Untimely Metropolitan-Field "Rurban" Development—Rural Renaissance as a Geopolitical Process in Israel

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The nature of the newly developed "rurban" (rural-urban) communities at the edge of the metropolitan field is evaluated, using metropolitan Haifa, Israel, as a case study. Rural renaissance and industrialization of the remote periphery of the metropolis have evolved in Israel as a result of geopolitical needs to settle politically-sensitive regions. The emerging rurban communities, the Industrial Village and the Community Settlement, are attractive to middle-class, educated, white-collar, middle-aged families who strive to secure their personal space and ex-urban lifestyle in a closed, intimate affinity community. Despite the high expense of such communities, which are financed almost entirely through public funds, the new forms of rurban communities should continue to be considered as a viable vehicle for regional development under geopolitical constraints.

This article discusses the distinct nature of the emerging "rurban" (rural-urban) communities that have evolved at the edge of the metropolis as a product of the urban-field socio-spatial processes (Friedmann, 1978). Although it is primarily aimed toward the general phenomenon of the "rural renaissance" of the post-city age (Conzen and Phillips, 1982; Lewis, 1982), this study is of a unique situation: for the sake of national geopolitical objectives, rurban communities have been established in an untimely fashion, leap-frogging the ordinary urban field processes. More specifically, the following three issues are discussed: (1) the nature and the evolution processes of rurban communities within the context of a multinodal, post industrial urban-field region; (2) the characteristics, expectations, and spatial behavioral patterns of the residents of these settlements; and (3) the

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role of the emerging rurban communities in designing regional settlement strategies under geopolitical and resource constraints. The last two issues are analyzed by using the planned rurban communities of the metropolitan Haifa urban field as a case study.

Urban Field-Patterns and Processes

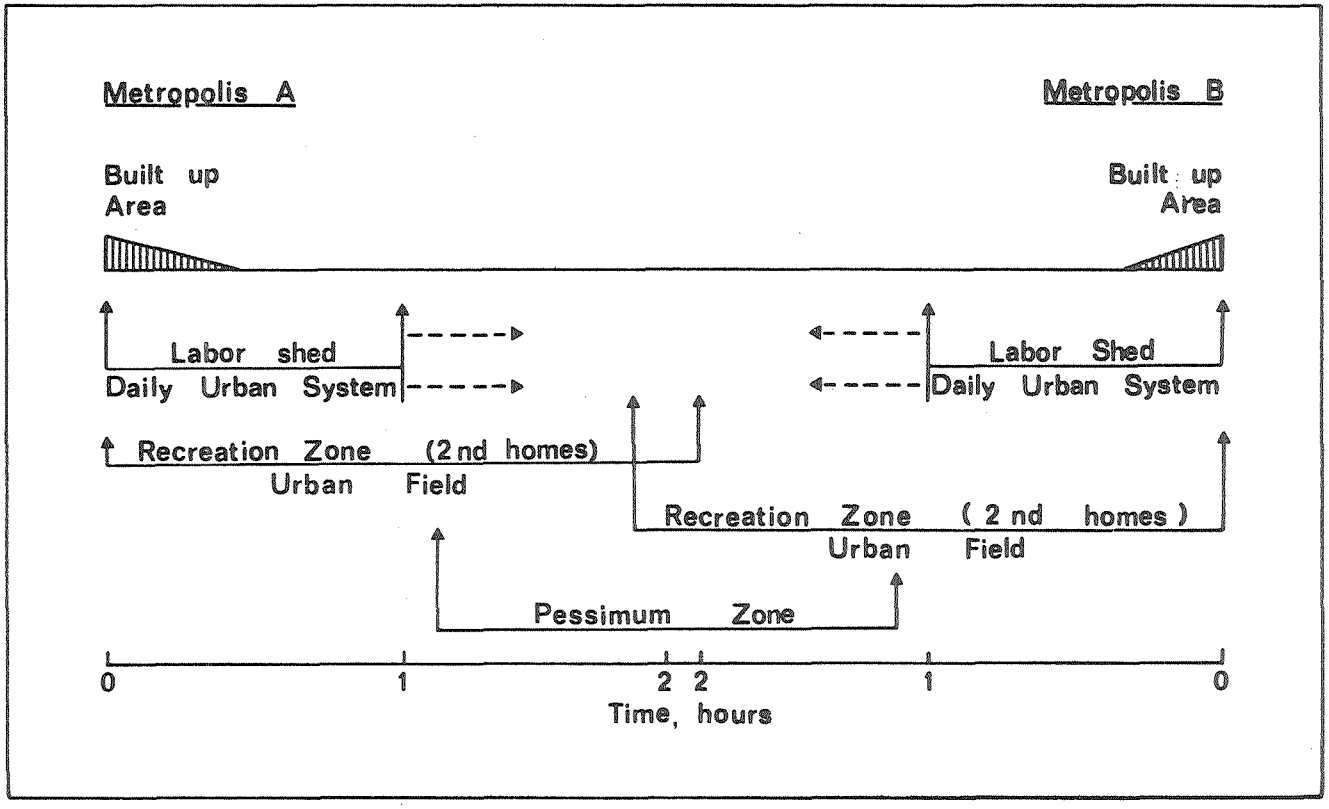
The concept of the urban-field, the basic territorial unit of post-industrial society, has been significantly modified since it was first introduced by Smailes (1947). For this researcher, the urban-field, a fundamental unit in the geographical structure of urban life, was a nodal region experiencing dependency-type, core-periphery interactions. The most comprehensive review of the spatial elements of a nodal field is Huguette's study of Graoble, while the operational notion of a nodal urban region is Berry's (1973) concept of "daily urban system," which refers to a region larger than a metropolis and reflects "the realities of daily urban life."

Three decades have elapsed since this earliest definition, and the urban-field of the contemporary metropolis has evolved into a "galactic" (Lewis, 1982) multinodal entity. The first writer to appreciate this significant modification of the nodal region was Friedmann (1978), who defined the urban-field as "a vast multi-centered region, having relatively low density, whose form evolved from a finely articulated network of social and economic linkages." If centered on an intermediate-sized metropolis, Friedmann's urban-field extends to roughly two hours' driving time, toward the outer limit of most trips taken by residents for periodic recreation. Implicit to the notion of multi-center urban-field is that the core city, the origin of the field, has lost its functional dominance in favor of the outer centers (Muller, 1976). In a fully developed urban field, the inter-center functional linkages have lessened their exclusive focus on the major city (Herbert and Thomas, 1982).

A milestone in the evolution of the concept of multi-center urban-field, as comprehensively reviewed by Krakover (1980, 1982), is Friedmann and Miller's (1965) urban field, defined as "the next generation spatial ecological unit." Troubled by the little attention given to intermetropolitan peripheries, Friedmann and Miller prognosticated a reverse of the long-established polarization effects that had drawn off the areas located around metropolitan cores. The spread effects of urbanization, these authors claimed, would transcend the relations of dominance and dependency to create a (still modal) urban community of shared functional interests.

The spatial dimensions of the contemporary galactic urban-field have been stretched far beyond the historical zone of influence of the nodal metropolis. Figure 1 schematically illustrates the outward spread of metro-

Figure 1.
Metropolitan Spheres of Influence



politan spillovers and their effects on intermetropolitan regions. It is interesting to note the way in which the impact of the urban field extends from the outer edge of the daily urban system zone into the zone of "pessimum," a zone that features diminishing spillovers from the core and increasing hinterland advantages of small, remote communities (Kipnis, 1982). The zone of pessimum is where most of the recent ex-urbia field processes have taken place, either through the establishment of new communities or through the urbanization of existing ones. This is also the zone where many of the second home clusters tend to emerge into permanent communities (Clout, 1974).

The changing spatial patterns of the human urbanized habitat have also created new modes of expectation and preferences. The historian Oscar Handlin was first to envision this change in 1963 (Berry, 1973):

> .... The urbanization of the whole society may be in process of destroying the distinctive role of the modern city.... What is new.... is the insistence upon constructing small, coherent communities.... Increasingly, the men who now people the metropolis long for the security of isolation from the life about them. They strive to locate their families in space with a minimum of connection to the hazards of the external world.

Friedman (1978) denotes that the occupants of small, coherent, isolated affinity communities try to have some control over their immediate space. Their affinity, spatially-bounded social environment, is based on voluntary residential choice and characterized by shared preferences of such salient attributes of ethnicity, lifestyle, income, age, and occupation. "Out there, in the ex-urbia," Friedmann claims, "among their own kind, in maximum security communities, they hope to build a haven for themselves." As such, the small coherent ex-urbia rurban communities are designed and built to satisfy their residents' personal and environmental quality of life (Helburn, 1982). Individuals who settle in rurban communities hope to defend personal space, to control the immediate physical and social environment, and to guarantee vivid and diversified employment opportunities (Friedmann, 1978).

Small, coherent affinity communities have emerged as the result of demographical, social, and technological developments (Krakoker, 1982), stimulated by the rural renaissance of the post-city age (Conzen and Phillips, 1982). For example, in the early 1970s, U.S. nonmetropolitan rural areas grew at an annual rate almost twice that of the metropolis.

The recent rural renaissance is in sharp contrast with trends of the 1960s, when the metropolis still exploited the human resources of its rural hinterlands. Of the many reasons for the rural renaissance, the perception of the nonmetropolitan areas as safer, cleaner, and quieter has been a leading

factor. In addition, technological advances in communication and transportation have allowed small-scale industries and businesses of the quaternary occupations to locate their facilities in remote communities, thereby satisfying the occupational expectations of post-industrial, white-collar employees. Despite the gloomy prospects of the energy crisis, which might cause an abatement of urban sprawl, rural renaissance and the spatial expansion of the multinodal metropolis seem likely to continue (Boyce, 1981).

Metropolitan field processes of post-industrial countries have been accompanied by intensive industrialization of nonmetropolitan rural areas. Whether such industrialization is associated with the rural renaissance or is viewed as an independent process, manufacturing employment of rural and other nonmetropolitan areas of the U.S., for example, increased by 1.8 million, or 56% of the nation's total, between 1962 and 1978 (Haren and Holing, 1979). Analyzed as a "filter-down" process and as the outcome of the "product's life-cycle," Cromley and Leinbach (1981) demonstrated that intensive industrialization, mainly of branch plants, had occurred in metropolitan Kentucky. These authors argued that the industrialization of nonmetropolitan Kentucky had taken off during the 1970s, benefiting from the planned and emergent rural community infrastructure and a less-costly labor supply. Such industrialization was made possible in part by reduced transportation costs and technological advances.

Rural Renaissance and Rurban Communities in Israel

More than 100 newly-developed Community Settlements and Industrial Villages have been built since the early 1970s in the geopolitically high-priority regions of the Galilee (the North District) (Kipnis, 1984) and in Judea and Sumaria (the West Bank) (Reichman et al., 1981). These communities have been the leading agents of the rural renaissance in Israel. Their settlers, mostly young urbanites who voluntarily selected a community and an affiliation group, share an ideology and expectations regarding lifestyle, occupation, and local and regional environmental qualities. As one of the young leaders of a new Galilean community firmly stated: "We have settled here to create a very special style of living, employment and environment, one that the customary urban system is not able to provide."

The rural renaissance of the Jewish population gained momentum during the 1970s (see Table 1); this activity indicated a turning point from the population growth patterns of the 1960s and followed trends occurring in other post-industrial societies (Conzen and Phillips, 1982). It is interesting to note that the rural settlements, which lost population during the 1960s,

Table 1.
Jewish Population By Type Of Settlement (1961-81)

Type of Settlement	Population (000)			Annual Growth Rate %	
	1961	1972	1981	1961-72	1973-81
All settlements	1,932	2,687	3,320	2.97	2.34
Urban	1,634	2,429	3,000	3.56	2.33
Metropolitan Areas	1,004	1,319	1,500	2.46	1.43
Peripheral urban centers	631	1,110	1,500	5.00	3.32
Rural	298	257	321	−1.34	2.46
Moshavim[1]	124	130	153	0.04	1.81
Small rural settlements[2]	40	24	33	−4.55	3.51

Source: Statistical Abstract of Israel, 1982.
Notes: [1]Moshavim includes both cooperative and collective organizations. Most of the Industrial Villages are moshavim.
[2]Most of the Community Settlements are defined as small rural settlements.

increased by higher rates than did the total Jewish population between 1972 and 1981. The small rural settlements, with the highest growth rates, increased at more than twice the rate of the nation's metropolitan areas.

Two types of rural settlements, the Community Settlement and the Industrial Village, which evolved as the new form of semi-urban or rurban settlement during the 1970s (Reichman, 1977), led the rural renaissance that took place at the edge of the metropolis. Both types of settlement were proposed or voluntarily established in geopolitically-sensitive regions lacking agricultural production factors (i.e., water and fertile soil) where land ownership constraints limit settlements to small parcels of hilly terrain. The Community Settlement, which is mostly a commuters' dormitory settlement planned to accommodate 250-500 households, originated spontaneously. The Community Settlement movement evolved outside of the historical framework of rural communities and generated extensive public dispute as to its form of organization and its role in mobilizing national settlement objectives. The Industrial Village, on the other hand, planned as a cooperative or collective village of 150-300 families, was created within the framework of the historical system and is perceived as a by-product or extension of the traditional forms of rural settlements (i.e., the Kibbutz and the Moshav).

Both types of settlement are organized as socially closed, intimate, affinity homogeneous communities whose membership is determined on the basis of personal fitness and cohesive social and lifestyle characteristics. In most cases, the settlements were founded by a nucleus organized prior to actual settlement. This group shared a common background that could include such factors as education, professional training, place of employ-

ment, country of origin, ideology, or friendship. The core group as well as new members are fully admitted to the community following one year of effective candidacy.

Implicit in the differing form of organization, the two types of rurban settlements are also significantly different in their economic base and regional affiliation. Manufacturing, tertiary, and quaternary activities constitute the economic base of the cooperative and collective Industrial Village. Economies of scale and labor force considerations led this movement to organize within a framework of planned regions, with a group of villages sharing regional manufacturing parks and establishments, and facilitating community services by means of a common regional center. Members are encouraged to find employment in the village itself or in the region's common employment centers.

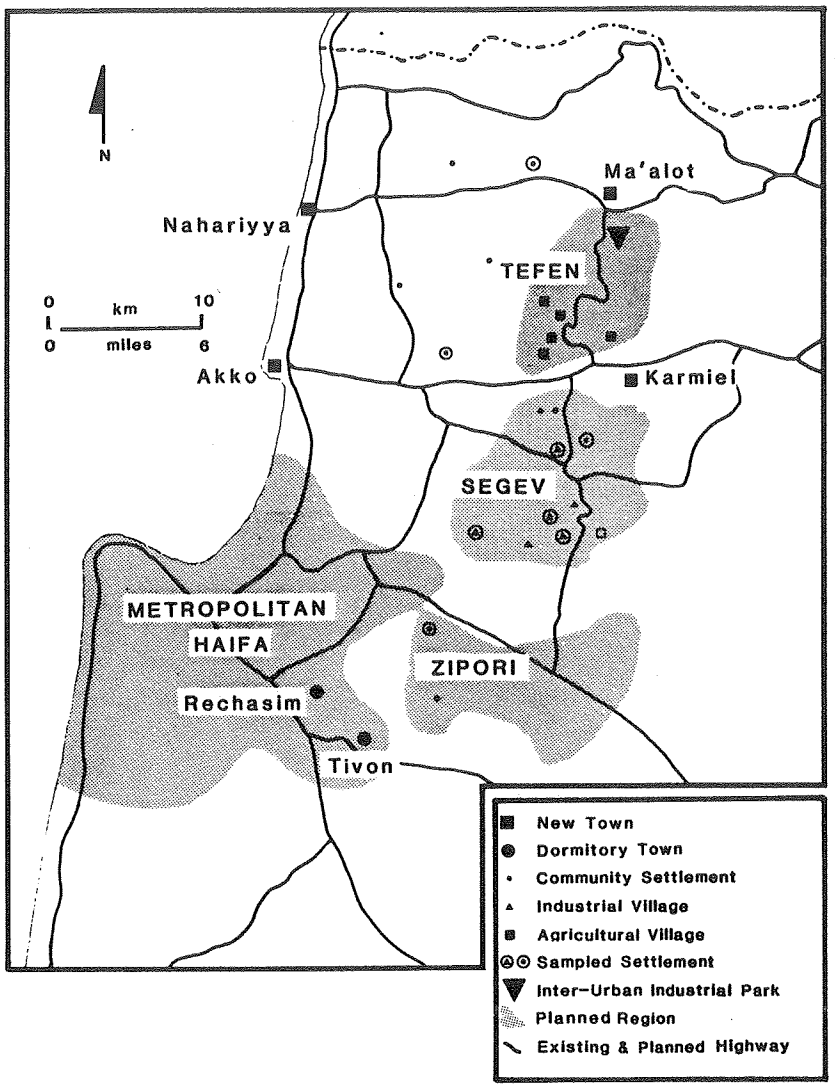
Being a non-cooperative or collective community, the Community Settlement, in contrast, is organized as a registered association. The elected body of the association is in charge of municipal, cultural, and social services that are financed by local taxes. In the few cases in which Community Settlements are located close enough to or within the framework of an Industrial Village's planned region, they tend to share, at least in the short run, the region's municipal services. Members of the Community Settlements are free to select their place of employment and many tend to maintain their pre-settlement jobs.

The Case Study

The study region extends over Western Galilee (North District), which comprises the northeastern edge of the urban-field of Metropolitan Haifa, the second largest metropolis in Israel with a population of 400,000 in 1983 (see Figure 2). Beginning in the mid 1970s, the region experienced dynamic spread and development processes affecting both the urban and the rural systems (Kipnis, 1984). The development of the Zipori, Segev, and Tefen regions have led this regional progress, guided as they were by a strategy of rural deployment and aimed at securing Jewish presence and sovereignty over land in areas highly populated by Arabs. Tefen is mainly known for its large-scale, inter-urban industrial park, while Zipori and Segev are the core region for ex-urbia rurban development. Other spillover and spread effects originating in metropolitan Haifa include the net positive migration to the new towns of western Galilee (Kipnis, 1983) and the emerging high technology, science-based manufacturing region along the Segev-Karmeil-Tefen-Maalot axis (Kipnis, 1981).

In late 1982, 2 random samples of 80 families of 7 of the newly-established rurban settlements were selected for study. The first sample is a

Figure 2:
The Study Region



segment of a larger, more comprehensive survey of 1,212 employed persons living in 12 Jewish urban study units and 8 rurban communities of the extended metropolitan field of Haifa. The study, initially proposed as a planning background study to delineate labor and commuting fields of the greater Haifa region, was extended to incorporate the location and utility preferences of commuters and shoppers. Samples of 2 of the 12 urban study units of the comprehensive study, with 100 observations each, are used to reveal the inherent differences in social structure and spatial behavior patterns between rurban communities and urban settlements of the metropolitan field. One sample is of the new town of Karmiel, located at the hub of the region, and the other is a combined sample of Rachasim and Tivon, two suburban dormitory towns of Haifa.

A second sample of 80 families, identical in distribution to the first sample, was selected for a supplementary study in the seven rurban communities. This study was designed to explore the "push and pull" factors affecting a household's decision to locate in the new rurban community and establish the place of origin of the families and their preferences relative to size, type, and affinity organization of the new settlement. The two samples of rurban settlements covered 20% of the families that had settled in these areas since their creation in the mid 1970s. Sample distribution between the Community Settlements and the Industrial Villages was 45% and 55%, respectively.

Push and pull factors and workplace utilities were evaluated by respondents, using a Likert scale methodology. Interviewees were asked to rate their evaluation of each factor and utility on a scale ranging from 5 (very important) to 1 (not at all important). Workplace utilities were evaluated, using a value stretch model,[1] as preferences and reality. The latter variable indicates the utility score of the present place of employment, while the former variable reveals the long-range utility, or lifetime career objective. These long-range objectives would be reached, it is assumed, when the settlements and the region are fully developed.

Analysis

The following sections present the analysis findings in more detail.

The Settlers

Most settlers of the rurban communities are urbanites, with slightly over 50% originating in metropolitan Haifa or in the North District (Galilee) region (see Table 2). Places of origin of Community Settlement residents, however, are significantly different from those of the Industrial Village.

Table 2.
Place Of Origin Of Haifa Rurban Residents (Percentages)

Place of Origin	Total Rurban	Community Settlements	Industrial Villages
Metropolitan Haifa	40.5	74.1	13.0
Metropolitan Tel-Aviv	12.1	5.6	17.4
North District Towns	10.7	11.2	10.2
Other urban centers	30.8	7.1	50.3
Rural settlements	5.9	2.0	9.1
Total	100.0	100.0	100.0
Have not changed place of work	27.5	61.1	0.0

Source: Field survey, 1982.

Over 85% of the inhabitants of the former emigrated from the immediate metropolitan Haifa region or from the neighboring towns, and more than 61% of the total employed have not changed their pre-settling place of work. The Industrial Village, as an economically self-contained community, attracts migrants from urban areas across the country. None of the employed surveyed had maintained pre-settlement employment.

In spite of differing places of origin and ideologies, the ex-urban settlers of the rurban communities reveal significantly similar push and pull factors (see Table 3). Minor differences, however, reflect unique lifestyle expectations. Push factors indicate the perceived negative aspects of city life and environment, while pull factors disclose the expected quality of life in the ex-urbia. It is interesting to note how factors such as the opportunity to live in a place of one's own choosing, with full control of lifestyle and environment, scored high values. In contrast, notwithstanding the fact that the rurban settlements of Galilee were used as a geopolitical tool to establish Jewish presence in a vulnerable region, the pioneering feeling of these settlers scored relatively low as a pull factor. The modern pioneers of Israel, in contrast to those of pre-state years who settled in the Kibbutz or the Mashav (also geopolitical tools of a setttlement deployment strategy), more

Table 3.
Push-Pull Factors—Rurban Settlements of Haifa's Ex-Urbia

Factors	Total Rurban		Community Settlements		Industrial Villages	
	Average score	Rank	Average score	Rank	Average score	Rank
Push factors from the city:						
Poor environmental quality	3.31	1	3.59	1	3.09	1
Social problems	3.03	2	3.18	3	2.91	2
High residential density	2.99	3	3.35	2	2.70	4
Unsuitable/poor education facilities	2.66	4	2.46	4	2.83	3
Pull factors to rurban community:						
Opportunity to live in place of one's own choosing	4.18	1	4.83	1	4.74	1
Possibility of influencing lifestyle	4.57	2	4.57	3	4.57	2
Possibility of influencing environmental quality	4.46	3	4.40	5	4.52	3
Life in the countryside	4.38	4	4.69	2	4.13	5
High environmental quality	4.20	5	4.51	4	3.95	7
Participation in a pioneering national effort	3.93	6	3.88	6	3.96	6
Life in an intimate community	3.92	7	3.83	7	4.00	4
Socially secure environment	3.73	8	3.76	8	3.70	8

Source: Field survey, 1982
*Note: Average Scores On 5-1 Likert Scale And Rank Order

closely resemble Friedmann's 1978 definition of American modern pioneers of suburbia: "The early pioneers of America set out to start a new life that they would make themselves. The modern pioneers of suburbia do not wish for a new life, they wish to re-establish an order of life that recalls the simplicities of an earlier day. They wish to protect their personal space."

The pioneers of the rurban settlement are among the social elite of Israeli society (see Table 4). These persons are typically middle-aged, highly educated, with white-collar jobs in quaternary activities. Their standard of living in terms of yearly expenses (substitute variable for income) is relatively high. If housing and services are intensively subsidized by the government because of its geopolitical objective of populating these settlements, the actual standard of living of rurban families is very high. The socioeconomic characteristics of the population of the two types of rurban settlements are basically similar, and are significantly different both from those of Karmiel, a neighboring successful new town, and from those of the overall Jewish population of Israel.

Preferences and Expectations

In an effort to secure a lifestyle and environment (see Table 3), rurban residents reveal marked preferences regarding the nature of settlement and employment. In rejecting city life, these people demonstrate a preference for a small, somewhat intimate social community. Yet, while the Community Settlement residents were split in settlement size and affinity texture preferences, the settlers of the Industrial Village overwhelmingly advocate a small heterogeneous community (see Table 5). Inhabitants of both types of communities assign a high priority to living and working in the same rurban community if employment aspirations can be fully met.

Ten workplace (employment) utilities[2] were evaluated by the study to reveal rank order and value stretch between reality and preferred (see Table 6). Prima facie, there appears to be a slight resemblance between the workplace utilities of those employed in the Community Settlement and the Industrial Villages; in addition, the employed of both areas tend to evaluate their job utilities differently from those employed in the Karmiel settlement. The quality of employment utilities in terms of personal satisfaction scored high among rurban employed population, while Karmiel residents placed greater emphasis on material utilities. However, a closer statistical analysis of the information in Table 6 suggests some unique properties of employment preferences for the three types of settlement involved (see Table 7).

Coefficient of variance analysis of workplace utilities scored low for Community Settlements and very high for Karmiel. Because the higher the

Table 4.
Labor Force Characteristics, Rurban Settlements
(Percentages)

Attributes	Israel (1981)	Karmiel	Rurban settlements		
			Total Rurban	Community Settlements	Industrial Villages
Occupation:	100.0	100.0	100.0	100.0	100.0
White collar	27.7	40.2	62.4	69.8	56.3
Services	39.2	23.2	20.6	18.5	22.3
Blue collar	33.1	36.6	17.0	11.7	21.4
Employment:	100.0	100.0	100.0	100.0	100.0
Primary & secondary	29.4	47.8	21.0	19.4	22.3
Tertiary	30.9	10.8	13.3	9.4	16.7
Quaternary	39.7	41.4	65.7	71.4	61.0
Age:	100.0	100.0	100.0	100.0	100.0
Up to 29	26.2	17.0	15.4	16.2	14.7
30-39	27.8	50.0	62.3	61.7	62.7
40-49	19.0	22.0	22.3	22.1	22.6
50+	27.0	11.0	-	-	-
Education:	100.0	100.0	100.0	100.0	100.0
up to 10 years	41.0	21.4	-	-	-
11-12	29.8	45.2	8.7	2.9	13.4
13-15	16.2	22.6	29.3	29.6	29.1
16+	12.6	10.8	62.0	67.5	57.5
Family expenditures:	N.A.	100.0	100.0	100.0	100.0
Up to $3,600	N.A.	26.8	5.4	2.9	7.4
$3,601-$5,500	N.A.	30.5	17.7	15.1	19.8
$5,500 +	N.A.	50.0	76.9	82.0	72.8

Source: 1982 Statistical Abstract of Israel, 1982 Field Survey.
Note: [1]Not available.

Table 5.
Preferred Settlement Types
(Percentages)

Attributes	Total rurban	Community Settlements	Industrial Villages
Size:			
Large (400-500 families)	33.7	53.7	17.4
Small (200-400 families)	66.3	46.3	82.6
Total	100.0	100.0	100.0
Affinity:			
Homogeneous	27.1	44.4	13.0
Heterogeneous	72.9	55.6	87.0
Total	100.0	100.0	100.0
Type:			
Dormitory only	7.4	11.1	4.3
A place to live and work	92.6	88.9	95.7
Total	100.0	100.0	100.0

Source: Field survey, 1982.

Table 6.
Preferences and Reality In Workplace Utilities

Workplace Utilities	Community Settlements				Industrial Villages				Karmiel			
	Preferences		Reality		Preferences		Reality		Preferences		Reality	
	Average score	Rank	Average score	Rank	Average score	Rank	Average score	Rank	Average score	Rank	Average score	Rank
Stimulating job	4.92	1	4.44	2	4.77	1	4.47	1	4.89	2	4.22	2
Professional freedom	4.83	2	4.12	4	4.71	2	4.30	3	4.77	5	4.13	4
Promotion opportunities	4.38	3	2.43	8	4.33	5	2.96	10	4.96	1	3.22	10
Profitable firm	4.18	4	3.70	6	4.37	4	4.16	4	4.85	3	4.17	3
Short commuting distance	4.10	5	2.35	9	3.66	10	4.14	5	4.48	9	4.01	6
High responsibility	4.04	6	4.31	3	4.52	3	4.46	2	4.71	7	6.32	1
High wage or personal profit	4.01	7	3.30	7	4.11	7	3.14	9	4.76	6	4.43	9
Convenient working hours	3.90	8	3.92	5	4.03	8	3.92	8	4.80	4	3.96	8
Job congruent with skill level	3.81	9	4.58	1	4.30	6	4.08	7	4.70	8	4.07	5
Short commuting time	3.07	10	2.34	10	3.77	9	4.13	6	4.44	10	4.00	7

Source: Field survey, 1982.

Table 7.
Statistical Analysis of Workplace Utilities:

Statistical Test	Preferences	Reality
Coefficient of Variance ($\bar{X}/\sigma$)		
Community Settlements	7.8	4.0
Industrial Villages	11.5	7.7
Karmiel	28.5	11.2
Spearman Rank Correlation (r^1)(1)		
Community Settlements vs. Industrial Villages	.71*	.52
Community Settlements vs. Karmiel	.70*	.64
Industrial Villages vs. Karmiel	.60	.94*
Preference-reality stretch (X^2)(2)		
Community Settlements	3.65*	
Industrial Villages	1.11	
Karmiel	1.69*	

Source: Table 6

Notes: [1] $r^1 = 1 - \frac{6(d^2)}{n(n^2-1)}$, where d = distance between the ranks and n = the number of of ranks groups

[2] $X^2 - \frac{(oi-ei)^2}{ei}$, where oi = reality and ei = preferences

*Significant with $\alpha = 0.05$

coefficient, the smaller the standard deviation relative to the mean, the employed of the Community Settlements tend to differentiate between job utilities more than do the employed residents of the Industrial Villages and in Karmiel. As a rule, the coefficients of the preferences state that long-range objectives are higher than those of the present, indicating that compromise is made on current employment utilities. Chi-squared analysis on the degree of similarity between employment utility values of reality vs. preferences indicates that the Community Settlement workforce has the highest propensity to compromise on workplace utility. The Industrial Vil-

lage, with low chi-squared value scores, disclosed the lowest propensity to agree on a lower state of employment amenities. Those employed in Karmiel, by narrowing their coefficient of variance and by altering their rank order of workplace utilities,[3] disclosed a significant dissimilarity in their preferred vs. present employment qualities.

Spearman Rank Correlation analysis also singles out the Industrial Village, revealing few long and short-range similarities between the rank order of workplace utilities of the employed population in the three settlement areas. The Industrial Village, facilitating the ideology of a self-contained economy, discloses a current utility rank-order similar to that of Karmiel. The Community Settlement, on the other hand, whose labor is highly dependent on long-range commuting, scored low and insignificant rank coefficients. At the preference state, however, when the employed of the Community Settlement narrow their propensity to compromise on quality of employment and strive to satisfy professional preferences closer to home, they tend to be closer, in terms of utility preference order, to the Industrial Village and to Karmiel.

Spatial Interaction Patterns

Shopping and commuting trips of the rurban and urban settlements of the Haifa metropolitan field correspond to the multinodal, centrally-biased pattern, but also disclose some unique properties (see Figure 3). Two basic spatial behavioral patterns were revealed by the study:

1) Clear-cut differences exist between spatial behavioral patterns of settlements with self-contained economies (i.e., the Industrial Village and Karmiel) and of suburban dormitory communities (i.e., Community Settlements and Rechasim-Tivon).
2) Commuting and place of work play roles in determining shopping locations and shopping trip patterns for higher-order goods.

The employed of Karmiel and the Industrial Village are employed locally or in the immediate region. Supplementary employment is found in the employment centers of the multinodal metropolitan field. The employed of the dormitory Suburban Communities, on the other hand, having relatively low rates of local employment, mostly in services, are highly dependent on long-distance commuting. These people are heavily dependent on Haifa, the core city of the metropolis; many also commute long distance to Tel-Aviv, which is 120-160 kilometers (70-100 miles) to the south.

The range for shopping trips, which is usually associated with commuting, reflects the accelerating order of threshold of the goods involved. As a

Figure 3.
Spacial Dimensions of Commuting/Shopping Trips

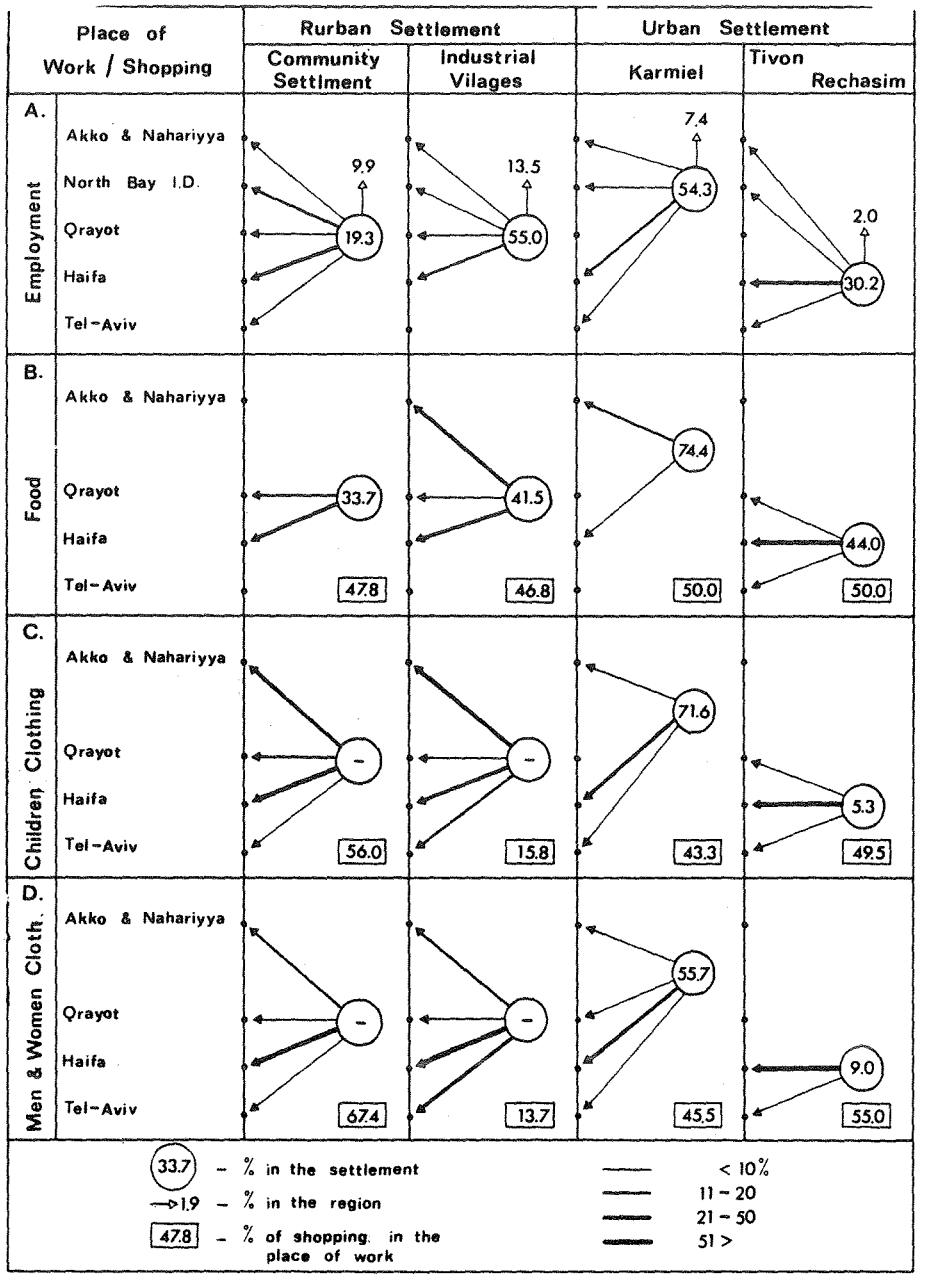


Table 8.
Comparative Costs Of Housing Construction And Municipal Services (1980)

Cost Elements	Rurban settlement 1	Typical New Town 2	Ratio 1/2
Housing cost per dwelling unit:			
Infrastructure	1,000[1]	400[2]	2.50
Housing unit	1,200[1]	1,000[2]	1.20
Total	2,200	1,400	1.57
Municipal services per capita:			
Services	31,000	11,300	2.74
Administration	9,800	2,000	4.90
Total	40,800	13,300	3.07

Source: Calculated by the author following Vinshal and Lapidot, (1980).
[1]Single-family housing—standard up to 80 m^2 (~900 $feet^2$).
[2]Row cottages—average size 120-140 m^2 (1,330-1,550 $feet^2$).

rule, the higher the threshold, the larger is the range of goods. An exception to these work-shopping place associations is the Industrial Village; residents of this small community, who prefer to work locally, indicated an independent shopping trip pattern, mostly to long-distance destinations.

The Costs of Geopolitical Objectives

Untimely regional development, stimulated either by the goal of equality or as a result of geopolitical motives, is extremely costly in terms of national economic growth (Mera, 1972, 1978) and in terms of social costs. The rurban communities of Galilee and those being developed in the West Bank are no exception. Drawing on the emerging quality-of-life aspirations of middle-class, educated, white-collar Israelies, the government has extensively used the small coherent affinity community as a vehicle to settle territories in conflict. Built and serviced by the government, these newly-developed rurban settlements have generated much public controversy.

One study (Vinshal and Lapidot, 1980) argued that this untimely development in Galilee, mostly via public funds, is much more expensive than developing a typical Galilean new town like Karmiel. This study indicated that in terms of 1980 Israeli currency, a housing unit, including the intra settlement physical infrastructure, is 1.57 times more expensive, and the provision of basic municipal services is 3.07 times more costly on a per capita basis (see Table 8). In addition, if the costs of "opening up" a vast territory for new roads, industrial parks, power, communication, water and sewer links are added, development costs become almost prohibitive. The

new settlers themselves also qualify for loans and grants for housing and economic facilities and machinery. Assuming the small scale of such development, these things cost much more than those in neighboring new towns.

Conclusion

Since the mid 1970s, intensive rurban development has taken place in Israel, arising from the growing aspirations for a rural lifestyle and the emerging spillovers of the metropolis. The settlers of these new rurban communities, like those who have participated in the rural renaissance in most Western societies, come from the society's educated middle class, who wish to delineate and control their immediate social and physical space. The extended spatial interactions of these residents are determined by their organizational ideologies and are confined by the multinodal opportunity systems offered by the post-city age urban field.

The unique feature of Israeli rurban development is that rural renaissance at the edge of the metropolis has evolved in an untimely fashion, leap-frogging normal metropolitan field processes. Guided by geopolitical needs to occupy politically-sensitive regions in an environment of diminishing human and material resources, the newly-developed rurban settlements have generated increasing public debate over the current regional-based governmental strategy. The crucial dilemma of the best development strategy—to encourage the growth of old, established and newly-created towns, or to open up new settlement frontiers—seems to be purely an academic discussion. Although the cost-benefit ratios weigh in favor of the former policy, immediate geopolitical gains in terms of Jewish presence in alien territories encourage the latter. The results of this study indicate, however, notwithstanding that residents of both new towns and rurban settlements live in the same region and enjoy the same spatial opportunities offered by the expanding metropolis, spread processes of a metropolis take two courses. One course attracts persons who wish a small, coherent affinity rurban community; the other choice appeals to those who prefer a small to medium-sized urban center.[4] These two options, each of which draws residents from a different segment of the metropolis, are not just alternatives but are actually complementary processes that should both be carefully incorporated into regional development strategies.

Notes

1. For a comprehensive discussion on workplace utilities and the value stretch methodology, refer to Kipnis and Mansfeld (1986).

2. The 10 workplace utilities are those that scored the highest preference values out of the 17 utilities evaluated in the study (Kipnis and Mansfeld, 1986).
3. Spearman Rank Correlation analyses of preferences versus reality results were as follows: Karmiel r' = 0.001, Community Settlements r' = 0.20, Industrial Village r' = 0.60. None of these values is significant with $\alpha = 0.05$.
4. For a comprehensive analysis on the development of the urban centers of the Galilee, refer to (Kipnis, 1983, 1984).

References

Berry, B. J. L. 1973. *The Human Consequences of Urbanization.* London: Macmillan.

Boyce, R. R. 1981. The Energy Crisis: A Case for Future Decentralization. *South African Geographer* 9, pp. 95-100.

Clout, H. D. 1974. The Growth of Second Home Ownership: An Example of Season Suburbanization. In *Suburban Growth*, edited by J. H. Johnson. London: John Wiley & Sons, pp. 101-28.

Conzen, H. P. and P. D. Phillips, 1982. The Character of Metropolitan Networks. In *Modern Metropolitan Systems*, edited by C. M. Christian and R. A. Harper. Columbus: Charles E. Merrill, pp. 30-61.

Friedmann, J. 1978. The Urban Field as Human Habitat. In *Systems of Cities*, edited by L. S. Bourne and J. W. Simmons. New York: Oxford Univ. Press, pp. 42-52.

Friedmann, J. and J. Miller. 1965. The Urban Field. *Journal of the American Institute of Planners* 31, pp. 312-19.

Haren, C. C. and R. W. Holing. 1979. Industrial Development in Non-metropolitan America: A Locational Perspective. In R. E. Lansdale and H. L. Seyler, *Nonmetropolitan Industrialization.* New York: Halsted Press, pp. 13-46.

Helburn, N. 1982. Geography and Quality of Life. *Annals of the Association of American Geographers* 71, pp. 445-56.

Herbert, D. T. and C. J. Thomas. 1982. *Urban Geography.* Chichester: John Wiley & Sons.

Krakover, S. 1980. Toward An Understanding of the Urban-Field Concept. *Geographical Research Forum* 2, pp. 35-46.

Krakover, S. 1982. *Spread of Growth in Urban Field, Eastern United States 1962-1978.* Ph.D. diss., Univ. of Maryland, College Park.

Kipnis, B. A. 1981. Segev-Karmiel-Ma'alot: The Science Based Manufacturing Axis of the Galilee. In *Proceedings of the 1981/2 Annual Meeting of the Israeli Geographical Association.* Tel-Aviv (Hebrew).

Kipnis, B. A. 1982. How to Advance Metropolitan Processes in Israel. *Horizons* 6, pp. 49-63 (Hebrew).

Kipnis, B. A. 1983. The Northern Migration Field—The Changing Trends of Late 1970s. In A. A. Shmueli, A. A. Soffer and N. Kliot, *Lands of Galilee*, Haifa: Scientific Applied Research Co., Univ. of Haifa, pp. 509-20. (Hebrew).

Kipnis, B. A. 1984. Role and Timing of Complementary Objectives of Regional Policy, The Case of Northern Israel. *Geoforum* 15, pp. 191-200.

Kipnis, B. A. and Y. Mansfeld. 1986. Work-Place Utilities and Commuting Pat-

terns—Are They Class and Place Differentiated? *Professional Geographer* 38, pp. 160-69.

Lewis, P. F. 1982. The Galactic Metropolis. In *Beyond the Urban Fringe*, edited by R. H. Platt and G. Macinco. Minneapolis: Univ. of Minnesota Press, pp. 23-50.

Mera, K. I. 1972. On the Urban Agglomeration and Economic Efficiency. *Economic Development and Cultural Change* 21, pp. 309-24.

Mera, K. I. 1978. The Changing Pattern of Population Distribution in Japan and Its Implications for Developing Countries. In *Growth Pole Strategy and Regional Development Policy*, edited by F. C. Lo and K. Salih. Oxford: Pergamon Press, pp. 193-206.

Muller, P. O. 1976. *The Outer City: Geographical Consequences of the Urbanization of the Suburbs*. Washington: Association of American Geographers, Resource Paper no. 75-2, pp. 29-64.

Reichman, S. 1977. New Forms of Urban Settlements in Israel, a Review. *City and Region* 3, pp. 3-19 (Hebrew).

Reichman, S., A. Ganor, and A. Openheim. (1981). *Nonagricultural Jewish Settlements in Judea and Samaria*. Jerusalem: Hebrew Univ. (Hebrew).

Smailes, A. E. 1947. The Analysis and Delineation of Urban-Fields. *Geography* 32, pp. 151-61.

Vinshal, Z. and S. Lapidot. 1980. *Socio-Economic Aspects of Jewish Settlements in the Galilee, Preliminary Analysis*. Jerusalem: Internal Report (Hebrew).