and has performed as well as or better than projected at the outset. Unit sales and rentals to ultimate consumers are penetrating the broad Baltimore metropolitan market.

However, the basis of a new community economic structure is more than metropolitan market factors. It includes the mutually reinforcing on-site markets that result from creating new communities as diversified, multiuse, and, to some degree, self-contained urban units. This is accomplished by providing a diversity of jobs within the community with a large range of employment opportunities to residents with a minimum commutation journey, and by providing a wide range of housing choices, in terms of price or rent levels and style, to meet the needs of workers in on-site job centers.

Employers provide basic jobs initially, which generate housing demand. On-site residents and workers require services, which generate support for more employees and these employees require additional housing on or near the new community site. Similarly, employers locate in the new community owing to the availability of a resident labor force. And home buyers locate there owing to the availability of on-site jobs. These interactions constitute site-generated markets, present in all types of large-scale development.

Nonetheless, the entire metropolitan market provides the critical underlying demand and economic support that is the

principal source of marketing strength for both in-town and satellite new communities. Specifically, not unlike most new community experience, less than 25 percent of Columbia's residents work in the community. The expected relationship varies according to the types and values of housing available in the new community, the types and number of job opportunities provided, and the proximity of housing and job alternatives outside the new community.

SUMMARY

Housing, employment and public service are the key elements for the self-containment for a new town. The new town must attract large-scale markets through a carefully selected site that offers proximity and attractive environment qualities. Additionally merchandise offerings must be in an array of price categories and living arrangements, at competitive prices, and in a physically and socially attractive environment. There are three points from this study:

1. The establishment of independent new towns that are self-contained or self-sufficient in terms of employment is not very simple. The British experience is most enlightening here, as self-containment has been an explicit objective of the new-towns program since its inception. Yet, despite the extraordinary controls and powers the public authorities exercise over the amount and rate of industrial growth and the provision of housing, the eight London new towns have experienced a large amount of commuting for work, both in and out of the new towns. It would appear that the journey to work offers some advantages and may be accepted as the necessary price paid for greater industrial stability, superior employment possibilities, and a higher standard of living. For employers it means, among other advantages, a welcome mobility of labor as well as a flexible labor market. For workers the journey to work opens up the prospect

of additional, varied, and better jobs, and it facilitates adjustment to changing circumstances, such as factory relocation, flexibility for home ownership, and necessary opportunities for secondary wage-earning jobs.

2. New towns should be viewed in their regional context and, in most instances, as centers for future regional growth. Work-travel movements can be expected to occur primarily in connection with the towns and cities in the surrounding hinterlands of the new towns, and secondarily with the mother city from where most of the new-town residents will probably come. Thus regional settlement concepts should replace the traditional isolated, bounded-area concept, along the lines of current thinking in the countries surveyed in this study. The concept of self-containment should be applied, as it were, on a regional basis with convenient mass transportation system.

3. While the journey to work is a fact of life that must be recognized, it is still true that minimizing such a journey is a desirable objective---especially for those in the population who are less mobile or who prefer to live close to their work. For reasons discussed earlier, realization of this objective requires, in the first place, larger communities than the traditional concept of population size calls for, in order to develop a large mix of diversified industries to satisfy the employment skills of a varied labor force. Second, to realize this objective it is also necessary to control both industrial and population growth, especially the rate and timing of both,

so that they are in reasonable balance over time. The closer this relationship is to a ratio of 1:1 (100:100) the greater the chance for minimizing the number and proportion of in-and-out commuters, and the greater the degree of self-sufficiency.

CHAPTER IV
POPULATION BALANCE

MEANINGS OF POPULATION BALANCE

Planners of British have advocated balanced communities as one definite goal of these town. The idea of a balanced community is more complex than that of self-containment, though the origins of the two ideas are partly interrelated. To some extent a town can be self-contained only if it is balanced. The level of population must more or less match the level of employment or there will be commuting in and out.

Population balance has three main meanings:

1. The first is that the level of population should be supported by a roughly equivalent level of employment.
2. The second meaning of balance is that the structure of employment should not be dominated by a single firm or type of industry.
3. The third meaning of balance operates in relation to social class. The new towns are not to be one-class communities, they are to have representatives of all classes.

New towns appears to be a means for equalizing opportunities in the realm of housing and employment, for bring together population groups of different ethnic and income background in a physical framework that would encourage social interrelationships and integration, and for improving the quality of life

through use of an efficient land use pattern and attractively designed housing and public areas. The examination of the objectives in establishing new towns in West Europe and in the United States shows a clear emphasis on these social and human implications. A typical example is the set of goals hoped to be achieved in Milton Keynes, a new town between London and Birmingham:

1. opportunities and freedom of choice;
2. easy movement and access and good communication;
3. balance and variety;
4. an attractive city;
5. public awareness and participation; and
6. efficient and imaginative use of resources.

THE PAST EXPERIENCES

In light of the substantial influence of these views on new towns in Britain and elsewhere, it is important to ask how successful the countries under review have been in attracting balanced populations and in meeting the problems that have ensued. Obviously these questions are very important for the planning and development of a new town in the future.

ISRAELI EXPERIENCE

In the 30 years since the founding of Israel some 30 new towns have been established there, with the number of towns and their population growth following the rise and fall in immigration.

The mass influx of immigrants made the quick beginning on the new towns possible and, in a decisive way, gave them their character---so much so that in everyday talk the communities are often called "immigrant towns". This influx, however, also established the towns' ethnic characteristics. Before the establishment of the state, 85 percent of all immigrants had been European in origin. In the following period, European immigration lost its lead and in 1955 reached an all-time low of only 5.4 percent. (Since then it has risen and dropped, swinging with the policies of the Soviet Union and other Eastern European countries regarding the granting of emigrant visas to

Jews.) In short, the new towns absorbed a larger percentage of Afro-Asians than of European-American immigrants, with the distribution of ethnic groups in the new towns in 1961 showing 24 percent and 47 percent for those of European-American and Afro-Asian origin respectively, and with 29 percent being Israeli-born. In 1967 only 17 percent of the Israeli population was of European-American origin; 49 percent was of Afro-Asian origin, and 34 percent was Israeli-born.

The large number of children in Afro-Asian families, their strong clan ties, their low cultural-educational level, their deep religiousness---indeed, their whole way of life---have contributed to the problems of the new towns. These include the low educational level of the population and labor force, the difficulties of developing leadership, and the high turnover of population---all of which lead to a cumulative downward effect.

However, in addition to their spatial, economic and political goals, the Israelis' policy has three goals in the social sphere:

1. decent housing and standard of living for immigrants to the country;
2. integration of the various ethnic groups within the Israeli society;
3. closing the gaps existing between the veterans and the newcomers to the country.

BRITISH EXPERIENCE

The experiences of British new towns, especially those in the London region, have been different from Israel's with respect to the balancing of occupational/income and racial/ethnic characteristics of the population. The meaning of a socially balanced community has been conceived, in general, to be one that conforms to the class characteristics of England and Wales as a whole, with most development corporations using the national figures as a standard of comparison when publishing statistics on their own class distribution.

The British new towns have been reasonably successful in recruiting socially balanced populations, if these are defined in terms of some national or regional average.¹⁷ In particular they have managed to avoid the one-class (predominately working class) image of the prewar housing estates. However, while they have been successful in attracting the professional and executive middle classes, they have been unsuccessful in bringing in substantial numbers of unskilled and semiskilled workers.

Several factors help to explain this situation. First, the industrial selection policy influencing the nature of industry that moves to new towns has led to the recruitment of a population with large proportions of skilled workers, as well as professional and intermediate employees. Second, the success of the new towns in later years in attracting service and distributive industries has contributed to the presence of a high proportion of middle-range and professional employees. A final

factor has been the policy of development corporations to allow for private, unsubsidized dwellings to be built, which has given an added impetus to attracting middle-class and professional families.

Indeed, it is this very policy that came under attack in Great Britain in the mid-1960s on the grounds that the new towns have not been serving the populations with the greatest housing need. While it is always assumed that the new towns, especially those around London, would help to relieve the surplus populations living in overcrowded and ill-housed conditions in London, the procedures used for selecting the populations did not help achieve the objective of social balance.

The explanation for this lies partly in the scheme used to recruit populations. The Greater London area was divided into sectors to which each new town was linked. Firms would apply to the new towns serving their sector, and if accepted, would bring with them as many workers as wished to move. These workers and their families would be housed by the development corporation, irrespective of housing need. Further recruitment would be linked through the Industrial Selection Scheme to the housing lists of the local authorities, which entered into agreements with new towns for the reception of their overspill populations. Selection of a worker from these lists could occur only if an appropriate vacancy arose in a new town and if a worker with the required skill applied for it. If suitable labor could not be obtained by this means, then recruitment anywhere in Greater

London, or in the country as a whole, was possible. The main criterion was that workers be suitable for the jobs available in the new town, and would live and work there.

Another factor in this situation pertains to the type of industry that moved out of London. This has been predominately the mobile manufacturing industry, about half of which is engineering. Most of these firms have come from the fringe areas of London County and the inner suburbs, and the majority of employees moving with their firms have also come from these or neighboring boroughs. By contrast, the inner areas of London contain many immobile industries, or firms unsuited or unwilling to move out. Thus the population of these inner areas has had relatively less chance of moving to the new towns.

This policy has had deleterious effects on the persons left in the inner parts of London and on housing conditions in those areas. With pressures on accommodation in the central areas growing, owing to such factors as slum clearance and the higher rents that follow conversion and rehabilitation, some families have been forced to seek cheaper accommodations farther out. As a consequence, areas hitherto not plagued by "housing stress" have soon come to lie in the path of this outward movement.

This familiar process of population movement has resulted in housing deterioration and further retrograde effects. For example, as mobile families have moved out of London to suburban or fringe areas or to new towns, those less mobile have been left behind and have become more "visible." They include workers

whose jobs tie them to London, families who could not afford municipal housing, or are not eligible for it, and immigrants from abroad or other parts of the country.

As a result, there has been a concentration of people with severe housing needs out of all proportion to the resources available to meet them, presenting local authorities with serious problems. In short, while social policy in the shape of overspill planning (that is, the achievement of social balance in new towns) has helped to solve the housing problems of one section of the community, the unintended consequence of this policy has been to aggravate the problems of another section of the community.¹⁸

This situation, when coupled with the further program of planned overspill up to 1981, has led some persons and groups to call for a reevaluation of the policies for recruiting populations to the new towns. The Milner Holland Committee noted that "many of these families will not wish to leave London or will be tied to London by their work and excluded from new and expanded towns for this reason, or by their inability to secure the more skilled jobs available in those towns."¹⁹ Hence, if the policy of "self-containment" remained in force, populations would be selected on the basis of jobs made available by firms that move out to the new towns, resulting in the selection of families not necessarily in acute need of rehousing.

According to its proponents, a new policy involving a more effective use of planned overspill in new towns, which would

relieve the pressing housing needs of the major cities, would have several advantages:

1. it would provide many of those with the most pressing housing needs in London and other major cities with the chance of moving out;
2. it would enhance the possibility of providing more varied and interesting housing designs for the working class;
3. it would enable sizable numbers of black and Asian workers and their families, now living in ghettos in London, to obtain decent housing and other amenities of urban life.

The new towns had never attracted many black or Asian people; rather they tended to recruit higher proportions of skilled workers than are found in these populations. Some observers feel that there are reasons for believing that minority workers may be well received, and that the new towns could serve as "antighettos."²⁰ Since the populations of these towns are quite young and without deep local roots and long traditions, they may be less resistant to this kind of change than older, more settled communities. A random sample of the relatively few black and Asian residents living in new towns in 1965 indicated that they were very happy about their new life, and encountered little resistance or animosity from the white families there.

In the late 1960s, government policy in regard to overspill did change, and now the new towns must contribute to the relief of housing stress in London and the other major cities. It is recognized, of course, that this new policy brings with it risks

and a set of new problems, and only time will tell how it works. These problems include the following three:

1. Those recruited are unlikely to have the skills necessary for the jobs available. The Milton Keynes planners, in their interim report on the plan for their new city, recognized this problem when they stated that "there is likely to be a conflict between the skills required by industries and the skills available among one of the kinds of migrants Milton Keynes is seeking---those in the worst housing need in London." Accordingly the planners recommended immediate development of training programs so that these persons could develop the skills required.

2. If jobs are not available for this group of persons, they would have to commute back to London or the other exporting areas from which they came. This, of course, would increase the amount of commuting and disturb those who still hold to the notion of self-containment and self-sufficiency of new towns. But, as the proponents of the new policy argued, and as our earlier discussion demonstrated, there is already plenty of work-travel movement in and out of new towns, making the concept of self-containment and self-sufficiency partly a myth. In view of the need to relieve the housing needs of the large cities, some planners think there is no reason why future new-town populations should not depend partially upon employment in the exporting areas. Besides, such workers may be successful in finding employment in the industries of the surrounding region,

which are often stimulated by the development of a new town. In short, as proponents of the new policy have argued, it would be more reasonable to recognize explicitly what now happens anyway in the new towns; namely, that they provide dwellings but not jobs for a proportion of their population.

3. Heavy housing subsidies and other special forms of assistance will be needed to attract skilled workers and make their transition to the new towns easier, financially and otherwise. However, as pointed out by the Milton Keynes planners, such subsidies should not "frighten away middle class tenants."

The British new towns have also been quite unbalanced in terms of age of population, especially in their early days. Most of them have tended to attract young couples with children, with relatively few middle-aged and older people. The Milton Keynes planners acknowledge that if these missing age groups are to be attracted, special means must be used. As well as providing special housing subsidies, the recruitment policy should not be tied to the existing skills of potential residents. These persons must be allowed to move to the new city, even if jobs are not readily available, with dwellings provided especially for them, outside the industrial selection system.

The Milton Keynes planners were also concerned about the need to attain balance in the provision of homes, jobs, and services at all stages in the new city's growth. Imbalances can cause harrowing difficulties, as was the case with many of the early British new towns and with some Canadian resource-based

new towns as well. This requires that expansion of employment and social services keep pace with population growth. It means that roads, sewers, power, gas, and water all should be installed in phase, and not delayed relative to investment in homes and factories. It also means that schools, colleges, health centers, and hospital and recreation facilities must be provided without a time-lag relative to need.

AMERICAN EXPERIENCE

An examination of the regulations of the U.S. Urban Growth and New Community Development Act of 1970 shows that:

1. The new community includes most, if not all, of the basic activities and facilities normally associated with city or town.
2. It must combine these diverse activities in a well-planned and harmonious whole, so as to be economically sound and create an environment that is an attractive place to live, work, and play.
3. It must contribute to the social and economic welfare of the entire area which it will importantly affect.
4. It must provide for the creation of a substantial number of jobs, both through development of the project and through the location of business enterprises within the project.
5. It must be designed to increase the available choices for living and working for the fullest possible range of people

and families of different compositions and incomes... and must be open to all, regardless of race, creed, color, or national origin.²¹

The main objectives of the act are in the realm of equalizing opportunities, while emphasizing the administration of federal assistance to minority and low-income groups. This emphasis on socially balanced communities is one of the most important justifications for U.S. government support of new towns, such as Jonathan, Park Forest South, and Flower Mound... etc. New towns are suitable for achieving social goals since they provide a variety of housing types and prices that cater to a wide range of income groups and life styles. Moreover, because they are built by one development agency, private or public, it is possible to avoid discrimination and to administer government support and subsidies to underprivileged groups. The control over the general physical layout and the timing of building public services enhance the possibility of achieving a high level of public services and amenities for all sections of a new town. Dealing with all facets of urban life in a comprehensive way, which is one of the basic characteristics of a new town, takes it beyond the realm of providing housing and puts it in a position to create a complete way of life, one with strong public emphasis on the level of education, health service, social activity, and amenities.

SUMMARY

Population balance has been part of the ideology of planned new towns since the inception of this movement. The idea of a balanced community has meant, as we have seen, diversity of industry and dwellings, and balanced physical development. But it also come to include the notion of population heterogeneity with respect to age, occupation, income, ethnicity, and class. We may draw some lessons from the aforesaid experiences:

1. As the British experience clearly demonstrates, a new-towns program should be planned in relationship to the problems of our central cities. Any new towns built to organize metropolitan growth on a more orderly basis---whether they be either independent and self-contained communities or satellites---should aim to attract, in part, low-income and minority groups now living in the worst housing and other adverse conditions in the ghettos. Otherwise new towns will become another escape hatch for middle-class whites. Indeed the problems of our central cities may even become exacerbated unless the pressures on housing and public services are relieved through a new-towns program. While new towns should be viewed as a significant mechanism for dealing with the problems of our central cities, it is also essential that extensive efforts be made concurrently to improve the attractiveness and economic viability of the central cores of our growing urban regions.

2. If we want our new towns to be truly balanced in terms

of population composition, special efforts must be made to attract unskilled and semiskilled workers, blacks and other minorities, and middle-aged and older people--persons who under normal circumstances would not be attracted or permitted to move to new communities. It will also require that recruitment policies not be tied to the existing skills of the potential residents. In addition, efforts should be made to attract different industries. At the same time, job-training programs should be instituted to develop the skills required by the more advanced types of industries.

While such efforts are under way, these residents should be assisted to commute to their old jobs in the mother city, or to jobs in the surrounding region with convenient mass transit system. Although self-sufficiency is a desirable longterm objective, it should not be slavishly adhered to in view of other more worthwhile objectives---e.g., providing decent housing and other urban facilities and amenities to persons now living in poor housing and deteriorated neighborhoods in the major large cities.

3. To attract and hold all of the types of persons we want in our new towns---middle-class professionals and executives, as well as low-income people, minority groups, and older people---it is important that there be a sufficient number and variety of urban services, facilities, and amenities available, and right from the beginning of development.

There is a need to have jobs, services, amenities, and housing keep pace with each other, and not get out of phase.

CHAPTER V
CONCLUSION

The concept of the new town offers us a chance to discover what we really want from an urban environment, and what we plan to bring to it. Unlike planning for a single aspect of urban life, the planning for the new town involves fresh examination of nearly every concept we have taken for granted. It promises an intellectual understanding as great as that of the urbanizing age itself.

The new town will remain an object of scorching criticism as long as their social goals are cast in unrealistically high or utopian terms. The effect of social planning in a free society is narrowly limited. Even the best planned new towns will not alter basic needs and life styles. New town residents are no more plastic or less conventional than other city residents. Their central concerns are very traditional: family, job, house. Through good planning technology, new town development will be effective to the degree that it services these three needs.

It is obviously that a new town is not just another suburb, or bedroom town. It is a self-contained entity with an optimum size, a truly new community where people work, shop, play and sleep. It is planned for optimum living conditions, reasonable land use, and an economic and social spectrum of inhabitants and activities. Its industries, and its sources of income, are diversified.

Transmission of electricity and natural gas makes it possible for us to be at any distance from a source of power; rail, highway, and air make the rapid movement of people and commodities merely a choice of the extent to which each means is to be utilized. Thus, using these technologies as a device, new town units may be developed within the metropolitan area on a regional basis.

The concept of a new town policy integrated within a regional plan for restructuring the spatial organization of metropolitan areas is incorporated to varying degrees in the plans of Washington, D.C., London, Stockholm, Copenhagen, and Paris, etc. This type of new town policy will help to facilitate the attainment of the social goals of new towns, and, at the same time, not hamper the economic opportunities of their inhabitants. New towns, socially balanced, innovatively designed and administered, emerging as a central component in regional metropolitan development, may prove to be the very important contribution of a new town policy in the developed countries of the world.

FOOTNOTES

- 1 T.C. Peng and N.S. Verma, New Town Planning Design And Development: Comprehensive Reference Materials, 1971, p.1.
- 2 Dame Evelyn Sharp, New Towns: A Selected Annotated Bibliography, 1960, Foreword.
- 3 Ebenezer Howard's ideas were originally published in his book Tomorrow: A Peaceful Path to Reform, in 1898, later revised as Garden Cities of Tomorrow, in 1902, and subsequently reissued on several occasions to the present day.
- 4 American Planning Association, Planning, p. 6, December 1978.
- 5 Final Report of the New Towns Committee, London, July 1946.
- 6 Ira M. Robinson, New Industrial Towns on Canada's Resource Frontier, 1962, Program of Education and Research in Planning, Research Paper No. 4, Ch. VI.
- 7 Erika Speigel, New Towns in Israel, 1967, p. 55.
- 8 Pierre Merlin, New Towns: Regional Planning and Development, 1971, Ch. 2.
- 9 Nathaniel Lichfield, Israel's New Towns: A Development Strategy, Vol. I, 1971, pp. 4.7.2, 7.3.5.
- 10 Lesley E. White, "The Social Factors Involved in the Planning and Development of New Towns," Planning of Metropolitan Areas and New Towns, 1967, pp. 194-200.
- 11 Harold Wilson, "The Prime Minister at Stevenage: Extracts from an Important Speech," Town and County Planning, XXXVI, 1, 1968, p. 31.
- 12 Albert Mayer, "Ingredients of an Effective Program for New Towns," Proceedings of the 1964 Annual Conference, 1965, p. 188.
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- 21 U.S. "Draft Regulations: Urban Growth and New Community Development Act of 1970," Subpart B, Section 32-6, in Federal Register, 36 F.R. 14205-14, 13 July 1971.

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AN EVALUATION OF SELECTED SOCIAL CHARACTERISTICS
IN THE PLANNING OF A NEW TOWN

by

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AN ABSTRACT OF A MASTER'S REPORT

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requirement for the degree

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ABSTRACT

The new town movement started in Britain at the turn of this century and had a tremendous influence on human living environment, physically, economically and socially. According to Sir Ebenezer Howard's Garden City concept, the ideal community is a town deliberately planned and built in a small size; it is also a self-contained and balanced community. The concept of the new town and the past experience offers us a chance to discover what we really want from an urban environment, and what we plan to bring to it, and that is the purpose of the study.

First of all, I briefly introduced the historic background of new town, its inception, philosophy, purpose, and achievement in the Great Britain and the United States.

The second part of this study is concentrated on the new town's population size. From the British experience, the population size of most early British new towns is a little small (less than 90,000 people), so that they were not able to reach the goals of self-containment and economic stability. After review and analysis, I believe a optimum population size in the range of 100,000 to 300,000 people may have both the feeling of human scale and the services of metropolis.

Thirdly from the study of experiences in Europe and America in terms of housing, commuting, employment and diversity of industry, I would recommend a self-contained new town with enough housing, employment and a variety of economic activities. The

concept of self-containment can also be applied on a regional basis if there is a convenient mass transit system available. The concept of regional planning may stimulate the development of new town itself and its surrounding region.

The fourth chapter of the report deals with the concept of population balance, one of the elements of Howard's Garden City concept. The idea of a balanced community means diversity of employment and dwellings, and balanced physical development. It also includes the notion of population heterogeneity with respect to age, occupation, income, ethnicity, and class. It is difficult to meet the requirements of the balanced community. However, the approaches of this study showed us a correct direction to start.

An optimal application of the concept of population size, self-containment and population balance should contribute to more successful new town development in the future.