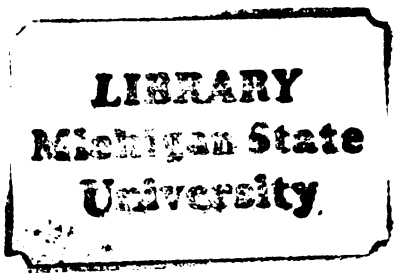

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Major professor

Date February 13, 1984

THE AMERICAN POPULATION ABROAD: A CASE STUDY OF THEIR RESIDENTIAL PATTERNS AND THE SELECTION OF RESIDENTIAL HOUSING IN JEDDAH CITY, SAUDI ARABIA

By

Asaad Mohammed Atiyah

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ABSTRACT

The American Population Abroad:
A Case Study of Their Residential Patterns
and the Selection of Residential Housing
in Jeddah City, Saudi Arabia

by

Asaad M. Atiyah

This study examines the problem of how members of a foreign-born population group manage to select their residential housing within the territorial limit of an alien city. The participants in the study are Americans living overseas in Jeddah City, a cosmopolitan city in Saudi Arabia which draws people from the four corners of the world. This investigation does not undertake a new approach, employing more sophisticated techniques, but reviews and reassesses pertinent information already available to expand our knowledge of the dynamics of residential-locational decisions. Such cross-cultural replication should generate new parameters from data collected in different spatial settings.

Unlike previous studies, the main concern of the present study is with the current residential pattern and the selection of residential housing, and with the socioeconomic characteristics of the American population,

rather than with the American's adjustment problems or social interaction with the host population--concerns which figure more appropriately in different disciplines other than geography. Continued research in this vein will improve our theoretical and empirical understanding of overseas Americans' distributional patterns, about which very little research has been done.

ACKNOWLEDGMENTS

A large number of people provided invaluable help during the time necessary for the completion of this study:

The American respondents of Jeddah City contributed to the research by lending their time and knowledge for interviews and the questionnaire.

Professor Ian M. Matley, who served as the principal advisor during the course of the Doctoral program and provided the author with both timely guidance and intellectual freedom. I am particularly appreciative of this association.

During the course of my graduate study, I benefited from the intellectual curiosity and insights of Professor Joe T. Darden. Professor Robert N. Thomas provided me with constant encouragement, along with an unyielding confidence. Professor J. Allen Beegle of the Department of Sociology and the Dean's Representative at the Dissertation oral examination contributed to the author's refurbished interest in the sociological perspective.

To my parents, without whom I would never have come this far; to my wife Refah Al-Ghamdi, who bore with me the hardships; and to our children, I lovingly dedicate this work.

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CHAPTER I

AN INTRODUCTION TO THE STUDY

A simple scientific fact is that people are people throughout the world, and yet they differ despite the basic biological similarity found in Homo sapiens. This is empirically verifiable reality, whether man is Negroid, Caucasoid, or a member of another ethnic subgroup of the human species. The important differences, however, are largely cultural. As Oliver (1962, p. 154) points out, "If we would communicate across cultural barriers, we must learn what to say and how to say it in terms of the expectations and predispositions of those we want to live with." This is a study of a small population group in a cross-cultural situation in the Middle East. The participants in the study are Americans living overseas who reside at Jeddah City, a cosmopolitan city in Saudi Arabia which draws people from many different countries.

American Population Living Abroad

"Living abroad" is defined by the U.S. Bureau of the Census as residing outside the fifty states, the District of Columbia, the Commonwealth of Puerto Rico, and the outlying areas of the United States' sovereignty or jurisdiction. The population abroad includes members

of the armed forces, federal civilian employees, the dependents of these two groups, crews of merchant vessels, and other United States citizens living abroad. Americans temporarily abroad on vacations, business trips, and the like are excluded.

Americans residing abroad are not an entirely new phenomenon. An estimated 100,000 people fled the U.S. to avoid the Revolutionary War; Canada received half of them (Casey, 1981). By virtue of geographical proximity, Mexico and Latin America played host to the greatest bulk of American migrants after the Civil War. In this connection, Casey (1981) indicates:

> The big wave of American migration did not occur until after the Civil War, when perhaps 10,000 disgruntled Southerners left for Mexico and Latin America, with 4,000 going to Brazil alone. Brazil has several large enclaves today composed in good measure of their Portuguese-speaking decedents, who are now as totally Brazilian in outlook as someone whose family has been in America for 100 years is American in outlook (p. 4).

The exact number of overseas Americans is not known prior to 1900. However, the following official number of United States citizens abroad clearly demonstrates the steadily rising total of Americans who live abroad:

1900	91,219
1910	55,608
1920	117,238
1930	89,453
1940	118,933

1950	481,545
1960	1,374,421
1970	2,400,000
1980	2,008,263

Dulles (1966), in his article, "A Historical View of Americans Abroad," comments on the increase in annual visits to the Old World by Americans from a few thousand visitors in the early nineteenth century to more than a million in the 1960s. He attributes the increase to tourism becoming within the economic reach of an average American, along with the increased sharing of expertise in business technology as well as the military and social importance of the United States.

Rubin (1966) provides a statistical overview of Americans abroad and came up with some very interesting statistics. In the sixty years since 1900, the U.S. population residing abroad increased by 1500 percent, and more than 50 percent of this population in 1960 was below the age of forty. Of the total Americans employed abroad, 70 percent were privately employed in 1960. Additionally, the study provides information regarding the distribution by sex, age, and years of education completed by Americans living abroad. The study also enumerates the following facts and trends among U.S. citizens abroad:

1. Between 1960 and 1966, there was a decline in the number of females between the ages of 20 and 40

and of children of both sexes. There was an increase in the number of males belonging to the armed forces personnel.

2. The overseas group is younger, better educated, and more remuneratively employed than the domestic national population.

As of 1975, Casey (1981) indicates that there were 2,078,900 Americans living abroad--923,000, or 44.4 percent of them and their dependents, in government (both civilian and military), and 1,155,900, or 55.6 percent, as private citizens. The breakdown of private citizens by category is shown as follows:

Businesspeople	485,000
Social Security Recipients	104,000
Veterans Receiving Benefits	68,700
Students	50,000
Missionaries	43,500
Retired Government Workers	26,000
College Teachers	6,500
Others	352,200
TOTAL:	1,155,900

(Source: D. R. Casey, 1981, p. 4.)

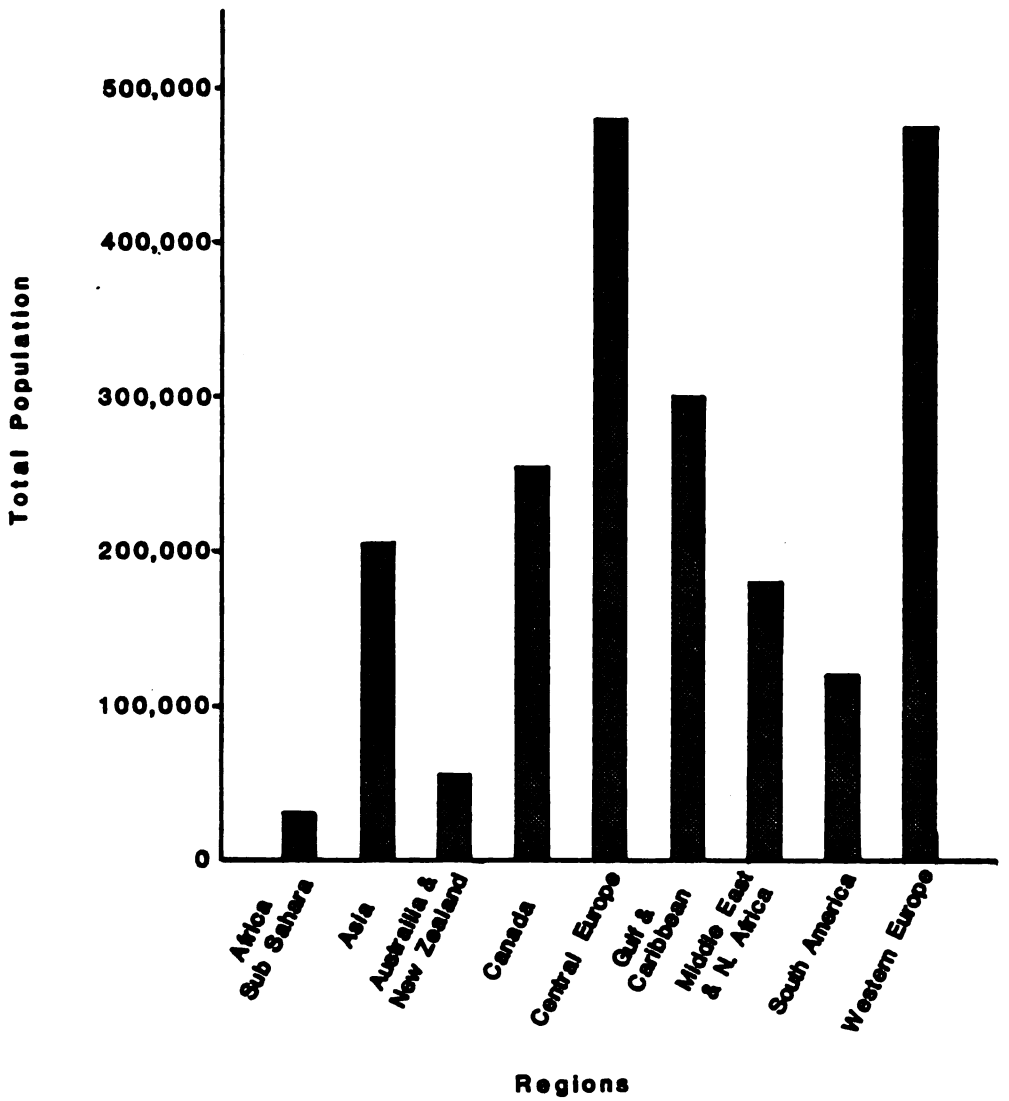
At present, there are few urban centers in the Americas, Europe, Asia, Africa, Australia, and New Zealand that do not contain Americans. (The total number of Americans living abroad in different countries is

given in Appendix A, and a graphic representation of their distribution in the world's regions is shown in Figure 1.) The overseas Americans, as Cleveland, Mangone, and Adams (1960) indicate, come from all types of families and from every region of the United States. Furthermore, Americans abroad, like other Americans, are

> dragged to church, sneak off to go fishing, manage the school baseball team, have dates and flirtations, awake to knowledge early or late, go to war, and get married. Somewhere along the line they decide to live overseas (Cleveland et al. 1960, p. 8).

However, the Foreign Service Institute of the Department of State (1965) indicates that when Americans go abroad, they carry a stack of cultural baggage with them--those typically American traits which are so natural to them that Americans tend not even to be conscious of them--but which nevertheless make them strange and recognizable to people of other cultures around the world. Moreover, there is a basic, profound difference in outlook between Americans and many of the people they meet abroad. In general, this is less of a problem in Europe than in areas such as the Middle East. That is, one might expect an American to find the going easier in Western Europe because much of America's own culture has its roots there. Cultural differences become issues of crucial importance when an American interacts with such foreign value systems as those embodied in the culture of the Middle East, for example.

Figure (1) American Population Residing in Foreign Countries (1980)



Americans Living Abroad: The Emergence of a General Pattern

A vital concern of the social scientist is to make it possible for individuals belonging to one culture to function effectively in an alien culture for the benefit of all. Social scientists have begun to understand and increase their perception of the problem of how an individual feels in an alien culture. In this context, a large number of studies in the last 30 years, with subjects ranging from young American students abroad to highly specialized experts, have examined cross-cultural interaction.

Professors Jeanne and John Gullahorn studied American students abroad in the context of personal and professional development in 1966. The investigators used interviews and questionnaires to collect their data, which were put through multivariate analyses. The investigators arrived at the broad conclusion that

> those reporting more extensive interaction with host nationals and greater personal development and satisfaction tend to be less settled in adult roles and less committed to academic goals; whereas those indicating that study abroad furthered their professional development and advancement tend to be older, advanced graduate students who incorporated data gathered abroad in dissertations for advanced degrees, enabling them to obtain college faculty positions (p. 43).

The situation for young students can hardly be described as stressful in a European (French) context.

Because the American students generally belong to the same race as their European counterparts, they are almost unnoticed. This eliminates one serious source of stress. The American students complain that they have "few opportunities to interact with host nationals in a home setting." The investigators conclude that language plays an important role in interaction, though they are not sure if a higher level of language proficiency is due to heightened contact with the host nationals or vice versa.

The host nationals, however, assume the Americans are more tourists than students. It is here, the investigators point out, that misunderstanding arises out of preconceived assumptions about rules; the American students are put off by the impersonal approach of their professors and feel frustrated. These frustrations and disappointments are easily traceable to the cultural experiences of each group--the hosts and the guests.

Compared with this situation, the experience of American students in India bears a striking contrast. Cormack (1973) records the following factors that contribute to frustration and the development of a negative attitude among the American students living in India:

1. The American students stand out as ethnically different.

2. The American students find the ways of their Indian counterparts mysterious and often puzzling.

3. The American students are forced into a representational role.

4. The American students find their attitudes toward sex, friendship, studies and social and moral issues completely opposed by their Indian counterparts.

5. The American students note that intellectual discussions follow nationalist attitudes rather than rational consideration.

6. The American students note that international political points of view get in the way of intellectual discussion.

7. The demands for friendship made on American students by their Indian counterparts are so total and time-consuming that they often avoid such contacts.

"The American Student in Taiwan" is a study by seven investigators working in six different institutions of higher learning. The conclusion they arrive at is based on interviews with 40 above-average American students in Taiwan. An interesting fact noted in this article is that the American students' responses are strikingly similar to those of students in India under similar circumstances: The students' stay in Taiwan increases their sense of being Americans, as they are constantly reminded of being different. One student expresses a typical view:

> In the United States, I have always thought of myself as being off to the side, not like the others. But over here, I realize that

> I am an American: I think like an American, I like to see the job done, I respect efficiency, I like to speak my mind (p. 363).

Taiwanese society has well-defined roles and is tradition bound. American students complain that they cannot come to know their teachers' feelings because of the distance that persists between teachers and students. It is difficult for American students to make friends among the local population, and this leads them to seek company among their fellow countrymen. In the case of eleven American married couples who consider themselves self-sufficient, "not one established a warm, friendly relationship as a couple with a Chinese." Most single students have Chinese boyfriends or girlfriends, but in no case did they feel that "the barriers to marriage seemed likely to be overcome." Most of the difficulties in establishing closer social contacts are due to the fact that the Taiwanese are dependent, other-directed, and conservative, as opposed to Americans' independence, assertiveness, and expressiveness. American students experience the same racial conspicuousness in Taiwan as in India, which leads to their social isolation. They are pushed into an ambassadorial role. The investigators came to the conclusion almost identical to that reached regarding India:

> Adaptations involving deep and intimate involvement with host country nationals are difficult to achieve, and have the widest range of effects--from the positive and satisfying to the negative and painful (p. 370).

It is interesting to note how the problems of adjustment and response to an alien culture follow the same pattern with regard to different host cultures.

John Useem (1966) investigated the work patterns of Americans in India. He is credited with originating the concept of the "third culture"--the "patterns generated by Indians and Americans working together in shared transactional enterprises and sustaining common social life." The emergence of this culture is the result of pressures of post-independence India. From a long history of being colonized, India has emerged out of a role subordinate to whatever is Western. The members of the "third culture" group among the Indians are highly skilled in their professions and have created patterns that are easily shared by their American counterparts. Yet this culture does not ensure the same degree of harmony between members of the same culture in their home environments. However, this "third culture," which Prof. Useem suggests is not peculiar to India, is like a "systematic link between societies." Participants in this culture, particularly the Americans, have opportunities to be creatively involved in the evolution of the culture, and in that involvement lies the key to reduction of stress for an American worker in India. However, outside of the third culture, the problems faced by Americans in India are more stressful.

In studying the American family in India, Ruth

H. Useem (1966) comes up with the following conclusions:

1. The American family is forced into a representational role which is a cultural shock to the wife, who is used to privacy of family life.

2. Social structures in India are so different from the structures one encounters in the mother country that adjustment is a serious problem.

3. The third culture poses stressful adjustment problems for an inexperienced wife.

4. Three areas produce the maximum amount of stress: (a) servants; (b) health; and (c) education of the children.

Wives handle these situations differently, according to their personality traits. In interacting with the host culture, the wife finds it difficult to maintain an egalitarian outlook. She begins to act as if she is superior, but often finds she does not know how to handle it. The native standards of hygiene are far below what she is used to in the United States. Even though she is not used to servants in her country, to fulfill her role as a representative of her culture she is forced to employ servants, whose habits of cleanliness do not meet her standards. Education of children poses another serious problem because the system and standard of education in India are not adequate according to her perception. Furthermore, it is interesting to note that an article published in Harper's Magazine (March 1959)

anticipated Prof. Ruth Useem's scientific study of American wives' problems in an Indian setting. The Harper's article ends with nine tips for the wives of American officials, ranging from familiarizing themselves with the local customs and culture to acting in keeping with their representational roles. However, since this article was written for popular consumption, it did not attempt to examine the deep-rooted sociological and cultural dimensions of the problem.

Lambert (1966) focuses on how Americans respond to the stress of adjustment to a new setting. Generally, Americans go through a cycle from euphoric enthusiasm to disappointment to outright anti-Indian feelings prompted by cultural differences, health conditions, the expectations of the Indians for friendship with the Americans, and language difficulties. Most Americans end up in an "enclaved" situation, confining their social activities mainly to their fellow countrymen or having none at all.

Tarr (1966) contributes important insights regarding the American military abroad. There were a million and a half military personnel stationed in Europe and Asia in the 1960s. Often, these military personnel lived a highly disciplined, closely supervised life, because of their sensitive assignments. They were discouraged, as a rule, from mixing with the local population. Therefore, Tarr indicates, "Military

personnel tend to live somewhat apart from the community which surrounds the base." Whatever relations fall within the permissible contact level, "the military encourages good relations." Otherwise, the military personnel remain isolated. One Army psychiatrist reported that "23% of all military teenagers have never been downtown in their German communities." The problem the military faces abroad is not that of adjustment or of homesickness because, within the military establishment, conditions similar to those at home are present.

Another study that testifies to the ever-increasing commitment in personnel and materials abroad was made by Wilkins (1966). She notes that American investments abroad have increased, as has the number of businesspeople all over the world. Wilkins identifies four categories of business enterprises in which Americans abroad are engaged: those working for foreign firms; the self-employed; those representing trading firms; and, by far the largest number, those who work for Americans headquartered in international operations and service organizations. The professions in which they are engaged include management, advertising and even drilling and construction. Furthermore, these businessmen strike people in the host countries and others as affluent and therefore are generally alienated from the people in countries for which they are working. Strangely enough, they experience an alienation from

their home country, too, even though they are largely treated as representatives of their country. A direct consequence of the alienation from the host country is that the host population's uniform reaction that they are overpaid and have no specific role from the perspective of larger national interests. Wilkins concludes that the impression is incorrect, but it contributes to stress.

As American missionaries were expelled from communist countries after World War II, their number in Asia, Africa, and Latin America increased manyfold. Latourette (1966) indicates that 83.3 percent, or five-sixths, of these missionaries belong to the Protestant denomination, and most of these missionaries work with the Christian community in their respective areas of operation. Generally, their areas of concern are medicine, health, education, and agriculture. Latourette is quick to add that, though the number of missionaries reached a high mark in the 1960s, they constitute a very small proportion of all Americans abroad (implying the breadth of involvement of American expertise and service abroad). Since the missionaries are a more dedicated lot, they tend to endure the pressures of change and the stresses of adjustment in a much better manner than do their fellow countrymen working in other fields abroad. Another advantage they enjoy is that their spouses, too, are committed to their line of work, and thus the

spouses do not have as much difficulty adjusting as do other American spouses abroad and do not become a source of extra pressure for the missionaries.

As a trained observer, Kimball (1956) provides excellent insights into the entire gamut of an American's life in Saudi Arabia. His article contains important basic information regarding the work conditions in the oil fields, the housing, and the social and cultural situations encountered in that country.

Kimball has divided his study into five sub-sections, including: Cultural Restrictions; American Cultural Characteristics; The Female World; The Male World; and The Spatial Setting. The cultural restrictions imposed by the strict Islamic law that governs the private and public behavior of the Saudis is found too restrictive by Americans living in the cities of Dhahran, Ras Tanura, and Abqaiq. These restrictions are obviously contrary to American habits, and the Americans openly and vociferously complain about them. Particular note has been made of the fact that contact between members of the opposite sexes of the two nations is totally prohibited. Kimball gives a profile of the cultural personality of the American in terms of restrictions and permissible style of life in Saudi Arabia.

In the Saudi Arabian world, the position of the American single female is very interesting. Kimball is surprised that in a heavily male-oriented society, a

good many women have found profitable positions. He postulates that these women employees perhaps are on husband-hunting expeditions, or that single women must be in great demand. However, his actual observation counters these assumptions. Women have reasons for employment as varied as men have. Wives of the employees form a group of their own. With the availability of local help to work as servants, wives have a great deal of free time on their hands.

Kimball recognizes that the city of Dhahran is a male-dominated work world. It is noted that American men and women employed there are stratified socially and in terms of their living conditions, according to the income and position of the breadwinner. It is a surprising fact that in a so-called egalitarian society like America, this social segregation should be such an obvious, patent fact.

The setting subsection of the present report describes the living conditions and amenities available to the stationed Americans, who are essentially the employees of Aramco. It is within the residential areas where they live that

> one can find the major retail and service centers that are reserved for use by the "senior" staff, a group composed largely of Americans but with a scattering of other nationalities (p. 471).

By Saudi standards, Americans live a much more comfortable life than one might expect. Furthermore, it is

interesting to note that the Americans remain largely separated from the local population in Dhahran, Ras Tanura and Abqaiq. In each of these cities, Kimball identifies four distinctive types of residential areas:

> First, no Westerner would have difficulty in identifying the senior staff "camp" as a settlement built by Americans in our southwestern tradition of town planning (p. 471).

It is an area of single-story dwellings for employees and their families. Each house is surrounded by a small, grassed yard, usually enclosed by a hedge. There are other plantings, including flowering shrubs, low desert trees, and in some instances flower gardens. Only in Dhahran is there a variation on the grid pattern of streets and walks. Here one finds a few curving streets and irregularly shaped blocks. Streets are paved and frequently curbed, and have night lighting. There are only slight variations between the recreational facilities of each senior staff camp. Each one possesses an auditorium that is also used as a movie theatre and for amateur productions; a luxurious club with snack bar, bowling alleys, library, dining room, lounge, and terrace for dancing and social gatherings. The two senior staff camps of Dhahran and Abqaiq have swimming pools, while Ras Tanura residents may use an immense beach on the Gulf. In addition, each senior staff camp possesses new modern elementary junior high school buildings that

provide facilities for instruction through the ninth grade. There is a well-staffed and well-equipped hospital in Dhahran which serves all employees; there are medical clinics in the other two cities. One factor of American community life that is conspicuously absent is the church building. Furthermore, in describing the variation in size and construction of habitations, Kimball adds that

> the upper echelons of the bureaucracy occupy the larger and most elaborate residences. Lesser employees live in more modest quarters. The more fortunate single men and women live in multiple-roomed modern house-type buildings. The "bachelors," a term applied to all single men including those with families in the United States, may live in barrack-type structures which, however, have many conveniences. Because of a shortage of family-type housing, a system of assignment based primarily on seniority has been developed (p. 472).

Second is the "intermediate" camp which houses those employees who are rated in the personnel system as primarily semiskilled and nonsupervisory. The bulk of these are other "nationals"; that is, they have been recruited from most countries of the Middle East and some from Africa and the Mediterranean. They include Indians, Pakistanis, Sudanese, Adenese, Palestinians, Lebanese, Italians, etc. The barrack-type dwellings are permanent concrete or cement-block structures.

Third is the camp for "general" or "Saudi" employees, which is of similar construction and arrangement as the intermediate camp. It has modest recreational

facilities, a market for buying foodstuffs and other items, and one or more mosques. It is an area which is constructed to house only bachelors.

The last residential area is the one that was neither planned nor welcomed. To Western eyes "it is reminiscent of the Hoovervilles of Depression days." Here the employees, mostly Saudis, may bring their families.

Each of the above-mentioned residential areas is separated from the other by either space or some type of barrier. The divisions correspond closely with the structure of the bureaucratic hierarchy and ethnic divisions among the employees, a correspondence which gives emphasis to the social divisions within the whole. Moreover, Kimball points out that

> their internal divisions reflect the bureaucratic structure of an American corporation, divisions that are sharply accentuated by the concidence of status levels and national origin. Only in the fringe natural community of the Arabs has there been thus far an escape from planned arrangement. . . . It is also, however, a position that imposes a high degree of cultural isolation, some uncertain restrictions upon the American behavior, and contributes to an omnipresent sense of precariousness (p. 473).

The pattern that emerges from the numerous studies that began appearing in the early 1950s with regard to the major problems faced by Americans abroad are:

1. Americans abroad can be classified as businesspeople, technical experts, missionaries, students and scholars, tourists and transit passengers.

2. The stress experienced and adjustments effected by people in these categories are dependent upon the duration of their stay and the professions in which they are engaged.

3. The stress experienced, adjustments effected, and overall attitudinal change reflected at the end of the experience is closely related to the age of the American living abroad, his or her sex and role in the foreign country, and the satisfaction derived from the foreign assignment.

4. Wives of Americans with foreign assignments face problems in the areas of health, daily homemaking routines, social adjustment, and education of their children.

5. Unfamiliar religious orders and sociocultural systems in the host countries account for a share of the stress the Americans face abroad.

6. The limited knowledge of the native language is a further handicap often standing in the way of promotion for Americans abroad and sets them apart from the indigenous peoples.

7. Those American employees abroad joining larger companies such as Aramco are not allowed free choice in selecting their residential housing. Instead, they are assigned to live in a camp-type settlement and are totally separated from the indigenous population.

Need for the Study

Overseas Americans may at first appear to be a minor transfer of population, both in terms of the numbers involved and the surface settlement areas. If examined within a scientific framework, their decision to live abroad may appear as just one of the many population movements which have dotted the history of humanity since time began. In fact, living abroad presents considerations which go far beyond the delight of eating new foods and sharing folkways, interesting though these may be. When living abroad, Americans (and other nationality groups) face the reality of interacting in a new and different spatial setting.

What has been done in regard to research dealing with the American population living abroad is a concentration of studies tackling the problems of cultural adjustment and the personal disruption which often occur within individuals as a result of a clash of cultures. With the exception of Kimball's 1956 study, there is far less research dealing with the problem of how overseas Americans manage to select their residential housing and decide where to live within the territorial limit of an alien city. In addition, whereas a substantial body of research has analyzed the spatial distribution of a particular national or ethnic group in one location--e.g., Asians in Nairobi (Tiwari, 1969), Pakistanians in Dundee

(Jones and Davenport, 1972), Chinese and Germans in Sydney (Wolforth, 1974), Puerto Ricans in New York (Rollwagen, 1975), Philippinos and Indians in Detroit (Carlson, 1975), Dutch people in Auckland (Trlin, 1975), Arabs in Detroit (Siryani, 1977), Armenians in Montreal (Chichekian, 1977), Italians in Bedford (King & King, 1977), and Russians in Sacramento (Hardwick, 1979)-- it is hard to justify the lack of interest, particularly among geographers, in studying the residential patterns and the selection of residential housing of overseas Americans in Jeddah or in any other city. It is earnestly hoped that this study will increase the level of our understanding of how Americans, who possess common attributes whether existing intrinsically or having been assigned by the prevailing society, manage to live where they do in Jeddah City.

Statement of the Problem

Of all the challenges and problems that face mankind in today's life, there are few that are so intractable, yet affect so immediately the daily life of a great many people, as the problem of where to select a residential dwelling within the territorial limits of an alien city. This study examines the spatial distribution and important factors responsible for the creation of the residential pattern of the American population living in Jeddah City, Saudi Arabia.

Objectives of the Study

The primary objectives of this study are threefold:

1. to determine the current geographic distribution of the American population in Jeddah City, Saudi Arabia;

2. to identify the variables affecting the decision-making process as to the residential site selection; and

3. to assess the general characteristics of the residential patterns of the American population living in a largely alien sociocultural environment.

In light of these objectives, the specific questions that merit investigation are: Why does the American population of Jeddah City live where it does, and not in some other areas? What are the choicest, most desirable residential locations among the American population in Jeddah City? Are there certain districts --inner, middle, or peripheral--within Jeddah City which have a higher concentration of Americans? What are the residential characteristics that are regarded as important by the Americans in Jeddah City?

Hypotheses

1. In Jeddah City, there is a correlation between the locations of Americans' residences and areas of low population density.

2. In Jeddah City, there is a correlation between the locations of Americans' residences and areas with high percentages of Europeans in residence.

3. In Jeddah City, there is a correlation between the locations of Americans' residences and areas with high percentages of residents with high incomes.

4. In Jeddah City, there is a correlation between the locations of Americans' residences and areas where a high percentage of residents have completed high levels of education.

5. In Jeddah City, there is a correlation between the locations of Americans' residences and areas with high percentages of newly-constructed dwellings.

6. In Jeddah City, there is a correlation between the locations of Americans' residences and areas where low percentages of residents live in traditional Arabic dwellings.

7. In Jeddah City, there is a correlation between the locations of Americans' dwellings and areas with high percentages of highly valued housing units.

8. In Jeddah City, there is a correlation between the locations of Americans' residences and areas where high percentages of the dwellings have high rental rates.

9. In Jeddah City, there is a correlation between the locations of Americans' residences and areas where low percentages of the housing units are

substandard.

10. In Jeddah City, there is a correlation between the locations of Americans' residences and areas which are relatively distant from the city's center.

The hypotheses are related to where the Americans live in Jeddah City. The data to be examined with regard to these people's reasons for selection of present residences should reveal the importance of certain dwelling and housing characteristics, as well as of a number of accessibility variables, in the residential location decision-making process. Although it cannot be hypothesized that the same housing characteristics are equally important to all decision makers, three research questions have been raised to assist in clarifying why Americans in Jeddah City selected their present residences. These questions are:

1. What residential characteristics are considered important to most Americans?

2. What is the rank order of these characteristics?

3. How are these characteristics traded off?

To identify these housing characteristics, each American respondent in the survey conducted for the present study was asked how important 30 different factors had been in the initial selection of the person's present dwelling. Each household head was allowed three

degrees of response: very important, moderately important, and not important. For the purpose of analysis, the respondents' answers were grouped in tabular form, and the absolute and relative frequencies were recorded.

To determine how well the Americans' selection of their residential housing in Jeddah City has worked out for them, respondents were asked several questions to elicit information regarding their satisfaction with the choice made. The word satisfaction was not defined for the respondents, with a view to letting them focus on their feelings rather than the definition of the word satisfaction. The data obtained from the questionnaire were converted to tabular form, and a series of chi-square (χ^2) tests of significance were administered to test the following hypotheses:

H_{0_A}: There is no significant difference between different age groups of Americans in Jeddah City with regard to satisfaction with residential housing.

H_{0_B}: There is no significant difference between American respondents who have different levels of education with regard to satisfaction with their residential housing.

H_{0_C}: There is no significant difference between American respondents who have different income levels with regard to satisfaction with their residential housing.

H_{0_D}: There is no significant difference between

American respondents who are in different types of occupations with regard to satisfaction with their residential housing.

H_{0_E}: There is no significant difference between American respondents who have lived in Jeddah City for different periods of time with regard to satisfaction with their residential housing. (Recent residents are those who have lived in Jeddah City fewer than five years, and older residents are those who have lived in Jeddah City ten or more years.)

H_{0_F}: There is no significant difference between heads of small-sized and large-sized households with regard to satisfaction with their residential housing. (A small-sized household has fewer than three persons living in the same residence, and a large-sized household has five or more persons living in the same residence.)

Organization of the Study

Including this introduction, the present dissertation is divided into five chapters. Chapter II discusses the extant theoretical and empirical works in residential patterns and factors relating to the selection of residential housing. The means of data collection, the sampling procedure, and a general description of the study area are outlined in Chapter III. Chapter IV discusses the principal findings regarding residential patterns and the factors relating to selection of residential housing by the American population in Jeddah

City. The last chapter summarizes the findings, provides the conclusions, and points to prospects for future research.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The majority of theoretical statements concerning the geographical distribution of any population groups in cities can be traced back, directly or indirectly, to such sources as the classical land use models of Burgess (1925) and Hoyt (1939), with a later extension by Harris and Ullman (1945); the preindustrial city model of Sjoberg (1960); and the social area and factorial ecology analysis of Shevky and Bell (1955), with later extensions by Berry and Horton (1970). The bases for these theoretical statements include two distinct but interrelated components: spatial and ecological. The spatial component can be equated with the geometric aspects of territorial occupancy in two-dimensional space, while the ecological component is more concerned with the relationships between the group and the attributes of the environment. The degree of concentration of a population group in specific areas is seen as important among the geometric aspects of territorial occupancy. Of prime importance among the ecological

aspects are the factors differentiating the area of residence of the group from the rest of the city.

Traditional Theories

Early attempts to unravel urban residential patterns have emerged out of three "classical" theories, namely the concentric-ring theory of Burgess (1925), Hoyt's sector theory (1939), and the multiple-nuclei theory developed by Harris and Ullman (1945). The basic underlying objectives of these theories have always been to identify the key dimensions of the urban residential structure and to describe the spatial patterns associated with them.

Burgess (1925), in his model, assumed the existence of a fixed and inverse association between the neighborhood density and the average socioeconomic status of home seekers. He argues that population and housing form a falling gradient from the center of the city. The result is a "concentric" pattern of the spatial distribution of home seekers exhibiting a fundamental preference for more spacious living environments away from the crowded conditions found near the core of the city, as their real incomes increase. Home seekers with lower incomes exhibit a preference for more central locations with respect to the major urban center of employment. The quality and cost of the houses, therefore, increase with distance from the center

and consequent decrease in residential density.

The empirical basis for Burgess's hypothesis was largely rejected in the 1930s when Hoyt clearly demonstrated that the actual distribution of socioeconomic groups and the rental values of houses tend to vary by "sectors" rather than by concentric zones. With regard to these sectors, Herbert (1974) pointed out:

> The high-grade residential areas pre-empted the most desirable space and were powerful forces in the pattern of urban growth. Other grades of residential area were aligned around the high-grade areas, with the lowest-grade areas occupying the least desirable land, often adjacent to manufacturing districts (p. 72).

Hoyt qualified his observation by stating that the high-grade areas would move toward amenity land along transport routes and towards the homes of leaders of the community. Unlike Burgess, he postulated that the fundamental preference of home seekers is a social attraction to prestigious or socially compatible neighbors and the accessibility to the employment areas forming a secondary order of preference.

While possessing similarities in the way space can be organized into zones and sectors, the descriptions of the residential locational behavior found in the Burgess and Hoyt models suggest that home seekers are influenced in their choice of residential location by a variety of preferences. Moriarty (1974) summarizes these preferences as:

> (1) a social accessibility preference to reside close to households of prestigious or compatible neighbors, (2) an employment accessibility preference to reside close to job locations, (3) a life-style preference for a more spacious living environment, and (4) a segregation preference to reside close to households of similar racial or ethnic status (p. 450).

The multiple-nuclei model, first presented by Mckenzie in 1933, is based on the observation that frequently there are a series of nuclei in the patterning of the urban land uses rather than a single central core, as in the Burgess and Hoyt models. The multiple-nuclei model's main distinctive contribution to the theory of residential distribution was its abandonment of the central business district as sole focal point, replacing it by a number of discrete nuclei to which individual land uses were geared (Herbert, 1974, p. 72). Elaborating on Mckenzie's concept, Harris and Ullman (1945) observe that these nuclei are distinct centers as origins of metropolitan areas. The centers have perished as growth has continued between them, and have sometimes emerged as new centers, as urbanization has proceeded. This explains the presence of important sub-centers subsidiary to and competing with the central business district of modern cities. These sub-centers, or nuclei, are described by Chapin (1966) as follows:

> The central business district clearly serves as one nucleus. Others may appear in the form of industrial or wholesaling centers where specialized economic activities of

> similar or complementing character have gravitated together. Still others may emerge in the guise of a major outlying retail center or a university center. Finally, the suburban center and the more distant satellite community for commuters are mentioned as nuclei to be recognized in this conception of the urban land use configuration (p. 19).

These sub-centers, it is argued, represent an important modification of Burgess's concentric-zone theory rather than an alternative or a refutation, as one would expect the concentric rings to form around each nucleus.

However, the three theoretical models have been criticized by an array of writers, mainly on the grounds that they have failed to explain, independently, spatial residential differentiation (Davie, 1938; Redwin, 1961; Timms, 1971). Most of the criticism is directed against the fact that each of these models is, in its original form, a very poor representation of the spatial structure of a modern city. But the value of a theory does not consist in the slavish imitation of the reality on the ground; it lies in its ability to enhance our understanding of a complicated phenomenon by means of sound simplification and generalization. On the whole, the three models are a fair representation, at least, of certain parts of the residential differentiation problem.

The urban residential differentiation discussed here is characteristic principally of Western industrial cities. Though few cities in the world remain untouched by industrialization, it is useful to examine the patterns

of "preindustrial" cities to gain a better understanding of residential differentiation.

The Preindustrial Model

Basing his study on a large body of data, Sjoberg (1960, p. 5) argues that "preindustrial cities everywhere display strikingly similar social and ecological structures, not necessarily in specific cultural content, but certainly in basic form." According to Sjoberg, the elite of a city reside at the center, while "the disadvantaged members of the city fan out toward the periphery, with the very poorest and the outcasts living in the suburbs, the farthest removed from the center." That is, the wealthy population clusters into one segment of the original town and the have-nots build their cottages in the remaining areas. The attraction of the original core, Sjoberg explains, is a product of both choice and constraint. Prominent political, religious, and economic institutions are situated in the city center, conferring upon it a prestige unrivaled by other quarters. The elite choose central homes not only because they are socially desirable but also because they provide easy access to the central institutions in which their power is based.

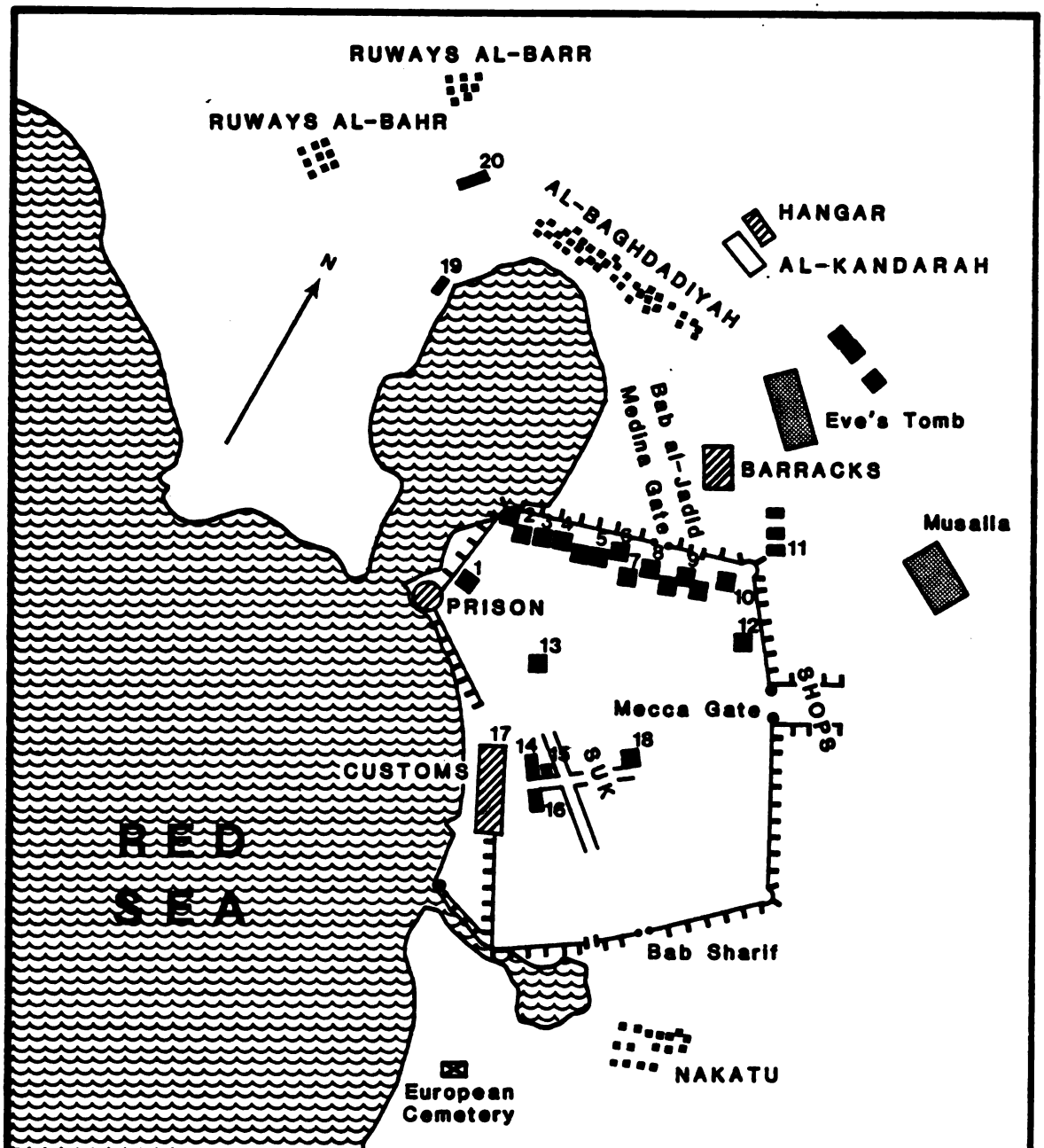
The major features characterizing preindustrial Middle Eastern cities are summarized by Costello (1977) as the following: the citadel, the palace, the mosque-

bazaar complex, and courtyard houses of several stories. In addition, Khan (1982) has suggested that the typical preindustrial Arab city would include: clearly defined boundaries; a small gateway; narrow, winding street patterns; organization based on a hierarchy of spaces; a mosque as a central feature, a souk; residential quarters; and caravanserais.

Before the demolition of its old wall, Jeddah City was circular in layout, with a circumference of approximately one kilometer, and was surrounded by a wall which contained five gates (Figure 2). Initially, the residential areas in Jeddah City were studded with housing for the nobles, merchants, and other elites, mainly at the center of the city. The common people and the transient population lived in the middle parts of the city.

What made the old town of Jeddah significantly different from many of the other preindustrial cities was a lack of central space allocated to governmental and religious institutions. Instead, the core of the old town emerged around the central souk, surrounded by a few great family houses and the general residential quarters (Khan, 1982, p. 195). Expansion of the residential districts was discouraged, mainly because of the physical limitation imposed by the wall.

Emergence of new residential areas began in a



1 British Legation
2 Police
3 Italian Consular Chancery
4 Italian Legation
5 British Consulate
6 Dutch Legation
7 House of Calif. Ar. Standard Oil Co. employees
8 Qaimaqamat
9 Egyption Legation
10 Miar Hotel
11 House of H. St. John B. Philby
12 Al-Falah School
13 Pasha Mosque
14 Municipality
15 Akash Mosque
16 Post Office
17 Bab al-Bunt
18 Mimar Mosque
19 House of the Amir al-Bahr
20 House of the Saudi Ar. Mining Syndicate employees

Source: Ansio Pesco. Jeddah, Portrait of An Arabian City, 1976

Figure (2) Plan of Jeddah in 1938

big way in 1947, the year when the city's wall was demolished. In the 1950s, the number and size of residential districts increased notably. This increase was later transformed by two factors--modern technology, and the influx of people from different cultures as a direct result of the exponential increase in oil revenues. Technological improvements in transportation have led to a rapid inversion of the residential pattern and, hence, the traditional geographical distribution of social classes as asserted by Sjoberg has changed under the impact of transportation innovation. In other words, the residential pattern changed away from that characterizing Sjoberg's theoretical preindustrial city.

The increase in population, together with demands for a better standard of housing, led to substantial new construction outside the central area. Much social and economic disruption occurred when houses were torn down for roads and the residents were relocated into the newer districts. It should be pointed out that some residents still cling to their ancestral homes in the original city for sentimental reasons. The vast majority, however, were widely scattered across the city, and this caused a major shift in the center of the city. Newer districts began to be filled with residential houses of different status groups for several reasons, among which are: (a) a shortage of space at the city's center;

(b) improvements in the transportation system; (c) heavy immigration; and (d) government action in recognition of the severe shortage of housing, along with the goal of establishment of "a home for every citizen." The government approached the problem with three simultaneous solutions: the construction of the Jeddah Rush Housing Project; loans for home building; and outright grants of land. Thus, beginning in the early 1970s, a large number of residential areas have sprung up along the major arterial roads and highways. In the process, as urban sprawl moved outward to the periphery, a major residential shift away from the center became inevitable.

At present, most of the residential districts on the periphery belong to the middle- and upper-income groups; the majority of the poorest have not shown much inclination to inhabit the peripheral areas.

Residential Patterns: The Study of Variability

One of the major domains of geographic research is the study of spatial variation of a phenomenon. The realization that urban residential pattern is a multidimensional phenomenon has brought about more sophisticated approaches to the study of its geographic expression.

The factorial-ecology approach posits the existence of a multidimensional pattern of variations among residential areas in terms of economic, social,

demographic, and housing characteristics. This pattern is comprised of three basic dimensions: the socio-economic status, the family status or stage in the life-cycle, and the ethnic status (Lansing & Morgan, 1955; Lansing & Kish, 1957; Butler et al., 1969). (These three dimensions were first propounded by Shevky and Bell, 1955, as part of a more general deductive model of social change known as social area analysis theory.)

The social-area analysis provides one an obvious approach to a definition of "objective social space." Social spaces originally denoted groupings of census tracts which displayed a degree of homogeneity in terms of socio-demographic characteristics (Shevky & Bell, 1955). Rees (1979) describes the approach of social area analysis as

> a technique for constructing indexes that summarize the characteristics of small areas within cities. The indexes were computed for each census tract in the city and the variation among tracts in social area scores was examined. The indexes were regarded by their authors as summarizing the social variation among neighborhoods in American cities (p. 6).

This method of index construction was criticized on the grounds that the measures employed to index each construct were assumed, without careful testing, to be highly associated with each other and to be dissociated with measures used to index other constructs (Rees, 1979). The danger here is that the researchers may be guilty of promulgating a self-fulfilling prophecy if the data

collected reflect only the three Shevky dimensions. Another point of criticism was proposed by Hawley and Duncan (1957):

> Looking suspiciously like an ex post facto rationalization for their choices of indexes . . . one searches in vain among these materials for a statement explaining why residential areas should differ one from the other or be internally homogeneous (pp. 339-40).

Here, Hawley and Duncan (1957) see little justification for social-area analysis, except as a classificatory device, a much more limited function than its originators would accept.

The difference between social-area analysis and the factorial-ecology approach is in the data input: While social-area analysis is theoretical, factorial ecology utilizes a wider range of variables in the input, including the social area analysis variables. Another major difference is described by Herbert (1974):

> The social area analysts have been constrated with urban ecologists in that they begin with a theory of social differentiation, identifying variations in social space which then translated into geographical space. By contrast, urban ecologists have always sought initially to identify natural areas as geographical territories and to study them in terms of their social characteristics (p. 139).

The interpretation of the social area analysis theory and the spatial framework of the classic models was subsequently adopted by geographers and other social scientists in numerous factorial ecological studies. The application of factorial ecology as a model of a residential

variation has confirmed the postulate of multi-dimensionality and amplified its spatial expression. That is, the ecological domain of an urban area is structured, and then similar cells are grouped to yield a "hierarchical typology" of residential structure. The central stimulus of factorial ecology has been to determine the inter-areal variation of the principal axes of residential differentiation. The actual nature of factorial ecology analysis, as a technique, is, in detail, highly abstracted and mathematical. In concept, however, it provides a way in which the appearance of a number of interrelated variables in the urban area can be reduced to a more limited number of independent factors. For example, fifty variables were factor-analyzed for the urban region of Chicago, with 147 municipalities inhabited by 2,500 people (Berry & Horton, 1970). This analysis found that a large proportion of the differences between neighborhoods in the city could be explained on the basis of only ten independent or nearly independent factors related to social, economic, and ethnic characteristics. Similar factor analyses provide a powerful means of organizing large masses of data and identifying underlying patterns of interrelation among variables (Schmid & Tagashira, 1964; Brown & Horton, 1970; Herbert, 1974; and Rees, 1979).

In the successive international application of

factorial ecology, Rees (1971) indicates that factor analysis has been employed as an explanatory model in a gradually expanding range of cross-cultural investigations. However, not in common with overseas studies, factorial ecologies of the North American urban areas suggest three major dimensions of residential differentiation, namely: (a) "family status" (or "stage in life cycle"); (b) "socioeconomic status" (or "social rank"); and (c) a third dimension reflecting the role of "ethnicity" or "minority groups." Outside North America, studies of factorial ecology have been characterized by Trlin (1977) as being based on the question:

> Do similar dimensions and associated spatial patterns [similar, that is, to those of the host population] underlie the intra-urban residential distribution of immigrant and indigenous ethnic and racial minorities? (p. 152)

The evidence from non-North American cities reveals some points of contrast. For example, an explicit "ethnic status" factor has not been found outside the North American cities; the factor is usually descriptive of a "relatively deprived" population, especially in terms of its access to the available resources (Bowman & Hosking, 1971; Timms, 1971; Herbert, 1974). This may be because of the smaller number of persons in the ethnic categories in non-North American cities in comparison with those in North America. Thus, to generalize the evidence of factorial ecologies, Herbert (1974, p.

174) suggests that "any comparison of results from studies in factorial ecology from various parts of the world rests upon the assumption that findings from various inputs are representative of societal contrasts and this expression in the spatial structure of cities."

A growing body of research has provided much of the information required for an understanding of immigrant residential patterns. However, Trlin (1976) indicates that the value and effectiveness of this research has been limited by two shortcomings:

> the uncoordinated, ad hoc manner in which the research has been conducted, and the absence of any real attempt to evaluate and integrate the results obtained from the studies conducted within the conceptual frameworks of various academic disciplines (Trlin, 1976, p. 80).

Berry and Rees (1969) provide a basis for an "integrated" model of residential pattern by specifying how the principal findings of factorial-ecological studies can be linked with individual household data. But, given the diversity of approaches and sometimes narrow viewpoints employed by researchers, only a few studies have managed to integrate the factors which are most often considered separately in the literature. For example, Duncan (1967) has managed to integrate some of the historical, physical, economic, and sociological factors contributing to the contemporary residential pattern. In other words, a substantial number of factors remains unexplained, and often enough, they provide only a partial explanation of

the urban residential pattern. Despite this limitation, findings generated via the ecological approach are useful, chiefly as a foundation on which to build models in search of explanations as to how and why residential patterns come about.

Residential Patterns

Economic Considerations

In some respects, quite different from the approaches discussed so far, the economic approach advances the conceptualization of urban residential pattern in the tradition of economic theory. The fundamentals of this approach remain virtually the monopolistic preserve of the economists who have long been interested in land rent and land value, as the earlier work of, for example, Von Thunen (1826), Hurd (1903), and Haig (1926) showed. That is, the spatial-economic basis of residential location has been developed by spatially conscious economists rather than economics-oriented geographers. This is due to the fact that economists have had a clearer conception than have other social scientists of the systematic nature of the residential patterns which figure typically in their market demand and supply framework.

Implicit in the economic approach to residential location is the assumption that the selection of a residential site by a household is influenced by its place of employment. That is, it stipulates residential choice

as being the outcome of a trade-off between price, space, and accessibility (Alonso, 1964; Muth, 1969), based on the assumption that the human is a "rational economic being." First, they postulate that the people selecting residential locations consciously weigh economic factors when deciding where to live. They then assume an urban residential "rent surface" that declines as distance from a center of employment (in most cases, the central business districts) increases. Their third assumption is that transport costs increase as the distance between the place of work and the place of residence increases. Finally, Alonso (1964) and Muth (1969) point out that there is only one constraint, that of the household budget, on household actions. Although their models contain no specific house type or locational preferences on the part of a household, Alonso and Muth imply that choice rather than constraint is the dominant factor.

Directing his attention mainly to the residential development, Alonso (1964) has proposed an indifference surface for individual households in examining level of satisfaction, and has linked together consumer preferences, transportation costs to households, prices of land, and quantities of space demanded. Alonso summarizes his conclusions in the following words:

> The Philadelphia data show the usual regularities: (1) price decreases with distance from the center; (2) density decreases with distance

> from the center, or in other words, lot-size increases with distance from the center; (3) site size increases with income; and (4) distance from the center increases with income (Alonso, 1964, p. 126).

Furthermore, Alonso uses "bid price curves" as a basis for distributing residential users to the selected sites. In describing these curves, Chapin (1966) states:

> Beginning at the center of the city, land is "put up for bid," and on the basis of these curves the bid for the most central site is compared to the next preferred alternative, with this preferred alternative being the marginal combination of price and location for that particular use. On the basis of the steepest bid price curve, the highest bidder takes the most central site; the next highest bidder corresponding to the second steepest curve takes the next most central site still available; and so on (p. 89).

This means that the residential location decision is a function of the area of the land in which the unit is located and the distance from the center of the city. The spatial distribution of the density of the residential areas in the urban centers involves the density-gradient concept, with the gradient falling from the center of the city down to the outskirts.

The effect of the workplace location in terms of its impact on gross housing price has also been suggested. In his formulation, Straszheim (1973) views the gross price of any given housing type in any particular residential area or zone as the sum of the prices of that house type in that zone plus the transportation costs between that zone and a household's workplace. A limitation to

this approach lies in the fact that it overlooks the time factor. In this regard, Evans (1973), in his work on residential location, includes an additional temporal constraint in his "basic utility maximization" model, while still neglecting the essential trade-off between journey-to-work costs and housing consumption as central to this model.

The economic approach to residential patterns, with its assumptions, has been severely criticized. Senior (1977) points out:

> Monocentric, uniform city assumptions are common for example, but others [other economic models] include the emphasis on a long-run static equilibrium which allows the durability and short-run flexibility of housing supply to be ignored and attention to be focused on the spatial uniqueness of housing and the consequent price variation by location. The whole topic of residential mobility--the decision to move as opposed to the residential choice decision--is neglected. In addition externality effects in the housing market are dismissed; individual decision making is assumed independent of decisions by other consumers (p. 285).

Furthermore, since the 1960s, geography has attempted to overcome some of the limitations of the economic-location theory by bringing behavioral models to the fore. As Olsson (1969, p. 23) points out, "large-scale data with small variance has been used as the basis for inferring small-scale behavior with large variance." This, as Stegman (1969) indicates, is evidenced by the confusion over the importance individual decision makers place on journeying to work when choosing a residence.

The incompleteness of the economic approach results from assumptions inconsistent with the realities of human nature and behavior. The approach incorporates the assumptions of perfect information, rationality, and optimization of utility. In this regard, Burnett (1976, pp. 29-30) asserts that people possess perfect information about the external world and use this information correctly and in identical ways, and that people are identically motivated to maximize utility. This argument assumes that there are mental processes which accurately evaluate the utility of residential space, and that decision makers trade off accessibility and site-space utility in choosing an "optimal dwelling." But in the search process of selecting a residential location, information regarding vacancies is biased. The spatially biased information is inherent in the concepts of action, activity, awareness, and search space, and has a directional bias in intra-urban mobility.

Behavioral geographers, however, have retained several "economic-man" assumptions. The notion of "utility" is often called by them "place utility," the value attached to a configuration of attributes of a residential unit or location (Brown & Longbrake, 1970; Gustavus & Brown, 1977; Leiber, 1978). The behavioral decision maker, like the rational economic person, is able to assign utility values to criterion variables--the values that are subjectively defined and are likely

to vary from person to person. Other geographers have recognized the real merit of the normative economic approach in that it provides a set of useful assumptions for setting up an "ideal" against which the "actual" may be gauged. For example, Gould (1976, p. 84) points out that "when actual behavior falls short of the normative expectations, the researcher is . . . in a position to ask sensible questions about information, motivation, and evaluation, and the varying degrees to which these may be important in a particular case of study."

Behavioral Considerations

In contrast to the other approaches, several geographers have called for a new emphasis on the study of human variables in locational analysis (Pred, 1967, 1969; Harvey, 1969; Olssen, 1969; Claus & Claus, 1971). The aim of the behavioral approach is to discover how people cognitively define areas and places, including the criteria they use. According to Herbert and Johnston (1978), the major dimensions of the behavioral approach revolve around concepts like "reputation," "responsibility," "security," "beauty," and "harmony with nature." The proponents of the behavioral approach to the study of residential differentiation point out that human beings act in keeping with their perception and subjective interpretation of the environment. In contrast to the advocates of the economic approach, the proponents

of the behavioral approach argue that people do not possess perfect information and do not always find the optimal solution to a problem. Rather, they argue, people make "satisfactory decisions" which meet "levels of aspiration." Along these lines, Wolpert (1964) argues that

> the decision maker merely classifies the various alternatives in his subjective environment as to their expected outcomes, whether satisfactory or unsatisfactory. If the elements of the set of satisfactory outcomes can be ranked, then the least satisfactory outcomes of this set may be referred to as the level-of-aspiration adopted by the decision maker for that problem. His search is complete and the action is taken. The theory suggests that aspiration levels tend to adjust to the attainable, to past achievement levels, and to levels achieved by other individuals with whom he compares himself (p. 545).

More recent research by geographers makes reference to various new concepts designed to assist in the explanation of the dweller's decision to select a residential location. The concept of "place utility" has been defined by Wolpert (1965) as "the net composite of utilities which are derived from the individual's integration at some position in space," and by Simmons (1968) as "a measure of attractiveness or unattractiveness of an area, relative to alternative locations, as perceived by the individual decision maker." The theoretical structure suggested by the place-utility paradigm is described by Brown and Longbrake (1970) in the following quotation:

> To measure place utility both the aspirations of the household in terms of residential environment and the environment of its present residence(s) should be considered. Environment in this context includes the neighborhood, dwelling unit, the site on which it is located, and the relative location of dwelling unit and neighborhood vis-à-vis other nodes in the urban area. Since the same set of variables may be seen as describing both household aspirations and dwelling units (residential sites), maximizing place utility may be operationally viewed as the outcome of matching household aspiration profiles with dwelling unit profiles on each variable (p. 370).

That is to say that the "place utility" measures an individual's level of satisfaction or dissatisfaction with a given location, and that the individual household can be considered to be under the influence of two sets of forces. One is internal, in that it is generated by the household itself and defined in terms of its own needs and expectations; the other is external and defined by the characteristics of the locale.

Residential satisfaction is another approach considered in the place-utility paradigm. What distinguishes this approach from the other behavioral approaches is its emphasis on the characteristics and aspirations of the household, its members' social bonds to other individuals, and their "attachment" to jobs, neighborhood-based organizations, and services. Again, this approach emphasizes the relationship between people's behavior and their residential environment in terms of how that environment is perceived and subjectively interpreted,

not in terms of an external "objective" environment.

Many studies have examined the factors influencing people's satisfaction or lack of satisfaction with residential housing. Rent and Rent (1978) list structural aspects of the housing unit, previous housing experience, degree of integration or social participation in society, housing aspirations, and occupants' social-psychological perspective toward society as being among the factors affecting residential satisfaction. Other studies focus on the possible influences of social-system characteristics on people's relative satisfaction with their residential housing. Onibokun (1976) argues that factors such as the socioeconomic status, a stage in the life cycle, the degree of social interaction, the lifestyle and the self-conceived image determine or strongly influence people's levels of satisfaction with their dwellings. This means that by analyzing satisfaction, the factors leading to it, and the factors that determine its degree, one can better delineate the individual's values and preferences regarding residential housing.

In the context of studying residential differentiation, geographic research using the behavioral approach presupposes that an individual who chooses a particular spatial alternative reveals a preference for that alternative and a rejection of the other available alternatives

(Rushton, 1970; Timmermans, 1981). That is, the basic underlying assumption is that an individual reveals a preference for the alternative he or she patronizes. Rushton (1970) justifies the preference paradigm on the ground that

> to say that choice is made consistent with a preference structure is simply to assert that, before the particular opportunities from which choice must be made are encountered, a preference ordering of all the conceivable opportunities that might be encountered exists in the mind of the chooser. If such an ordering did not exist, a real possibility would exist that the particular set of opportunities confronting the chooser might contain two or more opportunities that are not ranked in his mind, thus making choice impossible (p. 147).

This suggests that decisions regarding the selection of a residence are influenced by preference systems, and before people act as they match environments, images and other cognitive schemata.

The Decision-Making Process and the Selection of Residential Housing

The concept of urban housing selection is old: Aristotle pointed out that people stay in the city to live a good life (Rapopart, 1977, p. 82). The problem is that it is not easy to define what constitutes "a good life" and what its environmental correlates are. A broad objective like "a good life" provides no insight into what alternatives may be worth pursuing. It does, however, make for a useful starting point for specifying detailed attributes in more operational terms. For

example, when a would-be residence searcher looks for a house, he may regard "spaciousness of dwelling" and "social homogeneity" as his two housing objectives. For each of these objectives the searcher might consider how well various alternatives meet his objectives. Once the attributes are identified, their magnitudes can be represented as a vector, measuring the degree to which they satisfy the overall objectives. The spaciousness of dwelling may be represented by such an attribute as the "size of rooms" and provide a scale for measuring the degree to which it meets his or her requirements.

It is very likely that the demand for these attributes may be valid even if the home-seeker insists on living in a particular neighborhood or residential district. In fact, when we think of where to live in a city, we have to think not only of the dwelling with preferred specification, but also of the setting of the house and of the services, facilities, and structures which support and complement the individual needs and makeup of the residential environment. This requires an ordering of concepts in evaluating the area in which to live and reflects a personal taste which, though unique to each individual, partakes of the commonly sought-after requisitions and constraints, which can be identified as exhibiting recognizable patterns.

The selection of a residential location is a key

problem area for research in social science. The concern for this problem has received much greater attention from geographers and other spatially oriented social scientists, for a person's location and its immediate residential environment constitute an important stimulus to a wide variety of behaviors, ranging from the socialization of children to the development of consumption systems which are complementary to the location of the home. Thus, choosing an appropriate residential location is a very important and crucial decision, for it may well be a wrong decision in terms of proximity, preference, value, or may be incorrectly related to other elements in the spatial and sociocultural systems of the city. Also, when a preferred environment cannot be selected, people's life is affected by having to adopt, having to reduce incongruencies and having to give up certain activities which become too difficult (Rapoport, 1977, p. 83).

Within the framework of human uniqueness and impossibility to replicate any set of circumstances in their entirety, research studies have identified a broad pattern involved in a search for a residence. When an individual household is either forced by circumstances to seek a new home or decides on its own to move to a new place, it is found that such specific variables as family life styles, economic considerations, accessibility to

places of interest, locational features, social implications, and the quality of the neighborhood and environment play an important role in the selection of homes. Furthermore, these variables are so closely interlinked that a slight change in one may significantly alter the form and nature of the transaction. This suggests that when a would-be residence seeker looks for a house, he or she has a set of criteria in mind against which the residence offered for purchase or rent is measured and compared, and that some assumptions do enter into the determination of which dwelling the person will choose. On the other hand, there must be some constraints or restrictions on the range of choices. That is, while some people consciously assess a broad range of opportunities available to them in deciding where to live, others find their search process constrained by the potentially restrictive factors. In this regard, Lee (1977, p. 41) suggests that "rather than viewing residential choice as a determinant force in housing, it may be more appropriate to envisage a continuum from complete choices to complete constraints, and to identify each individual's position in the housing market in relation to this continuum." Within these two extremes, total freedom and total restriction of choice, it is clearly possible to postulate other constraints.

The identification of these constraints is so

important that if constraints are overwhelmingly dominant, free choice becomes subordinate to or even irrelevant in the search for a dwelling. For example, the ability to gain access to housing resources might be tightly constrained by "social barriers." Weisbrod and Vidal (1981) identified the following barriers which limit housing choice: racial/ethnic discrimination, discrimination against children, age distribution, discrimination because of the source of income, discrimination because of the marital status, and sex discrimination. The practice of such discriminations might be a function of a deliberate policy of decision makers, reflected by discriminatory allocation procedures, and/or by the level of prejudice in society. Furthermore, some real-estate agents may justify their residential control practices on the grounds of social pressures exerted by neighborhood residents. Other real-estate agents, in the name of "protecting" the neighborhood, deliberately prevent minority groups from entering white neighborhoods. Such acts, as Barressi (1968, p. 60) declares, serve to add legitimacy and moral justification for the discriminatory practice of many real-estate agents, and reinforce their "gatekeeper" role. It must, however, be recognized that some thinkers have sharply disagreed with the view that a real-estate agent has such a major role in society. Bordessa (1978, p. 338) asserted that

"real estate agents have very little impact on the basic social geography of a city in a case such as Toronto when there is an absence of spatial discrimination against a particular group."

Another major source of constraint is the inability of the people with limited incomes to afford some homes. Lee (1977, p. 42) indicates that "inability to pay high rents imposes severe constraints on a person's choice of accommodation and residential location." This, in general, suggests that the rich have greater purchasing power than do the poor, and gives rise to the notion that locational options differ considerably for people of different incomes and social classes. Other studies have indicated that lower-status workers are expected to live in the inner city in order to avoid heavy commuting costs, and high-status workers tend to move to more spacious houses in peripheral areas. The more economically oriented of these studies, basically the work of Muth (1969) and Alonso (1964), further indicate that the more affluent in the city have a greater freedom in choosing where to live and can thus afford to trade accessibility for more space and to live in a more pleasing environment on the periphery of the urban area. The more disadvantaged classes, however, are restricted in the selection of the range of residential areas by the demand for proximity to central locations.

Concerning the limitations imposed on one by one's economic resources, Damm (1971, p. 137) points out that "one's choice of a residential location may be limited by economic factors. It may be limited by the urban historical legacy, by one's social class or even by one's wife's opinion on kitchens. It may be limited by the amount of time the major wage-earner is willing to devote to commuting to work, but within these limitations, there is usually a wide latitude for choice." This suggests that residential location is not a totally volitional process. There are a great many factors--personal, social, and economic--that limit and determine the area into which one may or may not locate.

The examples of constraints discussed in the foregoing passages will serve as a background to our examination of the alternative available to an individual in search of a dwelling. Usually, by the time a person has come to the point of choosing a particular residence, the remaining alternatives are reordered according to their prospects to meet the objectives of the choice maker. This prioritizing is not an easy task. Rossi (1955) attempts to explicate this complexity by computing an "index of incompatibility." His results show that

> a house superior in its costs tends to be inferior in a large number of other ways. Houses which maximize outside appearances tend to be larger and locate in a neighborhood with good reputation. Accessible homes tend to be cheaper, smaller, of poor appearance, and located in neighborhoods with poorer reputations (p. 127).

In other words, the final decision is a very difficult one in that a particular alternative may be superior in some requirements but deficient in others. This phenomenon does not affect the dwelling seeker, either in specifying his or her detailed alternative needs or in pursuit of overall, broad, worthwhile requirements in a dwelling.

Major Factors Influencing the Selection of Residential Housing

The decision of where to live, and the concomitant actions taken by a multiplicity of individuals and groups, lead to the spatial pattern of residential growth and locational outcomes. Much empirical research has been directed to finding out what housing attributes consumers demand, as revealed by their actual choices. Rossi (1955) found that the price and floor space requirements, notably the number of bedrooms, are of paramount importance to house seekers. Weiss et al. (1966) have determined that among the factors influencing the residential choice are several important locational considerations, including:

1. nearness to the place of work
2. nearness to shopping centers
3. nearness to the church
4. nearness to schools
5. the character of the individual site (trees and landscaping)

6. the size of the individual dwelling (number and arrangement of rooms)

7. social accessibility (nearness to friends and relatives)

8. the social environment (types of people living in the area)

9. services and facilities in the area (security)

10. financial considerations (resale value and monthly payments)

In addition to these, among the other locational attributes often cited are: the urban or suburban "character," the neighborhood, and accessibility. Simmons's (1968) review of evidence reveals that people distinguish between urban and suburban locations and concludes that there is a strong preference for the latter, which is often associated with the desire for quiet, spaciousness, and a "suburban image."

Another factor that receives frequent mention in research on housing selection is accessibility. People take account of accessibility to various activity nodes, such as the shopping centers, downtown, medical facilities, parks and playgrounds, schools, religious institutions, and one's one relatives. This is especially important for people who are restricted and have limited personal mobility, such as the poor and the handicapped. Typically, most accessibility

measures employ some unit of distance, time, cost, and convenience between origins and destinations in an urban area. Yamada (1972), viewing accessibility from the perspective of the time consumed in getting to places, saw it as a part of the transportation cost.

Most studies have identified accessibility to the workplace as the key variant in the selection of a residence, and view accessibility to other amenities as a tradeoff with the accessibility to the workplace (Alonso, 1964; Chapin, 1966; Muth, 1969). This importance of accessibility varies with the size of the city. Dahms (1971) points out that

> In very large cities, access to the workplace may be an important factor influencing the choice of residential location, but this consideration decreases in importance with decreasing city size. Obviously, no one will worry much about access to work if all jobs are within a mile or two. In large cities, high-speed public passenger transport systems and controlled-access motorways have reduced the importance of the distance between place of work and place of residence (p. 136).

Other studies have totally deemphasized the role of accessibility as a determinant of residential location. As Brown (1975, p. 38) indicates, "the alternatives to the workplace-based residence location models assume that a household's residence location choice can be explained on the basis of a household's tastes and preferences and neighborhood characteristics without regard to the place of work."

Another factor that influences the selection

of a residence is distance. Distance can be easily confused with accessibility, but accessibility and distance are two different concepts. An amenity or a place may be accessible, but it may be distant. At the same time, what is accessible in one situation may be inaccessible in another. In the traditional studies of residential location, distance from the central business district (CBD) was assumed to represent only accessibility and was thought of as a commodity with negative utility (Alonso, 1964; Muth, 1969). Other studies point to different aspects of distance as it relates to the selection of homes. Yamada (1972) explains that in most cities, environmental quality increases as distance increases. Hempel and Tucker (1979, p. 418) found that "the rank order of the distance attributes indicates clearly that distance to where the husband works was the primary consideration in residential choice. Distance to shopping facilities and schools were also considered by most home buyers to be of major importance." The importance of distance in the choice of a home is summed up by Daly (1968, p. 14) when he indicates that "the choice of a home represents a balance between convenience to work and commerce, and rival disadvantages of freedom from industrial nuisance, bush surroundings, and in some cases, cheap land." He further indicates that a distinct proportion of high-income workers desires to be close to work, but the

proximity of householders to parents and relatives is not considered important by the New Castle respondents.

One of the most important factors that influence the selection of residential housing is economics. In this connection, Dahms (1971, p. 138) suggests that there is little doubt that there are absolute economic limits on one's choice of a home or neighborhood. Obviously, the possibilities of choice are greatest for those with the highest incomes and least for those with the lowest incomes or, as Weisbrod and Vidal (1981, p. 472) indicate, "It is frequently the case that, within a given housing stock, the choice of affordable housing units is more limited for those with low incomes." Furthermore, Dahms (1971) added that within the absolute economic limitations, the location-selection process will involve an assessment of the amount of money one is willing to spend on transportation to work and of a subjective rating of the prospective residence. Indeed, Stucker (1975) was interested in deriving an equation that attempted to predict the behavior of the home buyer with regard to the cost of transportation to and from work. He points out that

> the effect on the preferred residential site brought about by a change in transport cost is composed of two terms--an income effect and a substitution effect. The income effect of a decrease in transport costs may be viewed as an increase in families' disposable income. However far they were commuting previously, they now have some amount of surplus income that had been spent on commuting--and a portion

> of this surplus income may be allocated to a change in residential location; that is, they may choose a more desirable location with higher rent, or they may choose a location farther from their place of employment with higher commuting costs (Stucker, 1975, p. 130).

With regard to the substitution effect, he points out that

> this effect operates in a slightly different manner, but with similar results. A change in transport costs typically includes a change in the cost per mile of commuting--the marginal cost or price--as well as a change in the fixed element of transport costs. This change in the marginal price of location affects the household's marginal tradeoffs between location and other goods and may encourage them to make a further locational change (Stucker, 1975, p. 130).

This purely economic consideration of tackling the problem of residential selection was based on the assumption that each household, in choosing its location site, faces a three-way tradeoff between the site, the quality and quantity of housing located on the site, and a composite commodity representing all other goods and services (Stucker, 1975, p. 124). Other studies, especially those by Schnare and Struyk (1976) and Ball and Kirwan (1977), usually assume that the selection of a dwelling unit depends on three sets of attributes: (a) accessibility to the urban center, (b) the physical attributes of the dwelling unit itself, and (c) the social and ecological amenities of the neighborhood.

One of the most important factors emphasized in

the housing-selection process is the features of the dwelling itself. The choice of the specific features of dwelling units usually varies from person to person. Rossi (1955, p. 202) indicates that "some households will be mainly interested in a house within a particular locality; others will be interested primarily in units of a particular size, and so on." Because of the degree to which neighborhood and dwelling characteristics are related, one could argue that families seeking specific types of houses will tend to gravitate to a limited number of subareas in a city. Such arguments are based on the assumption that better-quality houses are often associated with less density, an attractive physical environment, the age of the area, and the socioeconomic level of the population living in that area. To illustrate this point, an example is provided by the relationship between the city center and the social status of the residents. Cox (1968) indicates that in U.S. cities the center is seen as a dense, lower class, dark area of a low environmental quality and with a high crime rate.

The concept of housing quality can be operationally defined to include the physical measurements of dilapidation and plumbing facilities. It can also be supplemented by the measurement of the living space to identify crowding conditions, for example. Additional criteria can be added to ascertain the quality of

housing in particular and the quality of the residential area in general. Such criteria can include street conditions, noise level, traffic congestion, street crime, trash, odors, etc. According to Peterson (1967), the qualities of the residential area most sought after by households include a low density, quiet and clean surroundings, and a suitable environment for bringing up children. A report issued by the Office of Management and Budget (1973) points to the quality of housing in a neighborhood perceptually measured by the percentage of persons expressing overall satisfaction with such neighborhood attributes as convenience, upkeep of housing, neighbors, and safety.

Another factor that influences the decision as to where to live is the area's social environment as reflected in the type of inhabitants, their lifestyles and social class levels, and the stage in the life cycle of the residents. Johnston (1966) indicates that people tend to choose areas where one's status can be determined from one's address. Eng (1978) states that, for Singapore with its multiracial society, racial mixing as a determinant of residential choice is a minor consideration influencing the household choice. Eng found that for a small, homogeneous group of households, the choice is influenced by opportunities for socialization with friends and relatives. McCarthy (1976, p. 55) asserts that "housing choices are powerfully conditioned by the

demographic configuration of the households, as measured jointly by the marital status and age of the households, the presence of children in the household, and the age of the youngest child." Other studies of residential locational choice suggest that some socio-economic groups exhibit a social-oriented preference structure when they decide where to live (Moriarty, 1974). In this regard, Hempel and Tucker (1979, pp. 409-410) note that "the decisions of home buyers, in total, result in communities being segmented into homogeneous social areas containing households that have similar lifestyles; possess similar ethnic, racial, or status characteristics; and live in homes of comparable quality."

Foreign-Born or Ethnic Population Patterns

Most studies researching the spatial concentrations of foreign-born or ethnic populations focus largely on three broad areas of investigation: the actual spatial residential patterns of ethnic or foreign-born groups, the degrees to which the individual ethnic groups' residential concentration vary from those of the native populations' concentration, and the extent to which the patterns of residential concentration are similar or dissimilar among the groups themselves. Further, these studies have identified a number of factors that produce the residential

concentration patterns of foreign-born or ethnic populations in parts of certain urban centers, based on the investigation of the nature of these urban societies in different parts of the world and the residential patterns of ethnic populations in cities in and around these societies.

Jones (1976) recognizes language, religion, culture, and social organizations among immigrants from India and Pakistan living in Birmingham, England as a set of potent self-segregating forces that reaffirm the immigrants' cultural identity. Supported by their ethnic institutions in an alien territory, the ethnic individuals remain within in-group orbits, spending their leisure in social interactions with members of their native communities. In this connection, Trlin (1975) points to the extent and strength of kinship obligations among the Southern Europeans, Asians, and Pacific Islanders in New Zealand cities for their preference for in-group social interactions and norms--the factors which, in their turn, inhibit residential dispersal. Also, Burnley (1976) finds that the Italian neighborhood concentrations in parts of metropolitan Sydney reflect regional origins of chain migration streams with their associated kinship networks.

In an immigrant setting, language has always provided an initial basis for social cohesion. In this

connection, Doeppers (1974) points out that

> the personal bonds and need for orientation and help which lead many new arrivals to seek relatives and hometown mates are still likely to operate when the immigrant is unable to communicate in the principal language of the city (p. 551).

However, Doeppers, with regard to the Philippine urban setting,. concludes that language groupings among Christian Filipinos in a given city is not reflective of a dichotomized linguistic status and the intermarriage between language groups represents less a flow of groups and individuals than the absence of a firm ethnic boundary. Without much information about the kinship of the migrant to the city and his contacts in the locality of origin, minority language alone is of limited use in predicting where a Filipino immigrant will settle in a given city.

In another setting--that is, Detroit and its suburbs--Carlson (1975) found no strong concentration of either Filipino or Indian immigrants. Instead, there was a fairly wide distribution of both groups throughout the city, except in Detroit's densest black areas northwest and northeast of the central business district. According to Carlson, this settling pattern of both groups can be attributed to two factors: Neither group has language difficulties which might have disposed them to cluster together for reasons of communication (both immigrant groups speak English); and most of them are

technically trained professionals, for whom it is easy to find employment throughout the Detroit metropolitan area.

Other cultural traits, as diverse as food preferences and religion, help them express and maintain their ethnic identity. Raitz (1979) points out that in many ethnic communities, the celebration of simple religious festivals, and cooking and sharing of traditional ethnic meals, are means through which the first-generation immigrants maintain nostalgic ties with the old country and introduce the succeeding generations to an important element of their heritage. In this connection, Allen (1977) points out that the Filipino immigrants in the U.S. preserve and maintain their cultural identity through such diverse means as

1. the publication of a great many newspapers serving their interests and cultural needs in this country;

2. the establishment of assistance programs by large Filipino communities to help their less-fortunate compatriots tide over their initial difficulties; and

3. the promotion of ethnic study programs on university campuses designed to foster a sense of group identity among young Filipinos.

Most immigrant groups tend to maintain some kind of cultural ties with their original homes. In

this connection, Driedger (1979, p. 97) adds that "an immigrant minority can be assumed to groom and water its culture within a territorial enclave where it can build a concentration of ethnic institutions."

Chichekian (1977) examines the distribution and clustering patterns of the Armenian community on the Island of Montreal, and explains that its cluster is not accidental. Like many other ethnic groups, the Armenians feel strongly about the preservation of their ethnic identity, language, culture, and traditions. They tend to be in-group oriented, evidenced in their social attitudes and behavior. For example, they still display a fairly noticeable aversion to exogamy. The majority fraternizes largely with their own people, subscribes to Armenian clubs and associations and supports relatives with more than an inordinate concern. Thus, the choice to be located near their compatriots appears to have been the most significant independent variable affecting the location of residence among the Armenians on the island of Montreal (Chichekian, 1977). Further, since proximity to the Sourp Hagop Church and associated organizations provides frequent opportunities for close social contact, this ethnic group is concentrated around the church.

In Sacramento, California, the residential distribution of Russians reveals several major population distribution trends, including clustering in a western

suburb, minor clustering in two other neighborhoods, and a dispersed settlement through many of the remaining census tracts of that city (Hardwick, 1979). The largest group of Russian immigrants was attracted to the small suburb of Bryte around the already existing nuclei of Russian settlements. Also, religion seems to be a factor in the Russian settlements in two minor areas in Sacramento. Since the Fruitridge Baptist Church originally sponsored many Russian families, the area served by the Church has grown in Russian settlements (Hardwick, 1979).

In Globevill, Colorado, each European immigrant group brought its own separate national and religious heritage. In this connection, Doeppers (1967) points out:

> The Volga-Deutsch set up the German Congregational Church, St. Paul's German Lutheran Church, and the Garden Place Seventh Day Adventist Church. The Poles formed St. Joseph's Polish Catholic Church. The Serbs and Russians combined to build the Russo-Serbian Orthodox Church of the Transfiguration (p. 509).

In other words, the Volga-Deutsch, the Poles, the Serbs and the Russians tend to concentrate in small neighborhoods which share their language and religious beliefs. As time weakens the old language and national ties because, as Doeppers explains, the immigrants' children come to adopt English, American education and values, the ethnic concentrations tend to disperse and

increasingly integrate with the native population.

Another important factor affecting the residential concentration of ethnic or foreign-born populations is the duration of their residence. Indeed, variations in residential concentration among various ethnic groups can be partly explained in terms of the difference in the length of time ethnic groups have lived in the host country. However, Burnley (1975) points out that despite the differences in the duration and its effect on the residential concentration within the major immigrant populations in Sydney and Melbourne, the Greeks and the Maltese who have been resident for a long time have continued to live much longer in their ethnically concentrated areas than the members of other immigrant groups with equivalent durations of residence in Australia. Yet, as Burney (1976) explains, recent Greek arrivals in Sydney have tended to be more heavily concentrated in their chosen areas of residence than their long-settled compatriots. That is, the Greeks settled for over 12 years show a strong tendency to live in their ethnically heavy concentrations, though markedly less so than those Greeks who have been resident for under five years. Further, new Greek arrivals tend to concentrate much more strongly in areas of low rent than the old, settled ethnic groups. As the economic conditions of these old ethnic residents improve, they tend to transfer to high-rent areas, though a moderate

proportion of this population continues to live in low-rent areas.

The residential distribution of ethnic groups is often affected by the "entrance" status of the ethnic group and the spatial expression of the social stratification within the urban system (Burnley, 1976). The entrance status, as Burnley explains, reflects the social origin of the ethnic group and often enough determines the group's occupational structure and income, which has a direct bearing on the nature of housing it can afford. Conversely, the distribution and concentration patterns may well reflect the status system of the urban host society and the niche the ethnic group has carved for itself in the structure. Trlin (1976), among other scholars, points to a high positive correlation between various levels of socioeconomic status and the nature of residence across the immigrant and host populations. In Toronto, Trlin found that the degree of variation in the nature of residence between specific immigrant groups and the host population is closely matched by the degree of variation in the incomes and occupations of the host and immigrant sub-groups.

Yet, the economic factors can hardly account for more than a small part of the residential concentration of Polynesian Pacific Islanders in the New Zealand city of Auckland. Of considerable importance, Curson (1970) explains, is the fact that their concentration is

socially determined and perpetuated. Most new arrivals, Curson points out, express a natural tendency to live either with or in close proximity to friends and relatives. Since many owe their presence in Auckland to the sponsorship and financial generosity of their kin, it is more than natural that they should stay with them on arrival. Similarly, Trlin (1976) explains that many immigrant families--Samoans, Niueans, Cook Islanders, Greeks, Italians, Yugoslavs, Indians, and Chinese--elect to purchase dwellings in areas of their group concentration in New Zealand cities. In other words, residential proximity to the people of the same ethnic background provides an ethnic group with an important means to preserve a concentrated residential pattern of group identity. Conversely, it may be pointed out that the concentration about the people of the same ethnic background is an obstacle to the residential and social integration with the host population. For example, the heavy concentration of the New Commonwealth immigrants in certain areas of Nottingham in England, as Husain (1974) indicates, is due to a strong sense of community feeling and the distinctive cultural characteristics of the people, which influence their residential location decisions. On the other hand, a number of Indians with English spouses live in mixed areas together with the host population. Their presence in these mixed areas may be explained by the weakening of

connections with the Asian community, and their keenness to adopt a wholly English way of life (Husain, 1974).

Trlin (1977) shows that Asians and Pacific Islanders are residentially concentrated in small ethnic neighborhoods in Auckland, New Zealand. However, continental Europeans, particularly the Dutch (who are well represented over a wide range of occupational and income groups), are residentially dispersed. They, as Trlin (1977) explains, are racially "invisible," culturally akin to the host population; are well aware of the favorable attitude of New Zealand's native population toward them; and are obviously free from strong in-group pressures that inhibit residential choice and the establishment of relationships with out-group neighbors and workmates.

Economic constraints are a dominant factor in the ethnic or foreign-born population's residential choice. The general poverty of urban Polynesians is often cited as determinant of their residential concentration in specific areas of Auckland (Curson, 1970). Filipinos in Los Angeles and San Francisco, although dispersed throughout most sections of both cities, are highly concentrated in certain low-income areas (Allen, 1977). The "colored" immigrant population in Birmingham, England lives largely in the underprivileged sector of the housing complex (Jones, 1976). Immigrants

from the Indian subcontinent in Greater Nottingham can afford only low-cost accommodations in the old housing areas (Husain, 1974). Pakistanis in the industrial cities of Britain buy low-priced houses to ensure a maximum of income flow to their families in Pakistan (Dahya, 1974). For both Indians and Pakistanis in Nottingham, Husain (1974) explains, the money available for housing is extremely restricted by obligations to their families back home. Consequently, they seek the cheapest accommodations in the center of the city, with the result that the concentration of these immigrants in poorer areas increases steadily. Pakistanis in Dundee are highly concentrated in the decaying, dilapidated inner residential zone, now in the early stages of development (Jones & Davenport, 1972). The typical housing unit in this area consists of two or three rooms, with an outside toilet (no bathroom), and can be bought for two to three hundred pounds. Though foreign-born or ethnic settlers generally lack the income to buy houses in desirable areas, there is an upward filtering of ethnic immigrants in the income scale. After a few years of work and saving, these immigrants tend to move to better dwellings. Many Indian and Pakistani residents who live in peripheral locations, as opposed to those who live in the decaying areas of Nottingham, have been successful in business and the professions. They have made a complete break

with their own community and have dispersed throughout the city (Husain, 1974).

The type of housing available to an ethnic group is often cited as a key factor that determines the close clustering of the group. For Hindus from India, the nature of the house is a factor responsible for their concentration in specific areas of Nairobi, Kenya. In this connection, Tiwari (1969, p. 148) indicates that the main reason for the concentration of Hindus in Nairobi is the communal house shared by four or more families, with two or three storeys--apartments on the upper floors and a community area on the ground floor. This type of house is usually shared by one caste or community of Hindus.

The type of housing available in Bedford, England to the Italians has been a major factor affecting the spatial distribution of the immigrant Italian community (King & King, 1977). On their arrival in Bedford, Italians are rarely able to afford more than a couple of rooms. Initially, comfort is sacrificed for low-cost living. For most, the aim is to scrimp and save for the day when their families may join them in Bedford. The supply of such accommodation, King and King explain, is limited to certain areas, notably to the lodging-house district of old houses which can be easily shared for high-density occupancy.

The nature of the profession of the ethnic

population is another factor contributing to the concentration of ethnic groups. The Sikhs and Punjabi Hindus of Nairobi, for instance, are largely in the car-repair and furniture businesses. As Tiwari (1969) points out, they all have shops in the same residential area--that is, the Light Industrial Area or Grogan Road.

Asians in Glasgow usually have poorly paid jobs with irregular hours in the transportation and warehousing industries. They also find work in the restaurant business (as waiters and dishwashers), where they acquire valuable experience and skills that enable them to set up the Indian restaurants that are found throughout central Glasgow (Kearsley & Srivastava, 1974). This ethnic group is concentrated in areas of low-cost accommodation, close to their place of work, and like most immigrant groups in similar circumstances, the Asian immigrant finds himself in the twilight zone of the central business district.

The residential concentration of unskilled and skilled manual workers, as well as high-salaried groups, within the major immigrant populations in Australia's large cities was analyzed by Burnley in 1975. He found that the unskilled manual and the civil-services workers from all immigrant groups were more residentially concentrated than were the skilled manual workers. The contrast is all the greater within the southern European communities. In general, Burnley argues, the

managerial workers within immigrant groups have greater residential choice than high income gives them. They are, in fact, residentially more concentrated than the unskilled or skilled manual workers within the same ethnic group. The notable exceptions are the highly grouped Polish-born, particularly of Jewish extraction, who are not only in high managerial or executive positions and independent proprietorships, but also live in relatively high-status, confined residential areas.

Burnley (1975) found that the British, German, and Dutch unskilled workers were more similar in their population distribution vis-à-vis their native Australian counterparts than were the Greek and Italian unskilled workers, who reflected a higher degree of residential concentration in Australian cities. In this connection, Burnley (1975) adds:

> The residential and occupational stratification pattern in Australian cities is clearly a complex mosaic and the pattern of occupational differentiation not only of cities but also of residential neighborhoods is being reinforced by ethnicity. It was shown that the unskilled members of the overseas-born, especially those populations more culturally dissimilar from the Australian-born, were very strongly residentially concentrated, more so than skilled manual or other workers (p. 19).

In other words, a low occupational status of an ethnic group limits its choices of residential location and influences the concentration pattern of the cultural group. Further, it may be asserted that the occupational and socioeconomic status of an immigrant group

affects its distribution within a metropolis, depending on the rent and cost of residential houses. In another study, Burnley (1972) analyzed the degrees of residential concentration of eight overseas-born immigrant groups in metropolitan Sydney. He found that the British and Irish immigrants were the least concentrated; the Dutch, Polish, Yugoslav, and Italian-born were moderately concentrated; and the Greek and the Maltese were the most concentrated. Burnley concludes that the patterns of migrant settlement in Sydney resemble those in Melbourne, with the inner city heavy with southern European concentrations and the smaller, eastern European refugee concentration in the western industrial suburbs, along with the Maltese, Italians, and Germans. The Netherlanders concentrated in higher-rent and -status suburbs on the urban periphery, and the Poles and Germans of Jewish faith settled in higher-status, eastern suburban areas of Waverly and Waallahra, the equivalents of Melbourne's St. Kilda and Caulfield. The factors responsible for these residential patterns have been the low socioeconomic status of the southern Europeans, Yugoslavs, and Poles; the chain migrations of the southern Europeans; and the higher occupational status of the British and the Netherlanders who, even if in low-status occupations, avoid the inner suburbs.

Attempts to find a pattern in the spatial

location of various ethnic groups with respect to distance from the city center add another dimension to the literature. Thong (1976) indicates that in Kuala Lumpur, the Chinese are concentrated in the central area, especially in the so-called Chinatown district, and that their proportions relative to other ethnic groups decline with the distance from the city center. The Malay and Indian proportions, however, tend to increase slightly with distance from the city center.

For the Greeks and the Poles in Wellington-Hutt, an urban area in New Zealand, low-cost housing encourages initial concentration in the inner-city areas, while with the Italians, availability of physical resources to produce primary goods for the urban markets are a factor in encouraging settlement developments in separate outer suburban localities (Burnley, 1972). Occupational structures, he explains, are important in the inner-city concentrations of Greeks and Poles, especially in Newtown, where significant populations of the unskilled members of these groups reside as compared with the middle-distance and outer suburbs, except industrial Petone.

Curson (1970) points out that there has always been a tendency in Auckland for non-European groups to concentrate in central-city areas, and such a tendency lends support to the Zonal Theory of city structure. The Polynesian, as the most recent arrivals in Auckland,

have concentrated within the older, innermost sections of that city, the areas that since the early 1950s have been experiencing a process of invasion and succession by various minority groups, with a related outward movement of the original European population.

Husain (1974) indicates that as a result of both the self-imposed and the superimposed forces, the present Indian and Pakistani immigrant populations in Nottingham are concentrated in segregated, poor housing areas near the city centers, though such segregation is without exception regarded as undesirable. However, a significant level of dispersal can be achieved if the immigrants decide that they no longer wish to reside in the central-city area--at the cost of severance of some ties with their own community--if the indigenous population accepts the migrants as part of their own communities.

A Final Remark

The review of the literature indicates that a very substantial body of the geographic literature is devoted to patterns of urban residential differentiation and the factors affecting the selection of residential housing. The studies reviewed are based largely on the investigation of the nature of urban societies and residential patterns of foreign-born or ethnic groups in selected cities in several parts of the world. In view of the lopsided nature of research in residential

differentiation, we must continue not only to undertake new studies employing more sophisticated techniques, but also to review and reassess pertinent information already available to increase the explanatory power of such data in order to expand our knowledge of the dynamics of residential-locational decisions. To increase our predictive ability, we must replicate the research approaches across different data sets from different parts of the world. Such cross-cultural replications may generate new parameters from data collected in different spatial settings. It is earnestly hoped that the study of the residential patterns and the selection of residential dwellings by the American population in Jeddah City, Saudi Arabia, will increase the level of our understanding of residential differentiation and selection.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Detailed census data on the characteristics of the people living in various parts of Jeddah City are not readily available. However, socioeconomic survey data are available, particularly in the following reports prepared by Sert-Jackson International/Saudi Consult:

Saudi Arabia, Ministry of Municipal and Rural Affairs, Ministry of Town Planning. Policy Review Papers, Jeddah Action Master Plans, Technical Report No. 3, 1978.

Saudi Arabia, Ministry of Municipal and Rural Affairs, Ministry of Town Planning. Evaluation of the Existing Master Plan, Jeddah Action Master Plans, Technical Report No. 4, 1978.

Saudi Arabia, Ministry of Municipal and Rural Affairs, the Ministry of Town Planning. Existing Conditions of the Metropolitan Area, Jeddah Action Master Plans, Technical Report No. 5, 1980.

Saudi Arabia, Ministry of Municipal and Rural Affairs, and the Ministry of Town Planning. Land Development Policy, Jeddah Action Master Plans, Technical Report No. 8, 1980.

Saudi Arabia, Ministry of Municipal and Rural Affairs, and the Ministry of Town Planning. Definitions of Projects for the Third Five-Year Development Plan, Jeddah Action Master Plans, Technical Report No. 14, 1980.

Other data were obtained from the Central Department of Statistics, the Ministry of Finance and National Economy. The most valuable and detailed information was contained in Technical Report No. 5. This report is based on a 5-percent random sampling of the heads of households in the residential area in the outlying districts of Jeddah City. The total number of households in the sample was 8,675, and, as indicated in the report (pp. 4-5), the following categories and types of people were excluded from the socioeconomic enumeration:

1. People sleeping in hotels and offices, in or near trucks, on apartment roofs and in corridors, at building sites, construction-site tents, and elsewhere. The consumer-habit survey indicates that this floating populace constitutes approximately 1 percent of the total population of Jeddah City.

2. The survey did not include people living within the restricted military bases, hospitals, certain company residences, the oil refineries, and the air and sea ports, for security reasons.

3. Members of the family and their staff living in and around the royal palaces.

Another valuable source of information was the unpublished data for the 1980 socioeconomic survey made available for this investigation by the Central Department of Statistics. This information contained in these documents is orderly and was systematically collected from households in each hara (district) in such detail that it includes the occupations or social classes of the householders; the age, sex, nature of employment, marital status, place of birth, household and income expenditure, conditions of the building, construction materials used, and leisure activities of the members of the household. For purposes of statistical analysis, the data from the socioeconomic survey are grouped according to haras. Recently, district boundaries have been extended to include the recent expansion areas of Jeddah City. The names of the 35 haras and their boundaries are shown in Figure 3.

In all, ten independent variables were selected for use in analyzing the spatial distribution of the American population in Jeddah City. In selecting these variables, an attempt has been made to select not only those variables which show some significant variation over the total number of Jeddah districts, but also to attain a reasonable balance of variables of different

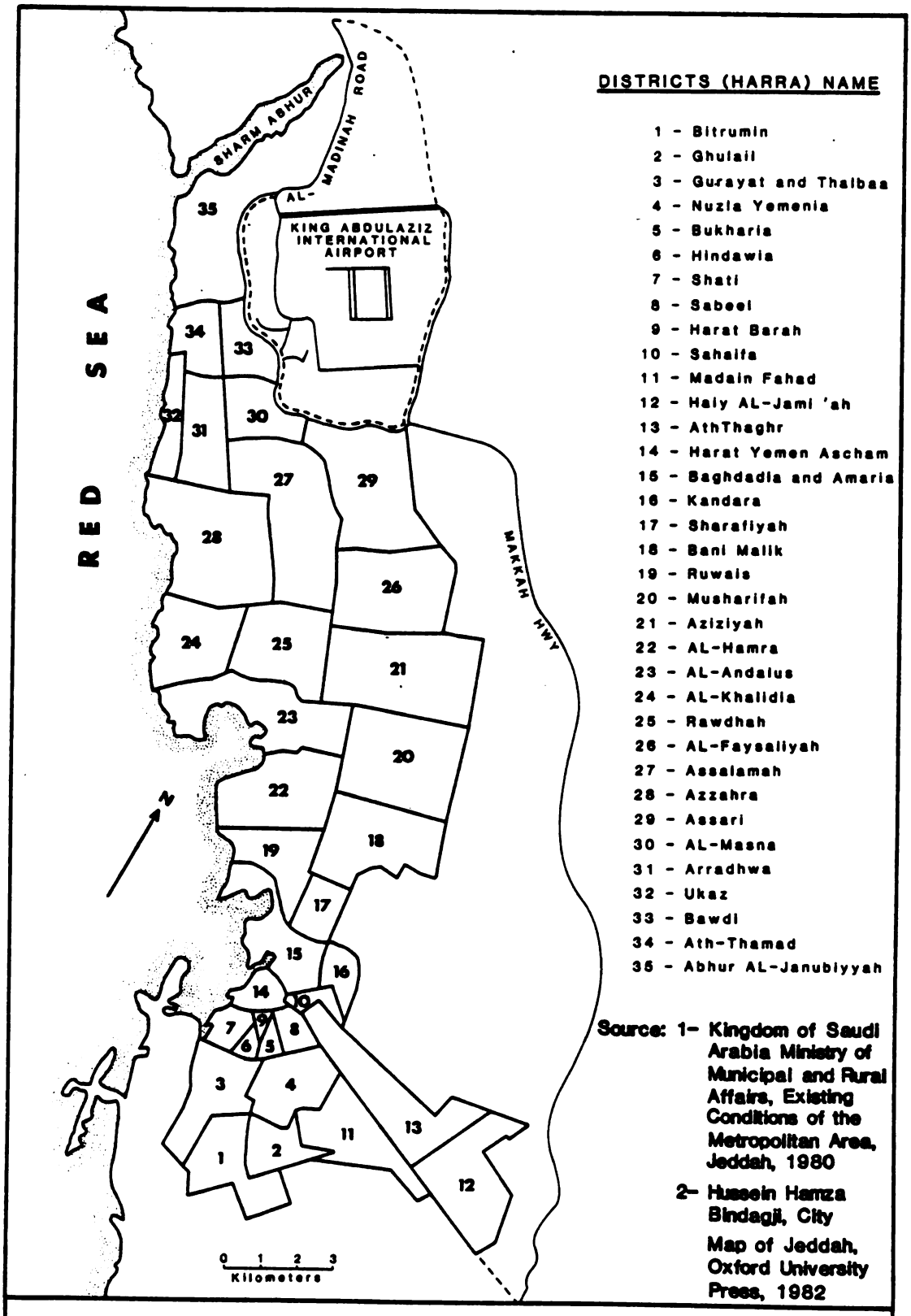


Figure (3) Jeddah Haras (Districts)

types to better explain the Americans' residential patterns in Jeddah City.

Definition of Variables

The dependent variable is the spatial distribution of the American population in Jeddah. This variable is represented by the percentage of Americans in each district in Jeddah City. The independent variables are: density of population per hectare in each district; percentage of European population in each district; percentage of households earning five thousand or more Saudi Riyals per month in each district; percentage of population which has completed secondary school or higher education in each district; percentage of dwellings by building age in each district; percentage of dwellings by type--that is, cottage/shanty, Arabic traditional, villa-apartment--in each district; average value of housing in each district; average monthly rent in each district; percentage of dwellings with sub-standard conditions (such as lack of water and sewage facilities) in each district; and distance from the center of the city, in kilometers.

The Other Source of Data: The Survey Method

For the purpose of investigating the reasons for the selection of their present residences by the American population in Jeddah City, a properly constituted social

survey provides the only effective means of obtaining reasonably reliable, detailed data. The first requirement for such a survey is a complete list of persons belonging to the group which is being studied, so that an appropriate sample may be obtained for intensive study. To obtain a list of American residents in Jeddah City, several agencies were contacted, among which the following supplied most of the information used in the present study:

1. The Royal Embassy of Saudi Arabia at Washington, D.C.

2. The U.S. Embassy at Jeddah City.

3. The American Cultural Center at Jeddah City.

A list of 4,689 household addresses, which is a complete list of Americans living in Jeddah City, was made available to this investigator by the U.S. Embassy and the American Cultural Center at Jeddah City. This list was found to be accurate and up-to-date as far as the numbers and the residential addresses of the American population then residing in Jeddah City were concerned. The distribution of American households in the city's districts had been carefully plotted on a map of the city. American households were found in 28 of the city's 35 districts. After their geographic distribution was determined, a uniform 10-percent sample from each of the 28 districts was considered. The major emphasis in

selecting this percentage for each district was to assure a fair and equal representation of all districts, with no district to be either over- or underrepresented. Using the names in alphabetical order, a total of 471 households was chosen by means of random-number tables (Table 1). A surplus of names was chosen, using the random table, to provide a reserve list to make up for inaccessible or unavailable heads of household. The initial random sample was considered representative of the entire American population living in Jeddah City, as indicated in Figure 4. Information was then collected by use of personal interviews guided by a questionnaire. The data collection was undertaken during the winter of 1982-1983.

Discussion of the Questionnaire

A questionnaire consisting of 46 questions was designed with a view toward collecting information from the American population resident in Jeddah City regarding their selection of residential site. The questionnaire, in its final form, has been appended to this study (Appendix B).

Although it is difficult to arrive at a definitive listing or description of a universal set of housing attributes which are sought after by all families in search of dwellings, it was possible to identify, through the first 30 questions, certain important

TABLE 1

DISTRIBUTION OF TOTAL AMERICAN HOUSEHOLDS AND THE SELECTED HOUSEHOLD SAMPLE IN JEDDAH CITY, BY DISTRICT

District Number	Total Number of Households	Total Number of Households Sampled (10% of Each Dist.)
1	61	6
3	76	8
4	90	9
10	55	6
11	72	7
12	87	9
13	69	7
15	153	15
16	102	10
17	137	14
18	91	9
19	238	24
20	161	16
21	106	11
22	285	29
23	201	20
24	226	23
25	223	22
26	114	11
27	258	26
28	209	21
29	170	17
30	94	9
31	308	31
32	305	31
33	235	24
34	262	26
35	301	30
TOTALS	4,689	471

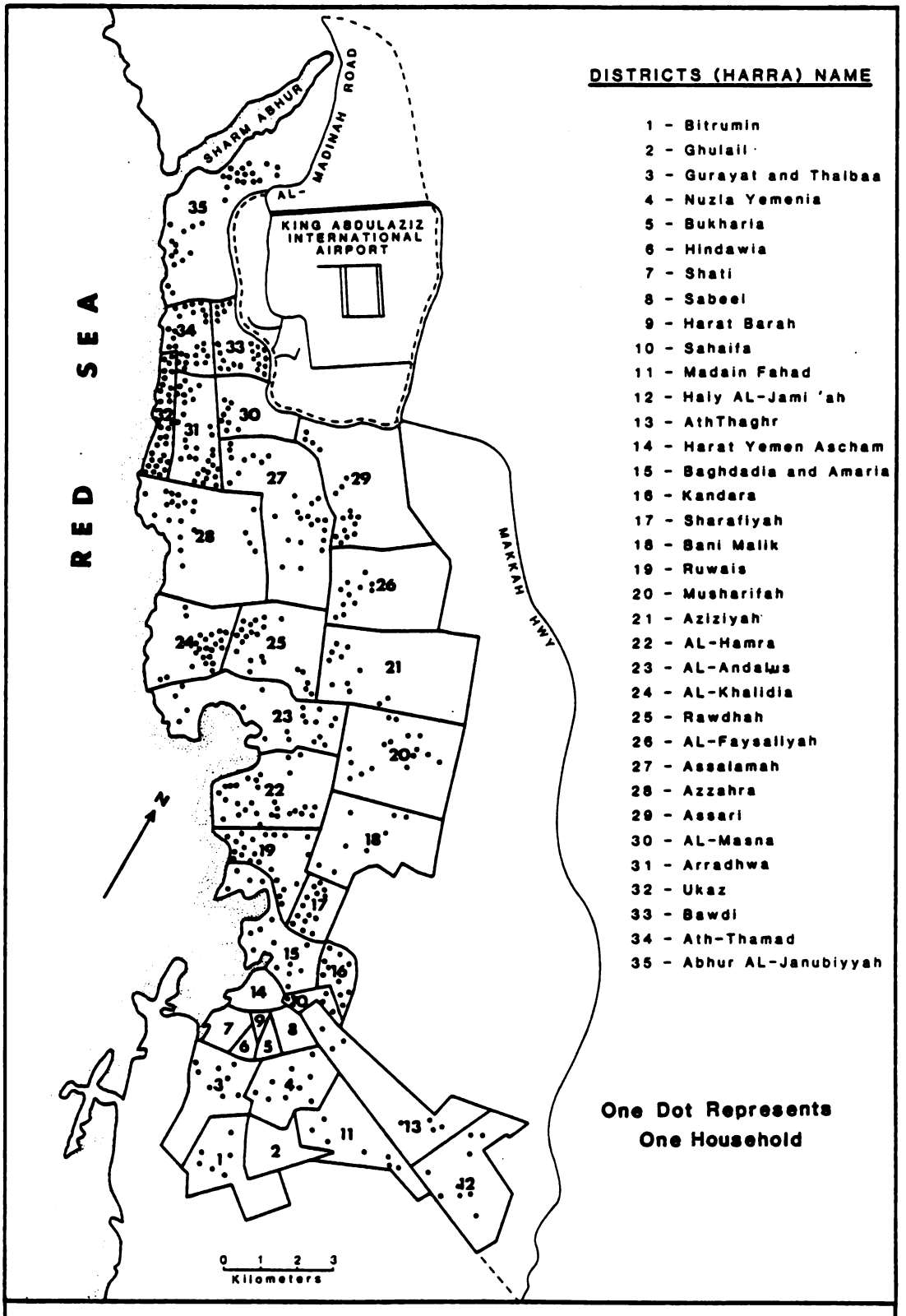


Figure (4) Household Sample of American Population in Jeddah City

housing characteristics for most residential selection processes. These 30 questions contained the following dimensions of the selection process:

1. specific dwelling unit attributes
2. types and styles of houses
3. dwelling space and room size
4. importance of the exterior of the dwelling
5. specific neighborhood attributes
6. general appearance of the residential area
7. general nature of the population in the area
8. nature of the surrounding physical environment
9. prestige or status dimensions of the area
10. economic considerations for selecting a dwelling
11. accessibility characteristics of the residence

Each of these 30 questions was represented as a separate variable in order to simulate the multiplicity of reasons involved in the selection of a home and to provide illuminating insight into the residential selection process. Moreover, the purpose of these questions was to determine which housing attributes were regarded as important in influencing the selection of a residence by the American population in Jeddah City. To answer these questions, three choices were given for each, from which the respondent was asked to choose one. Each

respondent was asked to check the appropriate box to show how important each factor was for that respondent. A "very important" response suggested that the respondent gave a great deal of importance to that factor; a "moderately important" response was interpreted to mean that the respondent may have considered the factor, while a "not important" response indicated that the respondent did not think about the factor at all. The decision to give the respondent only three responses from which to choose was not arbitrary: It was designed to limit the number of intervals for better coding procedure, and to give the respondents a chance to make a judgment on less-demanding questions.

A strong transitional link between the first 30 questions and the thirty-first question was maintained by directing the respondent to reconstruct a rank-order out of the multidimensional alternatives, asking the respondent to identify the three most significant factors in the order of their importance to the person in making a decision to select the respondent's present residence. This question constitutes a compromise between the need to gather information on many relevant factors and the desire to minimize the number of factors that affect the householders in their choice. The assumption inherent in this question is that the choice from among the housing alternatives frequently involves the problem of tradeoff among attributes, as it cannot

be assumed that the same housing characteristics are equally important to all decision makers. However, a small number of housing attributes, if they are reasonably representative of the housing objectives of the target population, can account for the actual residential choice of each individual household.

Question 32 seeks to determine how the selection of the respondents' current dwelling has worked out. This question is linked to the key question of our argument, in that it assumes that the decision maker does not know that his snap judgment to select a particular dwelling may later prove wrong. By responding to this question, the decision maker begins to compare the set of housing attributes actually available in the current residence against the person's own standards and goals. A judgment choice--whether the selection of the current dwelling is "better than expected," "about as expected," or "not at all as expected"--was given to the respondents.

Question 33 was designed to ascertain the perceptions of the respondents regarding their residential area, which was explained to the respondents to mean the view from across their yards. The respondents were required to choose one of the ten descriptive words that best described their perceptions of this area. Each of these ten variables was broken down into three major categories to indicate a positive, negative,

or somewhere-in-between description. Further, as an indirect indication of how the respondents felt about their residential areas, the answers to this question revealed information about any major inconveniences experienced by the American householder living in Jeddah City.

Insofar as residential satisfaction is assessable, respondents were given three questions with respect to this dimension. Question 34 directly asks the respondents to show whether they are very satisfied, satisfied, dissatisfied, or very dissatisfied with their present residential housing. Question 35, an open-ended question, asks the respondents to describe the specific unsatisfactory features of their residence. Asking such a question, it is believed, will give the respondents a chance to mention as many attributes as they can as the sources of dissatisfaction with their present residential dwellings.

Question 36 was designed to find out whether the respondents consider moving only because they feel dissatisfied with their present residences or not. That is, by making a connection between the level of residential satisfaction and the propensity to move, it is possible to test a general assumption that the greater the residential dissatisfaction, the greater the propensity to consider moving. The question examines, as has been evidenced by several studies, whether residential

dissatisfaction is more highly correlated with plans to move than with any other demographic or socioeconomic variables (Jones, 1979; McCarthy, 1976; Rent & Rent, 1978; Speare, 1974).

In order to measure the respondents' search behavior, two questions concerning the intensity of search for a dwelling were asked. While question 37 asks the respondents to indicate how seriously they have searched for a dwelling before they finally found their present residences, question 38 asks the respondents to indicate how long it took them to find the present home. These two questions were among the most valuable items on the survey, as they provided information regarding the very nature of our argument. In these two questions, two dimensions of the residents' search behavior were found to be of particular importance: the extent of the respondents' search for a dwelling, and the duration of the search. The extent of the respondents' search is reflected in the number of vacant houses inspected through the selection process, and the duration of the search was connected with the length of the time period during which the respondent was an active participant in the housing market--that is, the length of time from the beginning of the search to the date on which a selection was made. To measure such a concept as the search intensity, an index referred to as Intensity of Search was found to be adequate. It simply divides the

number of houses inspected by the time spent searching.

The rest of the questionnaire (items 39 through 46) includes questions focused on the description of the individual decision-making patterns and on some individual characteristics. These questions include the length of residency in Jeddah City and in the present residence; the number of persons (excluding visitors) living at the residence, the age and occupation of the householder, etc. Further, the interviewees were asked to specify how much education they had had and where they located themselves in the five categories. Finally, it is assumed that the level of income is one manifestation of social segmentation, which has an incontestable impact on the individual residential selection. The respondents were asked to identify the bracket within which their incomes fall, rather than to specify their incomes by an exact figure, which few respondents were willing to do.

The questionnaire runs nine pages, and each was accompanied by a letter to each respondent explaining the purpose of the study and guaranteeing anonymity. Moreover, to set the minds of the respondents at ease, full official sanction was obtained to interview or to administer the questionnaire, and the respondents were informed well in advance about the impending visit of the investigator.

The average interview lasted 40 minutes, and

all questions were fully completed by the head of the household. This is importance for the making of inferences. There was no non-response bias.

Method of Analysis

Beside the use of several descriptive statistical techniques and cartographic presentation of the data, simple correlation analysis was used to test Hypotheses One through Ten. This analysis yields coefficients of correlation to indicate the strength of a relationship, if any, between a dependent and an independent variable, and the direction of the relationship. The dependent variable is the spatial distribution of the American population in Jeddah. This variable is represented by the percentages of Americans in each district in Jeddah. The names and definitions of the ten independent variables were given in this chapter (see Page 91). Furthermore, to test the degree to which a selected set of independent variables predicts our dependent variable, multiple linear regression was used. That is, a multiple regression equation established with the percentage of Americans in each district as the dependent variable and a series of ten independent variables relating to the socioeconomic characteristics of each district was used and entered into the regression model in a "step-wise" manner, in order of contribution to the solution.

To identify the level of areal concentration of

the American population in Jeddah's various districts, a statistical indicator termed "the localization or concentration ratio," R, developed by Biswas et al. (1976), is used, where

$$R = \left(\frac{T_d}{T_j}\right)\left(\frac{T_{jA}}{T_{dA}}\right)$$

T_d = Total population of a district
T_j = Total population of Jeddah
T_{jA} = Total American population of Jeddah
T_{dA} = Total American population of a district

When R is greater than 1, the district shows a relatively high concentration of the American population. The cut-off point for the degree of concentration is obtained by computing the standard deviation of each R in each district. Districts with an R below the mean ($\bar{R}$) indicate a very low or negative concentration; +2 standard deviation indicates low-medium; +3 standard deviation indicates medium; +4 standard deviation indicates high-medium; and +5 standard deviation or higher indicates high.

To measure such a concept as "residence search intensity," an index referred to as "Intensity of Search" developed by Barrett (1976) was found to be an adequate

measure. It simply divides the number of houses inspected by the time spent searching, where

$$I = \frac{N}{T}$$

I = index of residence search intensity

N = total number of houses the respondent claimed to have seriously inspected

T = length of time from the beginning of the search to the date on which a selection was made

As Barrett indicates, the larger the N and the smaller the T, the greater is the intensity of the search.

The Study Area and the Selection of the American Population

Located in Western Saudi Arabia on a coastal plain east of the Red Sea, at 21°31' north and 39°12' east, modern-day Jeddah City is one of the world's fastest growing population centers. Its north-south facade overlooks the Red Sea for more than 70 kilometers and its built-in area covers some 150 square kilometers.

The physical expansion of Jeddah has been a reflection of its population growth. Thirty-five years ago, Jeddah was a small, walled city covering an area just under one square kilometer, with a population of less than 30,000 (Jeddah Today, 1982, p. 2). Table 2

TABLE 2

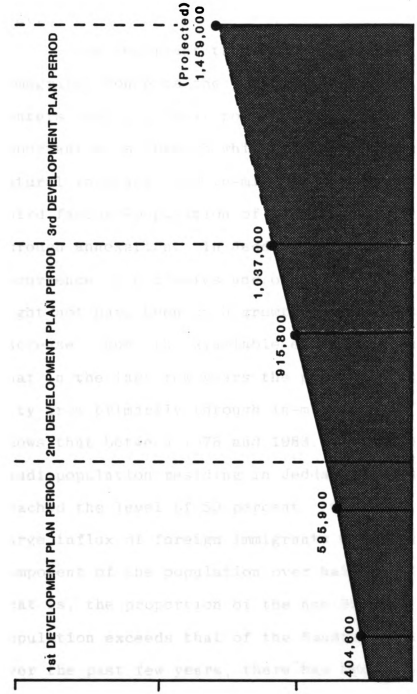
JEDDAH'S POPULATION GROWTH (1946 - 1974)

Year	Total Population	Population Increase	
		Total	%age
1946	60,000		
1959	110,000	50,000	83.3
1963	148,000	38,000	34.5
1971	381,000	233,000	157.4
1974	561,000	180,000	47.4
TOTAL		501,000	

NOTE: Figures to nearest thousand.

SOURCE: A. A. Ismail, "Jeddah City: A Geographic Study of Saudi Cities," Al-Khafji 6(4) (1976):20.

shows that during the 1946-1974 period, the city's population grew from 60,000 to 561,000 (Ismail, 1976, p. 20). In this 28-year period, the population of the city increased by 501,000; how much of it was due to natural increase and how much to immigration, we cannot accurately estimate. Between 1974 and 1980, Jeddah City more than doubled in both size and population. Reliable and most-recent population data are shown in Figure 5. This figure shows that the trend of high population growth rate is likely to continue in Jeddah City. According to the Deputy Ministry for Town Planning (Report No. 14,



Source: Kingdom of Saudi Arabia, Ministry of Municipal and Rural Affairs, Deputy Ministry for Town Planning Technical Report No. 14

Figure (6) Jeddah Population Growth Trends

1980), the population of Jeddah City's metropolitan area shows a linear annual growth rate of 12.64 percent and an exponential growth rate of approximately 11.3 percent.

One important theoretical question in urban demography concerns the process through which urban centers increase their population. There are two important ways through which urban growth can occur: natural increase, and in-migration. There is also a third factor--population of an urban center can increase through annexation. In Jeddah City, given the frequent occurrence of epidemics and other calamities, there might not have been much growth through natural increase. But the available evidence supports the idea that in the last few years the population of Jeddah City grew primarily through in-migration. Table 3 shows that between 1978 and 1983, the percentage of Saudi population residing in Jeddah City has never reached the level of 50 percent. On the other hand, a large influx of foreign immigrants makes the non-Saudi component of the population over half of Jeddah's total. That is, the proportion of the non-Saudis in the total population exceeds that of the Saudis. This means that over the past few years, there has been a dramatic change in the nature of Jeddah's population. Although foreign population has always formed an identifiable element of Jeddah's population, they are now clearly in

TABLE 3

SAUDI AND NON-SAUDI POPULATION
OF JEDDAH CITY (1978-1983)

Date	Total	Saudi	%age	Non-Saudi	%age
1978 (Socio-Economic Survey)	916,000	432,000	47.2	484,000	52.8
1980 (Start of first yr. of Third Development Plan)	1,037,000	479,000	46.2	558,000	52.8
1981 (End of first yr. of Third Development Plan)	1,118,000	528,000	47.2	590,000	52.8
1982 (End of second year of Third Development Plan)	1,201,000	579,000	48.2	622,000	51.8
1983 (End of third year of Third Development Plan)	1,285,000	631,000	49.1	654,000	50.9

NOTE: Figures are to nearest 1,000.

SOURCE: Kingdom of Saudi Arabia, Ministry of Municipal and Rural Affairs, Deputy Ministry for Town Planning.

the majority, and have caused the city to change from a patriarchal to a pluralistic society. Furthermore, whereas before socioeconomic groups were hardly in evidence, let alone spatially differentiated, the

geographical repartition of the residential districts reflects not only the differences which separate the foreign population from the native population, but also the economic and social cleavage which divides the population into various social strata.

The focus of this research will be on one specific foreign population group: the American population now residing in Jeddah City. They are a minority even among the total foreign population in this city. Of the eleven leading sources of foreign population in Jeddah City, the United States ranked tenth, contributing 1.6 percent of all foreigners. Selection of the American population for this investigation was based upon three general characteristics which were deemed ideal for the purpose of this study. These characteristics were as follows:

1. Americans in Jeddah City experienced a tremendous increase in population in the last few years.

2. Americans remain conscious of their vastly different cultural background, and appear to regard Jeddah as a place to work where they might settle for a while, and whence they remit substantial sums of money to families to whom they intend ultimately to return.

3. In Jeddah City, little attention has been given to analyzing the geographic distribution and the selection of residential housing of the foreign population, of whom Americans form an entirely different group,

adapted to high-rise living and representing a different lifestyle.

The main concern of the present study is with the current residential pattern and the selection of residential housing, and with the socioeconomic characteristics of the American population in Jeddah City, rather than with the Americans' adjustment problems or social interaction with the host population--concerns which figure more appropriately in a purely sociological investigation.

CHAPTER IV

AMERICANS RESIDING IN JEDDAH CITY: THE SELECTION PROCESS AND SPATIAL PATTERN OF THEIR RESIDENTIAL HOUSING

Characteristics of the American Population in Jeddah City

Based on the information supplied by the sample population of the Americans resident in Jeddah City regarding their ages, levels of education and income, and occupations, Tables 4 through 7 were compiled. Table 4 reveals that 22.1 percent of the American population in Jeddah City is in the 25-29 age group; 39.9 percent is in the 30-39 age group; 27.6 percent is in the 40-49 age group; and 10.4 percent is in the 50-59 age group. None of the respondents was younger than 25 or older than 59.

It is generally believed that people between the ages of 25 and 49 are economically most productive, and 89.6 percent of the American population in Jeddah City falls in this age group. If we examine the distribution of the population by age groups, it does not seem to be evenly distributed. Rather, the heaviest concentration (39.9 percent) occurs in the 30-39 age group, followed by 27.6 percent in the 40-49 age group. These two age groups, between the ages of 30 and 49, combine rich

TABLE 4

DISTRIBUTION OF THE AMERICAN POPULATION IN JEDDAH CITY BY AGE

Age Group	Absolute Frequency	Relative Frequency
25-29	104	22.1
30-39	188	39.9
40-49	130	27.6
50-59	49	10.4
TOTALS	471	100.0

TABLE 5

EDUCATIONAL BACKGROUND OF THE AMERICAN POPULATION IN JEDDAH CITY

Level of Education Completed	Absolute Frequency	Relative Frequency
High-school graduates	62	13.2
Technical school or some college	198	42.0
College graduates	82	17.4
Advanced or professional degree	129	27.4
TOTALS	471	100.0

TABLE 6

DISTRIBUTION OF THE AMERICAN POPULATION
IN JEDDAH CITY BY OCCUPATION

Type of Occupation	Absolute Frequency	Relative Frequency
Technical and professional	204	43.3
Administrative and managerial	138	29.3
Finance and insurance	58	12.3
Independent contractor	53	11.3
Teacher	18	3.8
TOTALS	471	100.0

TABLE 7

DISTRIBUTION OF THE AMERICAN POPULATION
IN JEDDAH CITY BY ANNUAL INCOME

Income Group	Absolute Frequency	Relative Frequency
Less than $10,000	19	4.0
$10,000 - $19,999	116	24.6
$20,000 - $29,999	137	29.1
$30,000 - $39,999	146	31.0
$40,000+	53	11.3
TOTALS	471	100.0

experience and training in their professions, and they constitute 67.5 percent of the total American population in Jeddah City. In general, the American population in Jeddah City can be described as essentially youthful.

Educational Background of the American Population

With regard to the educational level of the American population, Table 5 reveals that no one in the sample population of Americans in Jeddah City has had less than a high-school education. Nearly 87 percent of the population has had technical training, graduated from college, or acquired advanced or professional degrees. Just under fifty of these have been through technical schools in the United States. The latter constitute the largest group among Americans in Jeddah City. The second-largest group (27.4 percent), after the technically trained group, consists of those who have advanced or professional degrees. Together, these two groups form 69.4 percent of the total American population in Jeddah City and provide the technological base for the industrial, technological, and educational needs of Saudi Arabia. In fact, they are the ambassadors of international goodwill and understanding. In this respect, Smith (1956) writes:

> [These people experience] the reciprocal process of learning and adjustment that occurs when individuals sojourn for educational purposes in a society that is culturally foreign to them, normally returning to their own society after a

> limited period. At the societal level, it is a process of cultural diffusion and change, involving temporary exchange of persons for training and experience (p. 3).

The Occupations of the American Population

The occupation of a person is reflective not only of his or her economic status and place in the social structure, but also of the person's educational attainment, intellectual sophistication, social grace, standard of living, choice of housing, clothes, and the food and health he or she enjoys.

The absolute and relative frequencies of the distribution of the American population in Jeddah City by occupation, shown in Table 6, points to the fact that an overwhelming part of the American population is involved in business, industry, and skill-related services. That is, 43.3 percent of the American population in Jeddah City is in technical and professional jobs, 29.3 percent is in administrative and managerial posts, and 12.3 percent is in finance and insurance. Another 11.3 percent of the Americans work as independent contractors, and 3.8 percent of them are in the teaching profession. It seems that Americans' decisions to work in Saudi Arabia are made primarily to improve their professional and financial prospects. As Cleveland and Adams (1960) point out:

> The overseas job often carries more responsibility than a comparable position at the same level in America would carry. Young engineers, for example, find that they are more likely to be placed in charge of a large field construction job abroad than at home--if they are willing to trade some physical inconvenience for the opportunity (p. 14).

To illustrate further why some Americans prefer working overseas to being employed in familiar surroundings in similar jobs at home, Cleveland and Adams quote an American executive hired to help run a small airline in an underdeveloped country as saying:

> "You see, one thing about this country is that you do everything in a little country. Sometime you are the only one around. You are the one who decides whether an aircraft will take off or not, whether the load will make money or not. You have an unlimited amount of authority; no one tells you what you can do, what you can't do. You have the responsibility. Back in the States with a big airline, even the district manager--he can't change the schedule. He's got to wire the home office (p. 14).

Yet the American population's participation in the public services in Jeddah City is minimal. This may be attributed to the fact that, unlike the Yemenis and the Egyptians who are employed in large numbers in the city's services, the Americans do not speak Arabic--a fact that limits their usefulness in clerical and other public service jobs. Also, there are hardly any Americans in the construction or retail industries (as compared to 79.4 percent of the Yemeni aliens and 56.3 percent of the Egyptian aliens).

Income Levels of the American Population in Jeddah City

An American resident's occupation determines his or her income, which in turn determines the person's lifestyle. Table 7 records the distribution of the American population in Jeddah City by annual income. A comparison of Tables 7 and 8 shows that the American households in the city belong to the highest income brackets among the foreign-born populations in the city. A closer look at Table 8 further shows that low-income

TABLE 7

DISTRIBUTION OF THE AMERICAN POPULATION IN JEDDAH CITY BY ANNUAL INCOME

Income group	Absolute Frequency	Relative Frequency
Less than $10,000	19	4.0
$10,000 - $19,999	116	24.6
$20,000 - $29,999	137	29.1
$30,000 - $39,999	146	31.0
$40,000+	53	11.3
TOTALS	471	100.0

TABLE 8

TOTAL MONTHLY FAMILY INCOMES OF HOUSEHOLDS BY NATIONALITY

Nationality	Total No.	Under 1000		1000-1999		2000-4999		5000-9999		Over 10,000		Don't know	
		No.	%age	No.	%age	No.	%age	No.	%age	No.	%age	No.	%age
Saudi Arabian	69,874	2,668	4.4	12,259	17.3	31,004	44.4	14,260	20.4	7,935	11.4	1,748	2.1
Yemeni	30,245	3,151	11.4	10,895	35.4	11,983	39.6	3,128	10.3	667	2.2	621	2.1
Syrian/ Lebanese	7,866	92	1.2	460	5.8	3,703	47.1	2,714	34.5	874	11.1	23	0.3
Jordanian/ Palestinian	16,767	207	1.2	2,024	12.1	10,212	60.9	3,496	20.9	621	3.7	207	1.2
Egyptian	18,124	805	4.4	2,622	14.5	9,131	50.4	4,761	26.3	782	4.3	23	0.1
Sudanese	5,727	322	5.6	1,288	22.5	2,438	42.6	1,311	22.9	276	4.8	92	1.6
African Non-Arab	2,461	299	12.1	782	31.8	1,035	42.1	276	11.2	23	0.9	46	1.9
Indian	3,519	184	5.2	667	19.0	1,587	19.5	736	20.9	299	8.5	46	1.3
Pakistani	8,142	460	5.6	1,587	19.5	3,657	44.9	1,909	23.4	460	5.6	69	0.8
European	3,542	23	0.6	46	1.3	851	24.0	1,725	48.7	851	24.0	46	1.3
American	2,185	-0-	-0-	-0-	-0-	207	9.5	397	41.1	1,012	46.3	69	3.2
Other Moslem Country	2,806	46	1.6	460	16.4	1,472	52.5	598	21.3	115	4.1	115	4.1
Other Nationality	2,231	69	3.1	345	15.5	874	39.2	598	26.8	299	13.4	46	2.1
TOTALS	173,489	8,326	4.8	33,235	19.2	78,154	45.0	36,409	21.0	14,214	8.2	3,151	1.8

NOTE: All figures are in Saudi Riyals. One U.S. dollar = 3.45 Saudi Riyals.

SOURCE: Sert Jackson International/Saudi Consult, Existing Conditions of the Metropolitan Areas: Jeddah, Technical Report No. 5, Vol. 3 ("Socioeconomic Survey Data") (April 1980), p. 68.

family groups are concentrated largely among the Yemenis, African non-Arabs, Pakistanis, and Indians, while the other end of the income spectrum is occupied by their less numerous but high-income American and European counterparts, who are significantly represented in the 5,000-9,000 and over-10,000 Saudi Riyal monthly income brackets. These facts go to show that the American population in the City can afford to live well and save much more than can their compatriots back home in the United States. With regard to this, Cleveland and Adams (1960) write:

> Taking everything into account, one American businessman's wife in Indonesia said she and her husband are "spending half as much and saving twice as much" as they would in the United States. One CIA mission chief in another country figured he would lose $10,000 a year if he were transferred back to Washington. A United States information officer in Southern Europe, without family, managed to live quite adequately on his overseas allowances, banking his entire salary (p. 17).

It must be pointed out that, owing to the absence in Jeddah City of such entertainment and cultural facilities as the cinemas, theaters, coffee houses and restaurants, bars, music halls, and public parks with amusement facilities, the American population there is obliged not to spend on such facilities, resulting in savings being diverted to profitable investments. Moreover, the employment of Americans in Saudi Arabia is characterized by extraordinarily favorable employment conditions, among which the following deserve special mention: (a) The fringe and

other employment benefits offered by Saudi Arabia are matched by few countries in the world; (b) Saudi Arabia has no income tax; (c) education, health-care services, and recreational facilities in Saudi Arabia are all free; (d) most companies recruiting American personnel offer more-than-adequate living allowances, subsidies for housing, and liberal vacation benefits; (e) imports and exports of specified household items and furniture are duty-free and shipped to the employees cost-free; (f) most American employees are entitled to a two-week paid vacation at the end of the first year of their employment and two and a half months' furlough at the end of the second year; and (g) employees are paid an equivalent of a round-trip fare to the United States, which they can use to travel to and from any part of the world.

The Origins of the Americans in Jeddah City

Studies in international population movements have largely identified the origins of migrant populations. In this connection, Lai (1977, p. 359) points out that over 60 percent of the Puerto Ricans in New York City come from San Juan; about half of the Greeks in Tacoma, Washington were farmers in the village of Gallini or on Marmar Island; the Italians and the Yugoslavs in New Zealand, the Japanese in Brazil, and the West Indians in Britain can be traced back to a

few specific areas in their home countries and tend to settle down in specific locations in the host countries. It is generally known that most Chinese people in Canada come from a few counties in the delta of the Ch-Chaing (Pearl) River in South China.

From Figure 5 it can be deduced that the Americans who happen to be living in Jeddah City come from only 41 states. Two states, New York and Washington, alone have contributed nearly 18 percent of the total American population in Jeddah City. New Hampshire, Massachusetts, Connecticut, New Jersey, Delaware, Virginia, North Carolina, Florida, Illinois, Texas, Arizona, California, and Oregon contribute only 4 to 6.9 percent of the Americans each. The rest of the 41 states contribute only 1 to 3.9 percent each. In other words, most Americans in Jeddah City come from the northeastern region of the United States, chiefly from the State of New York. This region, with the exception of Rhode Island, contributes nearly 31 percent of the total population of Americans in Jeddah City. Two northwestern states, Washington and Oregon, together contribute nearly 11 percent, and one western state, California, contributes nearly 5 percent of the American population in Jeddah City.

There is no heavy concentration of Americans in Jeddah City from the midwestern region, except for Illinois. The contribution of Michigan, Indiana, Ohio,

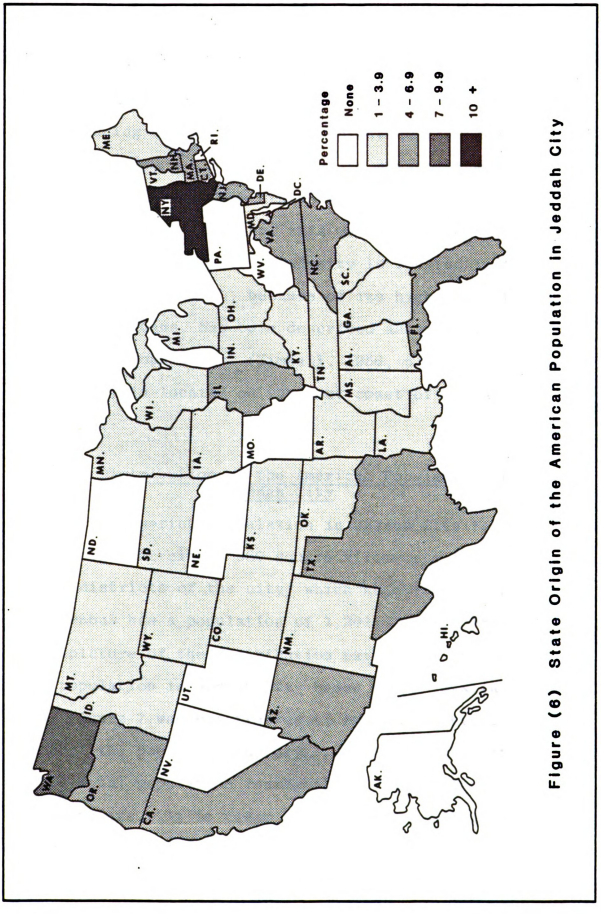


Figure (6) State Origin of the American Population in Jeddah City

and Wisconsin is small. Illinois has contributed nearly 5 percent of the Americans in Jeddah City.

The lack of movement from Alaska and other oil-producing states in the United States to Jeddah City might seem a bit surprising, in view of the close connection between these states and Saudi Arabia through the oil industry. However, this may be due to the fact that the Saudi Arabian oil industry is located in the Eastern Province which, because of its high concentration of Americans, has been described as a "tiny outpost of American population" (Kimball, 1956, p. 471), whereas Jeddah City is located on the west coast of the Arabian Peninsula.

The Distribution of the American Population in Jeddah City

The American population in Jeddah City is spread over the city's 350 square kilometers in 28 of the 35 districts of the city, which according to the 1982 census has a population of 1,201,000. To draw a clear picture of the distribution pattern of the American population in Jeddah City based on the available data, Figure 7 was constructed to represent the distribution of the population by district and the percentages of the total population represented by Americans in the districts. It is clear from Figure 7 that in no district is the American population more than 6.9 percent of the total population. In other words, the

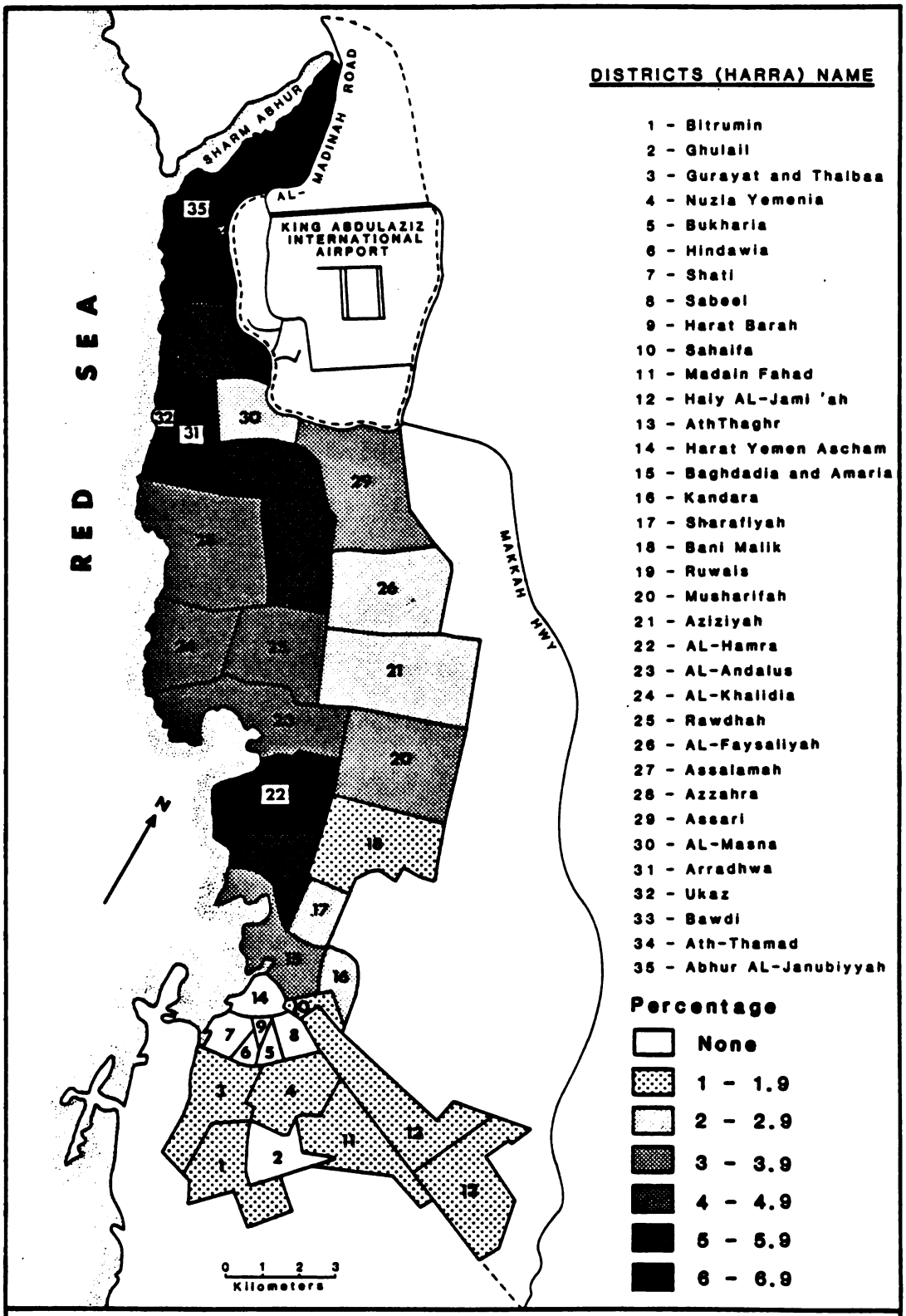


Figure (7) Distribution of American Population in Jeddah City

Americans form a small group and are widely dispersed in the 28 districts, and their number in any one district was found not to exceed 308 homes.

It is interesting to note that even as low American population density districts as less than 2 percent of their total population of the districts do not occur in the Old City districts. Secondly, the low density American population is dispersed all through eight districts outside the Old City which, with the exception of District 18, are all located in the south and southeast sections of the city and are all characterized by a heavy concentration of industries and colonies of low-wage earners, though the Americans tend to avoid the Old City because of its very heavy concentration of commercial activity. (The southern and southeastern districts referenced here are Districts 1, 3, 4, 10, 11, 12, and 13.)

The Americans form 2 to 3.9 percent of the total population of districts 15, 16, 17, 20, 21, 26, 29, and 30. With the exception of District 15, these districts are located at the eastern edge of the city. Although these districts form the affluent section of the city, laid out in rectangular elegance, they suffer from very obnoxious noise pollution. Districts 16 and 17 are located in close proximity to the old airport; District 30 is located in the vicinity of the new airport; and the rest of the districts (20, 21, 26, and 29) are located directly under the air corridor of

incoming and outgoing flights, the area of high noise intensity.

A relatively high percentage of the American population is located in Districts 19, 23, 24, 25, 27, 28, 31, 32, 33, 34, and 35, where Americans make up 4 to 6.9 percent of the population. All of these districts are located in the west and northwest sections of the city; the houses are comparatively new and are furnished with modern amenities and services. In these twelve districts is located 65.2 percent of the American population in Jeddah City. Four of the districts (22, 31, 32, and 35) account for more than 25 percent of all Americans in the city. They form the most peripheral suburban area of the city, and the houses are built in Western style with open spaciousness. The residences are not even remotely suggestive of substandard conditions, congestion, or overcrowding.

Based on the relationship of the American population in Jeddah City with the city's total population, Figure 8 was constructed with the help of a statistical indicator, termed the "Concentration Ratio" (R), calculated through the following equation:

$$R = \left(\frac{T_d}{T_j}\right)\left(\frac{T_{jG}}{T_{dG}}\right),$$

where:

T_d = total population of a district

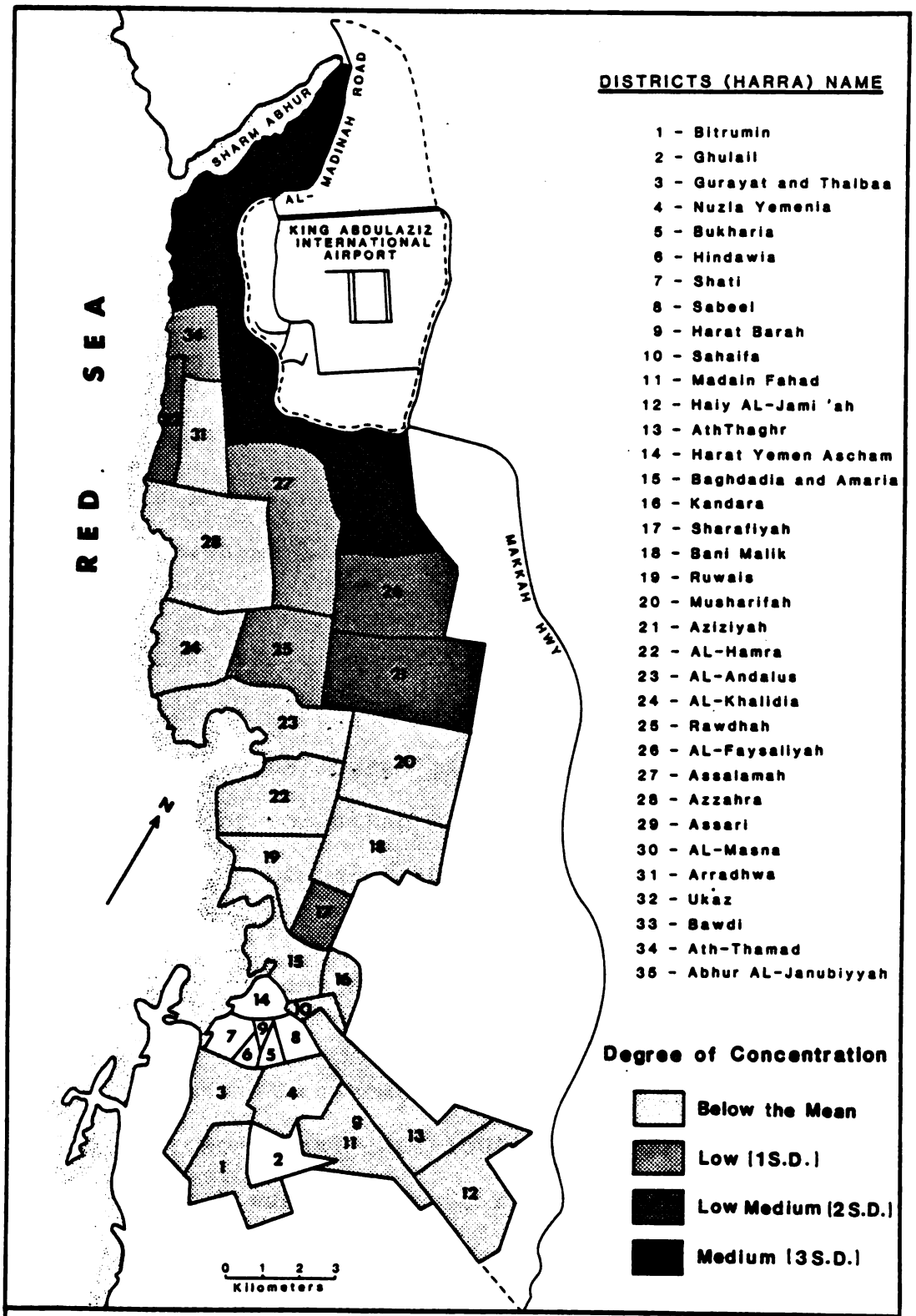


Figure (8) Degree of Concentration of the American Population in Jeddah City

T_j = total population of Jeddah City

T_{jG} = total American population in Jeddah City

T_{dG} = total American population in a district

This index (R) computes the relative numerical strength of the Americans in the total populations of the districts and the ratio of Americans in Jeddah City to Americans in a district. If R is greater than 1.0, it signifies a relatively high concentration of Americans, while an R less than 1.0 implies that the group is under-represented in that district compared to the city as a whole.

Using the census data made available for each district by the city's socioeconomic survey, the cut-off points for the degree of concentration of Americans was obtained by computing the standard deviation for each district. Districts with an R below the mean ($\bar{R}$) had a very low or negative concentration; districts with +1 standard deviation had a low concentration, and so forth.

Based on the comparison of the group in question with its proportional contribution to the total population, Figure 8 was developed, representing an analytical breakdown of the American concentration against the total population of each district. It is clear from Figure 8 that there exist no identifiable population clusters of Americans in Jeddah City's districts. In

other words, though the Americans in Jeddah City are culturally and numerically distinct, their composition and concentration in any of the districts cannot be characterized as exclusive, unlike other foreign-born populations in the city, which tend to congregate in the ethnically exclusive sections of the city. This characteristic of the distribution of the American population defies the generally observed phenomenon in the literature on population distribution that the foreign elements in an area tend to congregate in exclusive districts. It may therefore be concluded about the American population in Jeddah City that, despite the fact that 20 percent of the Jeddah City districts are uninhabited by Americans, the Americans are so widely dispersed all over the city that no discernible exclusivity of residence area can be observed.

The analysis of the distribution of the American population in Jeddah City has been tied to a specific areal base--the district--to this point in the present study. A change in the scale of analysis may provide better insight into the location and concentration of the population under study. To this end, the contiguity index--an index that measures the percentages of American households which are adjacent to one another--was employed. The house-to-house distribution, or the total number of American households next door to other

American households or in the same building on a street of more than 20 dwellings, is represented in Figure 9. Table 9 shows the total number of Americans populating each district and the percentage of the American households that are located next to other American households in that district. It seems clear that, at this scale, the residential concentration of Americans in Jeddah City takes on the form of residential cluster. To further illustrate the distribution of the American population within the Jeddah City districts, Figure 9, as has been pointed out, captures the residential contiguity of the population in clearly identified streets and reveals that the Americans in Jeddah City are widely dispersed at the metropolitan and district levels, yet at the street level display a residential pattern with significant nucleation, indicating that the Americans tend to live in close contiguity with one another at that level.

The main American habitations in Jeddah City are to be found on Al-Andlus, Yamamah, and King Fahad Streets; on Medina Road; and in the affluent sections between Corniche Road and Prince Majed Street. This distribution represents the polarization points on major roads and streets rather than exclusive clusters at the district level, since in no instance does the American population form even 5 percent of the district population.

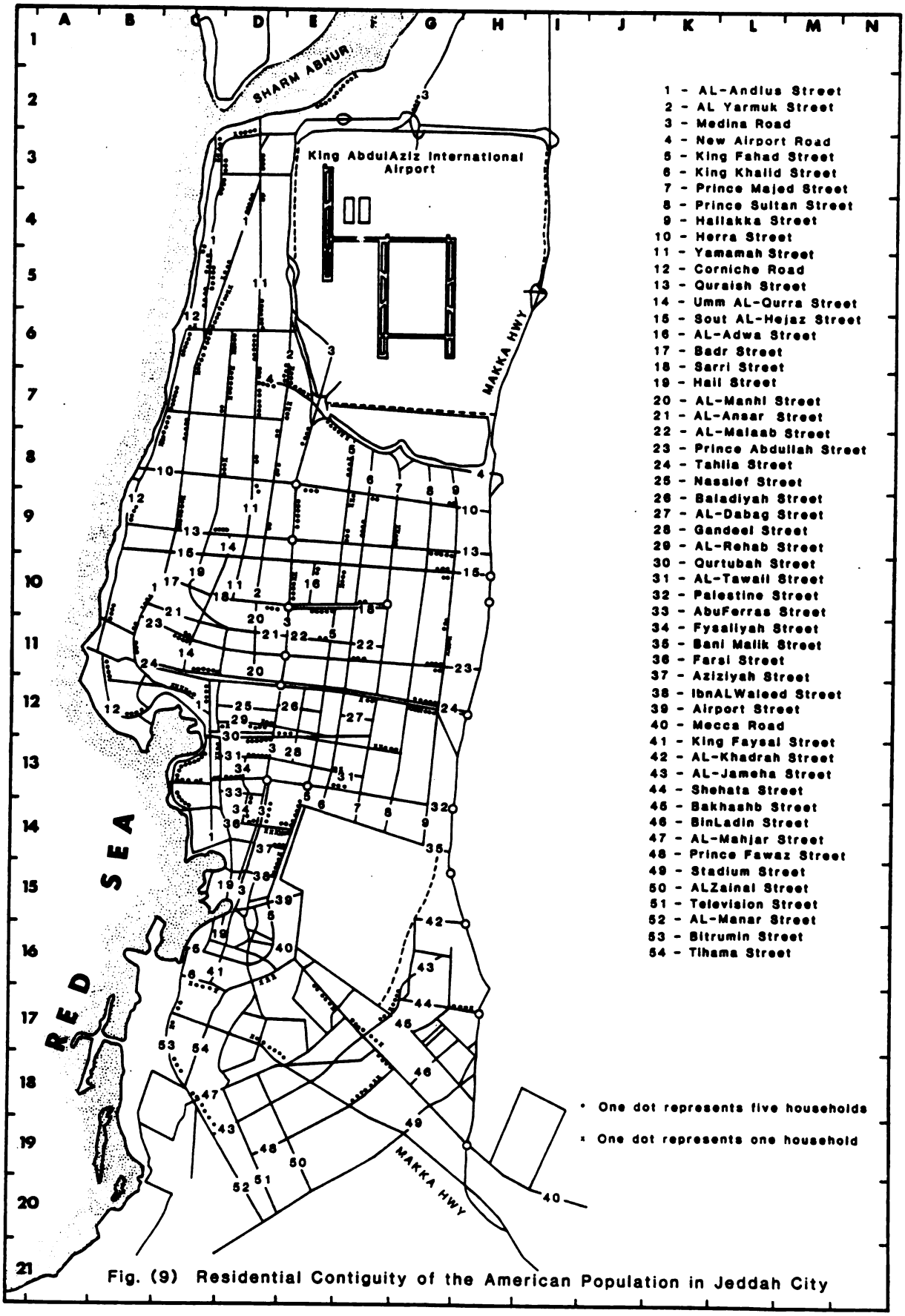


Fig. (9) Residential Contiguity of the American Population in Jeddah City

TABLE 9

DEGREE OF CONTIGUITY OF THE AMERICAN POPULATION
JEDDAH CITY

District Number	Total Number (N) of American Households	Total Number (H) of American Households Next to One Another	Degree of Contiguity $(\frac{H}{N}) \times 100$
1	61	45	73.8
3	76	33	43.4
4	90	65	72.2
10	55	30	54.5
11	72	47	65.3
12	87	39	44.8
13	69	41	59.4
15	153	71	46.4
16	102	27	26.5
17	137	78	56.9
18	91	21	23.1
19	238	82	34.5
20	161	72	44.7
21	106	69	65.1
22	285	97	34.0
23	201	84	41.8
24	226	102	45.1
25	223	93	41.7
26	114	67	58.8
27	258	100	38.8
28	209	117	56.0
29	170	63	37.1
30	94	77	81.9
31	308	109	35.4
32	305	127	41.6
33	235	119	50.6
34	262	139	53.1
35	301	208	69.1

Although Binladin, Alkhadrah, Bani Malik, and Prince Sultan Streets do not have any American households, the Americans elsewhere in Jeddah City tend to cluster contiguously on the rest of the city's streets. The dots in Figure 9 represent areas of lesser distribution to the south of the core of the city, and the area between Mecca Road and Al-Manner Street marks a fragmented cluster as compared with the area north of the city core. In other words, the Americans in Jeddah City manifest a basic tendency to cluster in selected localities and, to put it the other way around, these clusters are largely confined to certain streets and roads within the northern section of the city.

This fact points to the residential compactness of the American population in Jeddah City and to the level of residential separation of the Americans from the rest of the city's population. Further, it may explain how the forces of national affinity affect the conglomeration of Americans on major streets within the Jeddah City districts, and how the American population in the city constitutes a closely knit community.

However, there is no ghetto quality to these clusters. Since in Jeddah City racial tension is totally absent, the concentration of this kind is invariably self-generating, in that the presence of one American household on a street increases the likelihood that more Americans will locate nearby.

Racial segregation, a conspicuous feature of the housing-locational patterns of American cities, is totally absent from Jeddah City. This is unlike the way most foreign-born populations are located within the United States. For instance, one living in the United States is quite familiar with

> "Chinatown," "Little Tokyo," "Dagotown," "Brownsville," "Germantown," "Little Sicily," and the like in the United States. The five most numerous minority racial or religious groups (as identified in the Federal census) --Negroes, Jews, Indians, Japanese, and Chinese--generally reside in separate sections of the town, sometimes by choice but more often because of the insistence of the white, Christian majority (Thomlinson, 1966, p. 13).

Results of the Correlation Matrix

In order to understand the relationship between the distribution and concentration of the American population in Jeddah City and some socioeconomic, locational, and geographic factors, a matrix of eleven variables associated with the percentages of Americans in the residential locations was prepared (Table 10). This relationship, it must be pointed out, does not imply causation; it simply yields coefficients of correlation to indicate the strength and direction of a relationship.

A scrutiny of the correlation matrix reveals that the percentages of Americans in Jeddah City's districts are strongly and positively related to the percentages of Europeans, of households earning 5,000 Saudi Riyals per month, and of newly constructed houses; to the average

TABLE 10

A SYMMETRIC CORRELATION MATRIX OF ELEVEN VARIABLES

Variables		1	2	3	4	5	6	7	8	9	10	11
1	Percentage of Americans	1.00 p=.001										
2	Percentage of Europeans	0.874 p=.001	1.00 p=.001									
3	Population density per hectare	-0.690 p=.001	-0.72 p=.001	1.00 p=.001								
4	Percentage of household incomes of 5,000 SR	0.653 p=.001	0.643 p=.001	-0.612 p=.001	1.00 p=.001							
5	Percentage of householders with high school or more education	0.428 p=.001	0.321 p=.010	-0.321 p=.010	0.412 p=.001	1.00 p=.001						
6	Average value of the house	0.619 p=.001	0.521 p=.001	0.433 p=.001	0.798 p=.001	0.312 p=.011	1.00 p=.001					
7	Average monthly rent	0.476 p=.001	0.424 p=.001	0.356 p=.007	0.621 p=.001	0.182 p=.087	0.714 p=.001	1.00 p=.001				
8	Percentage of newly built houses	0.678 p=.001	0.654 p=.001	-0.481 p=.001	0.642 p=.001	0.211 p=.056	0.765 p=.001	0.629 p=.001	1.00 p=.001			
9	Percentage of houses with substandard conditions	-0.792 p=.001	-0.694 p=.001	0.634 p=.001	-0.782 p=.001	0.322 p=.010	-0.511 p=.001	-0.479 p=.001	-0.762 p=.001	1.00 p=.001		
10	Percentage of traditional Arab houses	-0.623 p=.001	0.521 p=.001	0.521 p=.001	-0.421 p=.001	0.216 p=.055	0.491 p=.001	0.210 p=.056	-0.587 p=.001	0.613 p=.001	1.00 p=.001	
11	Distance from the city center in km.	0.644 p=.001	0.589 p=.001	-0.679 p=.001	0.587 p=.001	0.316 p=.011	0.562 p=.001	0.632 p=.001	0.691 p=.001	0.629 p=.001	-0.239 p=.053	1.00 p=.001

NOTE: Number of cases used in the computation of the Correlation Coefficient = 35.

monthly rents; and to the distance from the city center. The values of the coefficients of correlation were found to be quite high, varying from 0.476 to 0.874.

However, the percentages of Americans in the districts were found to be strongly negatively correlated with the percentage of dwellings with substandard conditions, population density, and the percentage of traditional types of Arab houses. The values of these coefficients varied from -0.792 to -0.623.

Discussion and Interpretation

It seems most appropriate to consider the location of the Americans in Jeddah City with another similar population group, the Europeans. The correlation between the percentages of the Americans and the Europeans with a coefficient r = 0.874 confirms that the distributions of Americans and Europeans in Jeddah City are directly and closely associated. Further, this correlation of the distribution pattern between Europeans and Americans is represented in Figure 10, which shows that the percentage distribution of Americans matches almost exactly the percentage distribution of Europeans in Jeddah City's districts. This suggests that the residential preferences of the two groups are strikingly similar. That is, the districts with a higher percentage of Europeans are likely to attract a higher percentage of Americans.

On the other hand, Figure 11 compares the

Fig. (10) Percentage Distribution of Americans and Europeans in Jeddah Districts

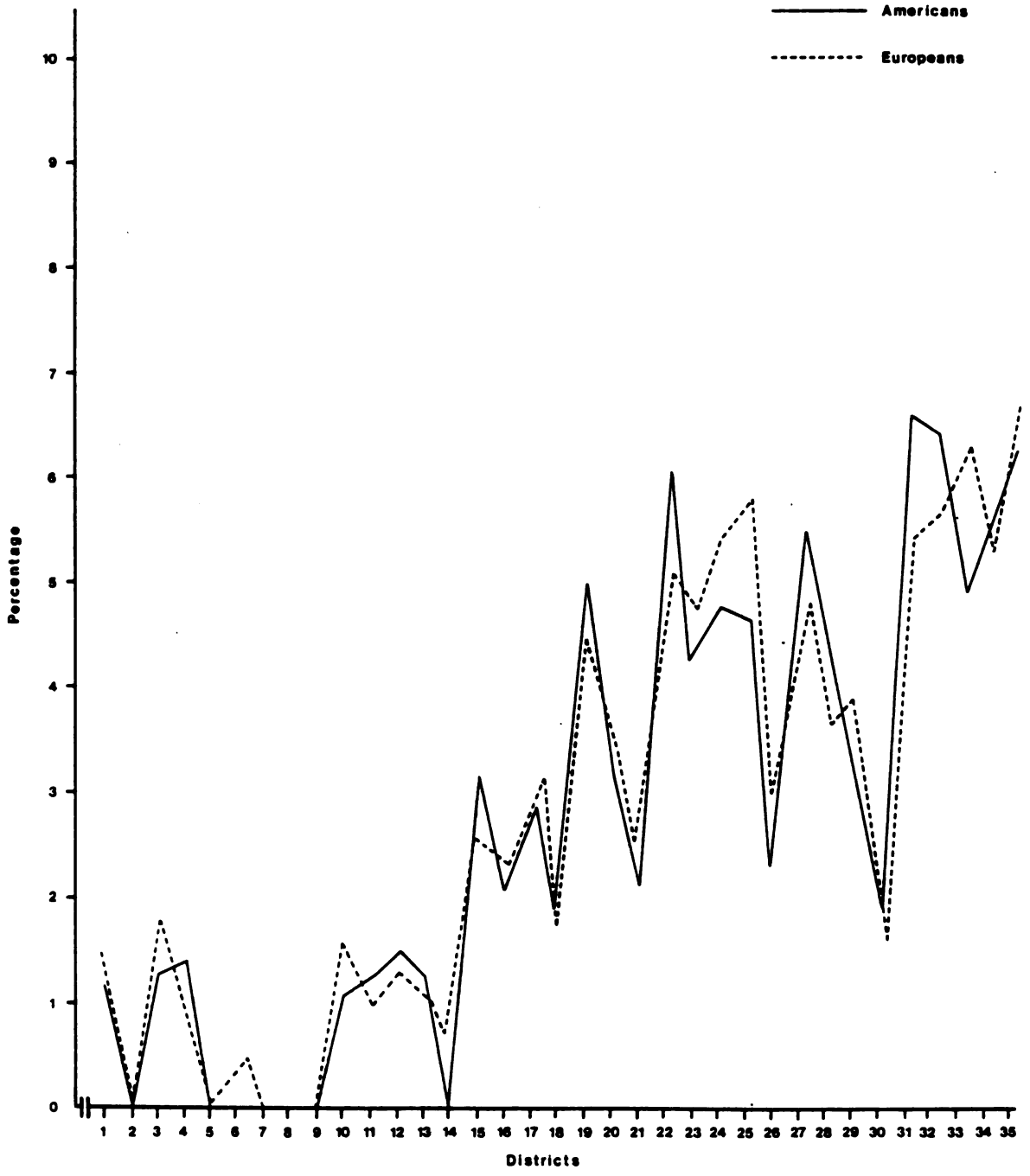
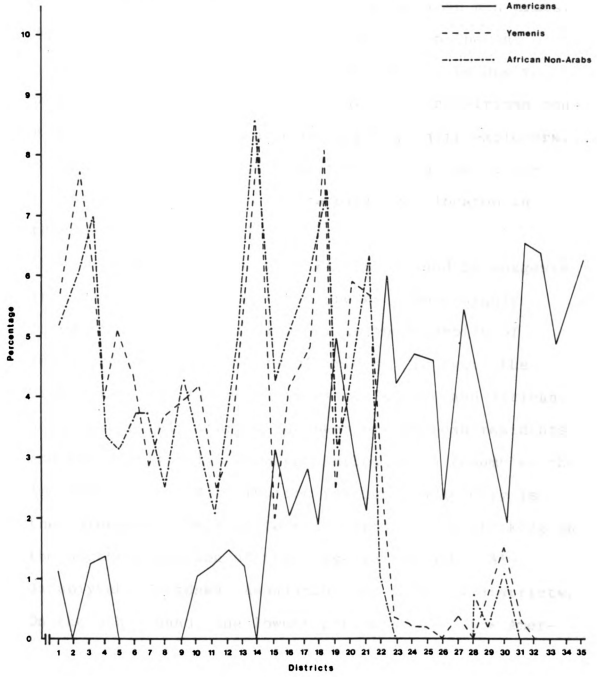


Fig. (11) Percentage Distribution of Americans, Yemenis and African Non-Arabs in Jeddah Districts



percentage distribution of the Americans with those of the Yemenis and African non-Arabs in the Jeddah City districts. These results show that the districts with a higher percentage of Americans are likely to have a lower percentage of both Yemenis and African non-Arabs. This contrast between these two groups, on the one hand, and the Americans, on the other, may be due to two factors. First, low-income Yemenis and African non-Arabs reside in the houses provided by their employers. Second, they are mostly concentrated in areas closer to the city center, and in the districts located in the southern section of the city.

A comparison between Figures 10 and 11 suggests that the Americans and the Europeans form a highly integrated community in respect to their choice of residence in Jeddah City's districts. In fact, the districts with high percentages of Yemenis and African non-Arabs rarely attract European or American residents, and the only foreign-born population which resembles the Americans in its distribution through Jeddah City is the Europeans. This pattern is particularly striking in the northern section of the city--in the Abhur Al-Janubiyyah, Arradhwa, Assalamah, and Al-Hamra districts. On the other hand, the lowest percentages of the Americans in the districts with high percentages of Yemenis and African non-Arabs are mostly in the Harat Yemen Aseham, Bitrumin, Ghulail, and Beni Malik districts.

The coefficient of correlation, $r = -0.792$, between the percentage of Americans and the percentage of substandard houses confirms that the distribution of the Americans in the Jeddah districts and the distribution of the houses of substandard conditions are inversely related.

A house is defined by the Deputy Ministry for Town Planning as substandard if it is dilapidated or lacks the basic sanitary amenities. The dilapidated houses are marked as unsuitable for human habitation because they are structurally unsound or unsafe. Generally, there are in very unsanitary condition, and are totally devoid of facilities like running water, drainage, sewage, etc. These houses, the distribution of which is shown in Figure 12, are found in thick clusters in the areas in and around the center of the city. The most outstanding features of these residential districts with high percentages of substandard housing conditions are: (a) They are located in some of the oldest localities in Jeddah City; (b) the population densities in these areas are the highest; (c) because of the land-use specialization, these areas are intensively used for both business and residential purposes; and (d) these areas contain the greatest admixture of various status groups, displaying the least amount of social and economic homogeneity. The inhabitants of these areas consist mainly of the middle and lower classes, originally from

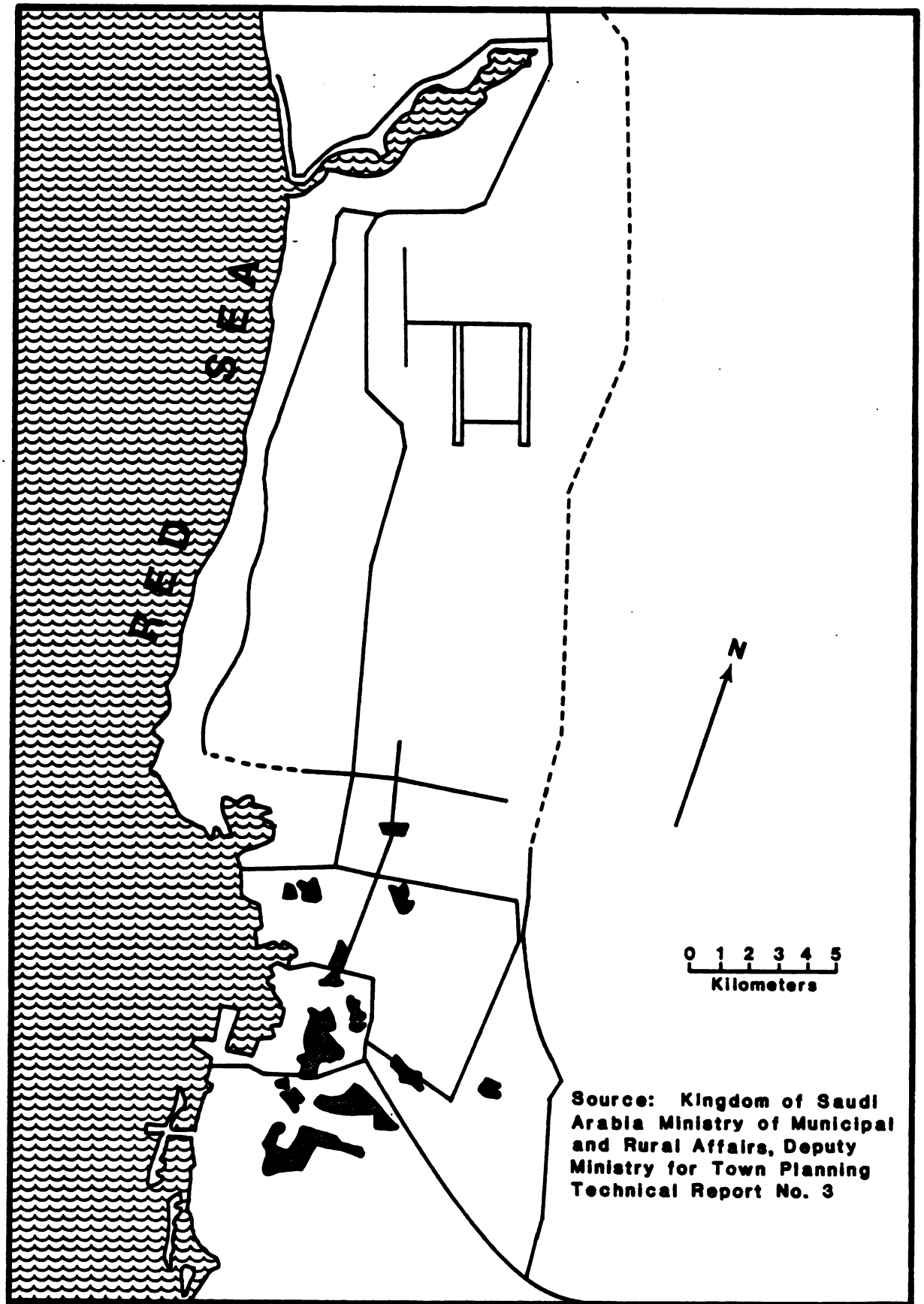


Figure (12) Areas With Sub-Standard Housing Condition

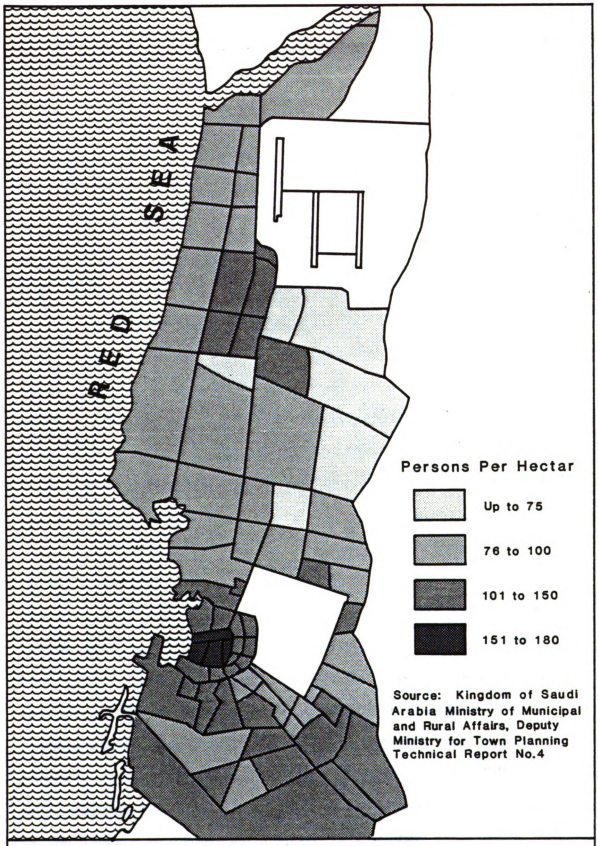
various Arab and African non-Arab countries. The condition of these substandard houses has continuously deteriorated because of the inability of the residents to afford to maintain them in good repair, or simply because of their indifference to an acceptable standard of living.

As can be seen from Figure 12, there are fifteen patches of houses with substandard conditions in Jeddah City. Spatially, 60 percent of them are located in the central and southern sections of the city, where less than 3 percent of the Americans live. Forty percent of these houses have sprung up in recent years on the vast tracts of once-vacant land in the middle districts of Jeddah City; in some cases, they have been built on unauthorized sites. Recently, the city municipality launched a program for the beautification of these areas, and some measures have been taken toward clearing out these substandard houses. Some roads were improved, and some modern amenities were provided, but the problem seems insurmountable: The unsanitary conditions and filth cannot be completely eradicated.

The negative coefficient of correlation, $r = -0.690$, between the percentage of the Americans and the population density of a district confirms that these variables are inversely related. The spatial aspects of the density of population have received much attention from urban geographers and demographers. Three decades

ago, Clark (1951) developed the density-gradient theory. He argued that population density decreases with distance from the city center. Later, certain generalizations were made concerning the social structure and the population density gradient in non-Western cities (Berry, et al., 1970).

In Jeddah City, there is a striking contrast between the densities of the inner, middle, and peripheral districts. As can be seen from Figure 13, the population density varies from as low as 75 persons per hectare in the outlying zones to as high as 180 per hectare in the inner zones. This appears to show some similarities with American cities in the sense that the central areas in Jeddah City have higher densities than the middle and outer districts. Thus, the density-gradient pattern appears to hold true in Jeddah City. However, there are at least two important differences between Jeddah and American cities: First, in the cities in the United States, the central business district is less densely populated than the surrounding residential-district areas--a phenomenon that is not true of Jeddah City. Second, not all peripheral districts show low densities in the city. In fact, some of the peripheral districts have much higher densities than do the middle districts. This does not imply, however, that Americans in the peripheral districts live in the high-density sections of these outskirts. In fact, 92.3



Figure(13) Jeddah Population Density Distribution

percent of the Americans in the peripheral districts live in areas of low population density--up to 75 persons per hectare.

The direct relationship between the percentage of Americans and the percentage of newly constructed houses--dwellings not more than seven years old--is also confirmed by the correlation coefficient r = 0.678. This coefficient reaffirms the concepts of "filtering" or "conversion" in the housing market, implying that the poor do not live in new houses. In the spatial context, this theory implies that the poor live in the central parts of the city, where the houses are generally old and of low quality, while the more well-to-do tend to move progressively away from the center of the city to where the houses are comparatively new and furnished with modern facilities.

In Jeddah City, the percentage of newly constructed houses tends to increase with distance from the center of the city. This is confirmed by the positive high correlation coefficient of r = 0.691 (see Table 10). Nearly 76 percent of all newly constructed dwellings are located in the peripherally north and northwesterly sections of the city, where nearly 81 percent of the Americans live. Most of these newly constructed buildings are square, with hardly any curves to relieve the monotony. They have large compounds and, generally, low boundary walls that match the architectural

style of the buildings. Though these houses are American in design, they are huge in dimension and look like palaces, built with reinforced concrete and glass. Houses of this nature are typical of high class residential living in Jeddah City.

The tendency of people to select residential areas in cities that are symbolic of wealth, power, and social prestige, or to gravitate to low-income and low-prestige areas, is related to the socioeconomic conditions of the home seeker. According to the ecological theory, the low-income groups tend to live in the center of the city, while the higher-income groups prefer sites farther away, toward the periphery.

Levels-of-income data in Jeddah City reveal that 53.2 percent of the upper-income group--people earning 5,000 Saudi Riyals monthly--reside in the northern and northwestern sections of the city. That is, they congregate around the periphery. Meanwhile, 63.2 percent of the lower-income groups--people earning less than 2,000 Saudi Riyals monthly--show a tendency to gravitate to the areas near the city center. However, a small percentage of the upper-income group (4.6 percent) does live at the center of the city. They are some of the wealthiest commercial-class people who, for sentimental reasons, still cling to the place where their ancestors used to live. The middle-income group--people earning 2,000 to 4,000 Saudi Riyals monthly--has the widest

spatial spread in the urbanized area of Jeddah City. That is, while the poor and the rich are spatially concentrated in certain sections of the city, the middle-income group residents do not live in clearly defined exclusive enclaves.

As has been noted earlier (see Tables 7 and 8), the Americans in Jeddah City belong to a high-income class, and it is natural that they should prefer to live in high-status areas. This inference is confirmed by the result shown in Table 10. The correlation coefficient r = 0.653 confirms that the percentage of Americans living in high-prestige areas is directly and closely associated with the percentage of people earning 5,000 Saudi Riyals or more per month in the Jeddah City districts. In other words, the majority (78.3 percent) of the Americans in Jeddah City have their addresses in the predominantly upper income class areas, which are located in the northern and northwestern outskirts of the city and comprise the northern part of the Ruwais district (which stretches northward to the Abhur Al-Janubiyyh district, located between Palestine Street to the south and Medina Road to the north, and between Hallakka Street to the east and Corniche Road to the west). The facilities enjoyed in these areas indicate the type of people who live there. These districts have the best available contemporary living conveniences: hospitals with modern equipment; wide

roads and boulevards; excellent sewage, drainage, and and running water; parks and open spaces; Western-style hotels and restaurants, banks, and luxury stores and shops selling Western goods. The imposing government buildings and the location of foreign embassies add to the general grandeur of these districts. In these areas are located several royal palaces, residences of ministers, foreign ambassadors and diplomats, and other dignitaries.

Furthermore, it is pertinent to draw a distinction between high income and high social status groups in Jeddah City. They are not necessarily synonymous. In Saudi Arabia, high social status accrues from positions in the government or in quasi-governmental organizations, the military, or the police. The university academics, who are not necessarily high income in the dollar sense but because of their official positions have access to residences that their incomes can ill-afford, are of high social status but not high income status.

Another dimension of a social class which accounts for the residential differentiation in the urban areas is the level of education. In this connection, Popenoe (1973) holds that education is a more powerful dimension of social class than either occupation or income in accounting for residential differentiation. The implication is that with education the

individual has not only a greater potential for self-advancement but also aspiration for higher attainments in life, enhancing his or her range of residential alternatives. Daly (1968) believes that there is a significant correlation between the level of education of residents and the qualitative features of the areas where they live.

In Jeddah City, the coefficient of correlation, on the one hand, between the percentage of people with high school education or more and the percentage of people with high income levels is as low as $r = 0.412$, and the correlation coefficient between the percentage of the American population and the educational level is as low as $r = 0.428$, on the other hand. These results suggest that the Americans in Jeddah City reside in areas of mixed educational levels, and point to the fact that almost every district in Jeddah City may have a sizeable percentage of illiterate or semi-literate people. On the whole, there is hardly any educational differentiation in the Saudi population in various parts of Jeddah City. In fact, the number of Saudi Arabians with high levels of educational attainment is too small to form a social class in any particular district. Furthermore, and contrary to general rule, wealth and education, for Saudi Arabians, do not go together in the districts of Jeddah City. For a Saudi Arabian, level of education may not necessarily reflect economic status. This

explains the poor correlation between high income level and high level of education among the Saudi Arabians.

In modern Western cities, residents living farther from the central business district tend to have higher income levels: One finds more low-income inhabitants in the inner city, and more high-income families in the outskirts. The percentage of Americans in Jeddah City tends to increase as the distance from the city center increases (the principal anomalies being Districts 21, 26, and 30, located in heavily noise-polluted areas).

The direct relationship between the percentage of Americans and the distance from the city center is confirmed by the correlation coefficient, $r = 0.644$. Using the central business district as a reference point, Figure 14 shows how the percentage of Americans in Jeddah City increases with distance from the city center. In the area within five kilometers of the central business district, we find only 4.4 percent of the American population of the city. As we proceed towards the northern section of the city, the percentage of the city's Americans residing 5-10 kilometers from the center is 22 percent, and 25.4 percent live 10-15 miles from the center. Finally, the area between 15 and 25 kilometers from the city center has the highest percentage (41.9 percent) of the American population of Jeddah City.

The negative coefficient obtained for the percentage of Americans and the percentage of traditional

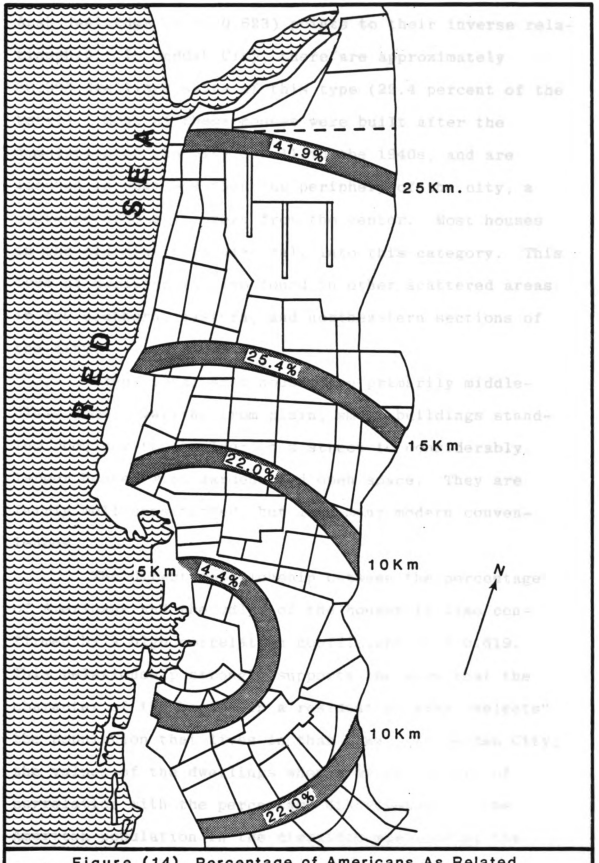


Figure (14) Percentage of Americans As Related to Distance From Center

Arab dwellings (r = -0.623) points to their inverse relationship. In Jeddah City, there are approximately 50,968 dwellings units of this type (29.4 percent of the total). Most of these houses were built after the demolition of the city's wall in the 1940s, and are located in what was then the periphery of the city, a distance of 5 kilometers from the center. Most houses in the old districts also fall into this category. This type of dwelling is also found in other, scattered areas in the southern, eastern, and northeastern sections of the city.

Traditional Arab houses are primarily middle-class homes, varying from plain, small buildings standing shoulder-to-shoulder on a street to considerably larger houses with gardens and open space. They are fairly well constructed, but lack many modern conveniences.

The direct relationship between the percentage of Americans and the value of the houses is also confirmed by a high correlation coefficient, r = 0.619. This relationship strongly supports the view that the character of the houses in a residential area "selects" the population that lives in that area. In Jeddah City, the values of the dwellings show a broad pattern of correlation with the percentage distribution of the American population in the districts surrounding the central area and in the peripheral districts in the

northern section of the city. It must be pointed out, however, that the high average cost of housing near the city center is not the result of an overwhelming demand for land but of competition among alternative land uses. The average value of housing in the northern section of the city is due largely to an abundant supply of modern amenities and such conveniences as parks, open spaces, and green belts. These areas boast of several well-developed employment centers and a wide variety of shopping and entertainment centers.

In the northwestern section of the city, the houses are valued for their aesthetic qualities and attractive locations with access to the Corneich on the Red Sea shoreline. These dwellings, with high average values--particularly those located in the northern section of the city, where most Americans live--are massive in dimension, with huge pillars, semicircular arched windows and doors, round towers and verandas. The attraction of this area is also attributable to the lifestyle of the people, particularly of the beach communities, living there. Moreover, the association between the high average values of the houses and the percentage of the people with high income levels is clear from Table 10; $r = 0.798$. This means that the largest proportion of the wealthy households are located in the areas that have some of the most expensive houses. This link between income level and the values of houses is

one of the main factors that serve to explain the relationship between the economic status of the population and the housing market. That is, the wealthy population of Jeddah City, including the Americans, is found largely in the highly privileged sector of the housing market.

The association between the percentage of Americans and the average monthly rent is clearly not as closely related as indicated by the small value of r, 0.476. One of the main distinctive features of Jeddah City is the high rents of the houses in certain districts. For example, in the Al-Hamra district, where there are 285 American households, 72 percent of the rented houses fetch the landlords an income of more than 5,000 Saudi Riyals per month for each unit. These high rents are not a feature of all parts of the city. The next highest percentage of high-rent houses is found in Assalamah, where the corresponding figure for high-rent houses is 52 percent.

The theoretical distance-decay rent function, based on the distance from the central business district as a proxy variable, is a function that characterizes most urban areas--but not Jeddah City. The coefficient of correlation between the average monthly rent and the distance from the city center, r = 0.632, confirms that the two variables are directly and closely related. This does not suggest that a high rental value is the result of distance per se. We have already pointed out that

the overall quality of the houses and the residential environment in the inner-city areas is inferior to that available in the outlying parts of the city. This may suggest that the rent level is more a result of the quality of the house and the housing services than merely of the geographical location. It must be pointed out that the skyrocketing prices of land in the city, particularly in the newer outlying districts, combined with the absence of adequate investment opportunities, make people divert their savings to the lucrative real-estate business, which fetches them high rents for houses because of the severe shortage of housing in this part of the city.

Results of Regression Analysis

The general socioeconomic and locational characteristics of the Jeddah districts have already been discussed in relation to where Americans live in the city. The previous section summarized the main correlations between such characteristics and the spatial distribution of Americans in Jeddah City. The correlation matrix confirmed that the percentages of the American population in various parts of Jeddah City are strongly correlated with the corresponding percentages of the European population; of the households earning 5,000 Saudi Riyals per month; of newly constructed houses; with the monthly rents of the houses; and with the

distance from the city center. At the same time, the percentages of American population had a strong negative correlation with the corresponding percentages of sub-standard dwellings, and of traditional Arab houses. Finally, the percentage of Americans was negatively correlated with population density.

With these results in mind, a step-wise multiple regression model was used to examine the degree to which these socioeconomic and locational variables explained the location of the Americans in Jeddah City. Each variable was individually tested for skewedness and kurtosis and the transformation which gave the best approximation to normality was used. If the skewedness results were between +1 and -1, the variable was regarded as normal. A multiple-regression equation, established with the percentage of Americans in each district as the dependent variable and a series of socioeconomic characteristics of each district as ten independent variables, was used and entered into the regression model in a step-wise manner, in the order of their contribution to the solution. This design is helpful in isolating a subset of predictors to get the "optimal prediction equation." That is, the independent variables enter in single steps from best to worst to meet our statistical criteria. For the purposes of this analysis, the following "parameters" were used:

Maximum Steps	10
F to Enter	4.000
F to Remove	3.900
Tolerance	0.0010

Table 11 summarizes the results of the regression analysis for the American population in Jeddah City where the five leading significant variables are shown in the order of their contribution to the solution. Other variables made only a negligible contribution to the explanatory power of the equation.

The distribution of the American population in Jeddah City was quite well explained by the available variables. The first five--relating to substandard housing conditions, newly constructed houses, distance, population density, and percentage of Europeans--account for 56 percent of the variance with a multiple R of 0.75. This value of R is by no means totally satisfactory, since it leaves a sizable portion of the variance to be explained by other factors, but it does suggest that the socioeconomic characteristics of Jeddah City's districts are relevant to the group's location.

The Americans' Level of Search Intensity for Houses in Jeddah City

The selection of a residence by the home-seeker is so crucial that a diligent effort has to be made before the final decision is arrived at. The greater

TABLE 11

RESULTS OF THE MULTIPLE REGRESSION ANALYSIS

Dependent Variables[a]	B	Standard Error B	Multiple R	R^2
Percentage of newly constructed houses	0.2040	0.0741	0.6012	0.3614
Percentage of substandard dwellings	-1.1978	0.4125	0.6391	0.4084
Distance from the city center	0.2627	0.0457	0.6942	0.4819
Population density	-0.1189	0.0463	0.7268	0.5282
Percentage of Europeans	0.1256	0.0237	0.7497	0.5621

[a]The first five significant variables entered into the step-wise regression model are shown. The F test to enter variables was significant at the 95-percent level.

the intensity of search for a house (as determined by the number of houses inspected divided by the time spent per week), the greater the need for specific attributes in a house on the part of the prospective householder. That is, the intensity of the search becomes a function of the major housing attributes sought.

In respect to the intensity of search, the respondents were asked to indicate the number of vacant houses inspected and the time spent on the search between the time when the search began and the day the final decision was made. The index of search intensity (I), developed by Barrett (1976), was adopted to measure the intensity of search for a residence by the American population in Jeddah City, using the following equation:

$$I = \frac{N}{T},$$

where:

I = the index of intensity
N = the total number of houses the respondent claimed to have seriously examined
T = the length of time from the beginning of the search to the date on which the selection was made

As Barrett indicates, the larger the N and the smaller the T, the greater is the intensity of search. Conversely, a low value of I implies a casual search, since only a few houses (if N is low) will have been searched in a lengthy period of time (if T is high).

The values of I ranged from a high of 39.3 to a low of 10.3, computed by number of houses inspected by Americans in each district divided by the average time per week spent on the search. Table 12 records the

TABLE 12

DEGREE OF INTENSITY OF SEARCH FOR A HOUSE BY THE AMERICAN POPULATION IN JEDDAH CITY BY DISTRICT

District Number	Number (N) of Houses Examined on Average	Time (T) Spent on the Search per Week on Average	Degree of Search Intensity $I = (\frac{N}{T})$
1	256	7	36.6
3	155	5	31.0
4	232	7	33.1
10	175	6	29.2
11	275	7	39.3
12	232	7	33.1
13	209	6	34.8
15	125	5	25.0
16	136	6	22.7
17	70	3	23.3
18	165	6	27.5
19	78	4	19.5
20	152	7	21.7
21	100	4	25.0
22	76	4	19.0
23	83	4	20.8
24	60	3	20.0
25	40	2	20.0
26	118	5	23.6
27	58	3	19.3
28	41	2	20.5
29	63	3	21.0
30	221	8	27.6
31	36	2	18.0
32	34	2	17.0
33	59	3	19.7
34	38	2	19.0
35	31	3	10.3

search intensity of the American population in each Jeddah district. An analysis of this table indicates that the Americans in Jeddah City pay a great deal of attention before they finally select their residences. This is reflected in the number of houses inspected and in the time spent on the search.

In this connection, it is interesting to examine the relationship between the degree of housing search intensity and the total number of Americans in each district. A strong negative correlation coefficient, $r = -0.862$, between the total number of Americans in a district and the degree of housing search intensity was found (statistically significant at the 0.001 level). This suggests that, within the districts, a small number of Americans make an intense search for a house. Such a correlation should not be startling, since the Americans in Jeddah City live in unfamiliar surroundings and, once they find their bearings in the environment, their compatriots prefer that they stay in a specified place. Furthermore, this strong correlation may be partially explained by the potential influence of a friend upon an individual's decision as to where to locate in the city. It is also possible that those casting about for a place to live, looking at a large number of houses, found many that were not suitable and were thus quickly rejected.

Factors Relating to the Selection of Residential Housing by the Americans in Jeddah City

The fact that residential units of special specifications are not distributed equally in each section of Jeddah City is likely to have a considerable influence on the residential patterns of the American population in that city. Implicit in this reality is the inference that the choice of a residential house with some specific attributes involves the rejection of others without those attributes. It follows, therefore, that the American population in Jeddah City has tended to gravitate toward certain sections of the city that have those specific housing attributes. In the spatial context, as pointed out before, the American population has tended to avoid the poor-quality, old housing areas of the central parts of the city in preference for houses of acceptable specifications in other parts of the city--in other words, the Americans tend progressively to spread away from the center of the city toward areas where the houses are comparatively new and are furnished with modern amenities and conveniences. This does not suggest, however, that the American households in Jeddah City are restricted to particular areas only; as the householders happen to have a much wider range of options, they face their residential choice with certain sets of specifications, which of course vary from person to person. However, each householder strives for the

best living environment possible within the residential areas of the city, for different areas provide different competing conditions for the individual household. The decision of an American resident to select a house in Jeddah City is made largely on the grounds that that house possesses the attributes that satisfy what Rossi (1955) calls the "household needs."

In order to gain an in-depth understanding of why Americans in Jeddah City live where they do, it is in order to define residential houses, following Lancaster (1966), as a vector of characteristics or attributes that relate to the location, the neighborhood environment, and the building structure itself. Therefore, in order to determine what role these attributes play in the decision-making process regarding the choice of residential house in the city, a total of thirty housing attributes were presented to the sample population of household heads in order to understand what level of importance they attach to each attribute in the selection process. These thirty variables, selected for that particular section of the questionnaire, were tested and supported in the literature on the grounds that a person making a choice of residential house selects one packet of attributes or another from among these to make his or her selection of a house in which to live. The attributes considered significant consist not only of the nature of the house and the site, but also of

their natural and social environment. Every attempt was made to make the list as comprehensive as possible, but it is by no means exhaustive. A selection of attributes was made with regard to their being represented in the decision-making process and their being comprehensive enough within the time constraints.

Each selected attribute is represented as a separate variable, and the 471 participants in this investigation were asked to indicate how important--very important, moderately important, or not important--each variable was to them in the initial choice of their present dwelling unit. Each choice was then assigned the following weights in the computation of the value of each attribute:

Very important	2
Moderately important	1
Not important	0

These weights imply that when the respondents chose "very important," they gave a great deal of importance to that attribute; when they chose "moderately important," the choice implied that the respondent may have considered the variable--may have given some thought to it; and "not important" signified that the respondent did not think about that variable at all.

The level of importance of each variable as computed is shown in Table 13, and the variables

TABLE 13

ABSOLUTE AND RELATIVE FREQUENCIES OF THE IMPORTANCE ATTACHED TO THE FOLLOWING FACTORS IN THE SELECTION OF A RESIDENTIAL DWELLING BY THE SAMPLE POPULATION (S) IN JEDDAH CITY (S = 471)

	Very Important		Moderately Important		Not Important	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Overall size of the dwelling	153	32.5	168	32.5	150	31.8
Number of rooms	157	33.3	169	35.9	145	30.8
Design and outside appearance of the dwelling	201	42.7	106	22.5	164	34.8
State of repair of the dwelling	375	79.6	93	19.7	3	0.6
Age of the dwelling	216	45.8	136	28.9	119	25.3
Cost of the dwelling	150	31.8	87	18.5	234	49.7
Types of people living in the area	362	76.9	86	18.2	23	4.9
Social composition of the area	349	74.1	30	6.4	92	19.5
Reputation of the area	401	85.1	52	11.0	18	3.8
Not in the old housing area	274	58.2	188	39.9	9	1.9
Not in high population density area	299	63.5	168	35.7	4	0.8
Quality of schools in the area	127	27.0	231	49.0	113	24.0
Quietness of the area	369	78.3	71	15.1	31	6.6
Cleanliness of the area	382	81.1	73	15.5	16	3.4

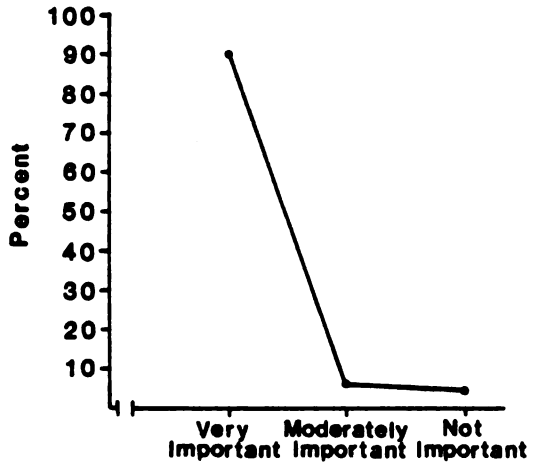
TABLE 13--continued

	Very Important		Moderately Important		Not Important	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Cleanliness of the area	382	81.1	73	15.5	16	3.4
Low street traffic in the area	237	50.3	109	23.1	125	25.5
Low crime rates in the area	224	47.6	236	50.1	11	2.3
Privacy from the people in the area	53	11.3	125	26.5	293	62.2
Space between the houses in the area	310	65.8	61	13.0	100	21.2
Availability of city services in the area	149	31.6	228	48.4	94	20.0
Proximity to the workplace	91	19.3	107	22.7	273	58.0
Proximity to the children's school	65	13.8	32	6.8	374	79.4
Proximity to the medical facilities	188	40.0	172	36.5	111	23.5
Proximity to parks and playgrounds	175	37.2	171	36.3	125	26.5
Proximity to transportation facilities	21	4.5	5	1.1	445	94.4
Proximity to the city center	18	3.8	14	3.0	439	93.2
Proximity to the shopping facilities	196	41.6	173	36.7	102	21.7
Proximity to friends	279	59.2	51	12.1	135	28.7
Proximity to relatives	13	2.8	70	14.9	388	82.4
Proximity to an American or fellow citizen	423	89.9	27	5.7	21	4.4
Proximity to an American institution	378	80.3	69	14.6	24	5.1

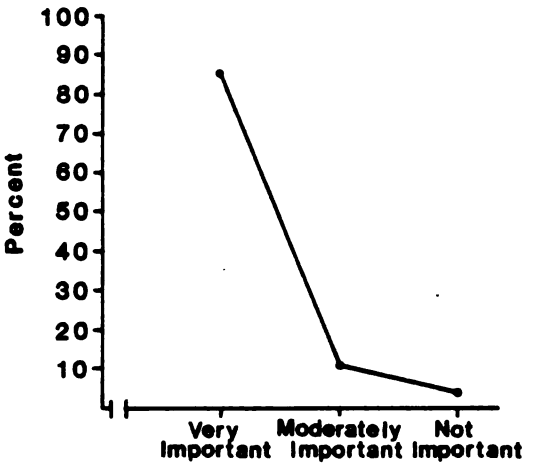
considered "very important" by 50 percent or more of the population are graphically illustrated in Figure 15. It is important to note, however, that almost every variable had some importance for the majority of the respondents, signifying that while it is possible to identify a group of variables which the majority (50+ percent) of the respondents considers very important, there is considerable diversity of response with regard to those variables which were marked as "not important" by the American population in Jeddah City. Most did not seem to attach much importance to "cost of the dwelling" or "proximity to the place of work," as would be expected of other immigrant populations elsewhere in the world. It is generally known, from most studies, that the cost of a dwelling exerts a major influence on housing choice, but only 32 percent of the Americans in Jeddah City considered that factor of some value in their decision to select a house. This may be due to their high incomes.

Additionally, "proximity to the workplace" as a key factor in the selection of the residential site is not important to most of the Americans in Jeddah City. Our data indicate that only a small portion of the Americans in Jeddah City (19.3 percent) thought that proximity to the workplace was very important in their decision regarding the location of their homes. The majority of them (58.0 percent) were not greatly concerned about the distance between home and workplace,

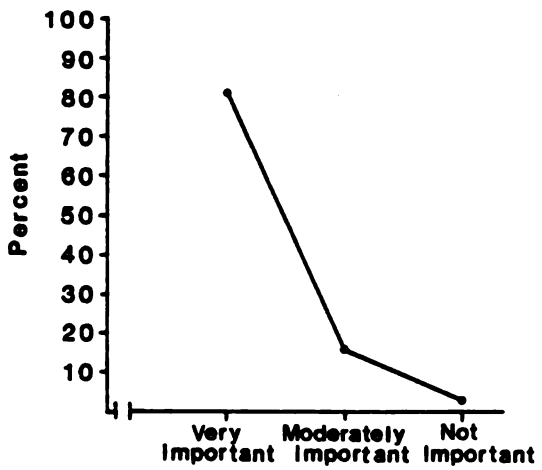
Figure (15) Factors Related to the Selection of Residential Housing Which Were Cited as "Very Important" by 50+ Percent of the Americans in Jeddah City



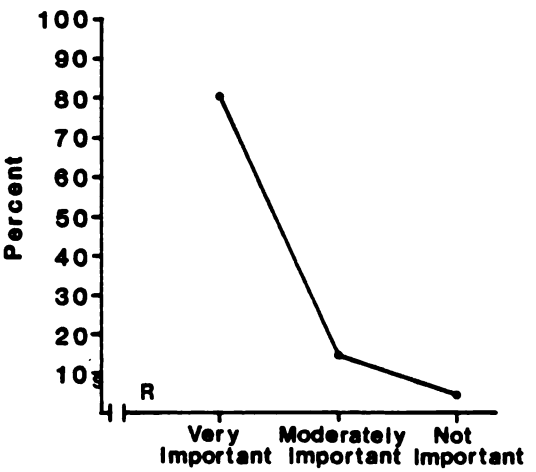
Proximity to an American Citizen



Reputation of the Area

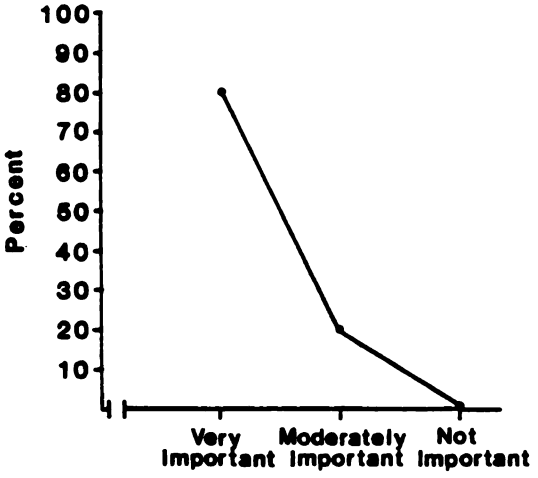


Cleanliness of the Area

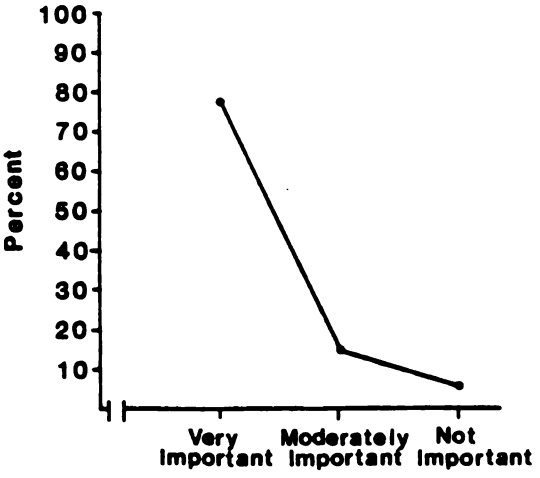


Proximity to an American Institution

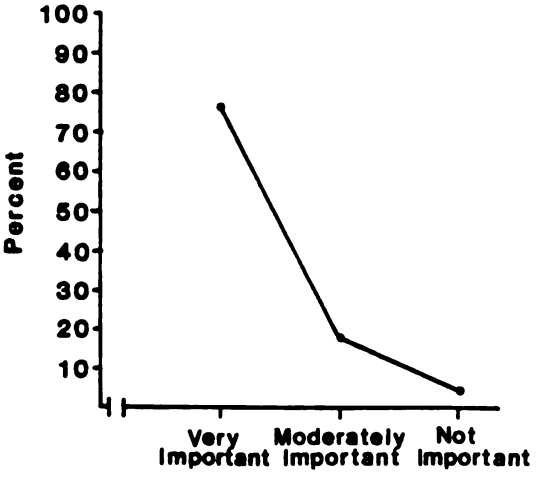
Figure (15) Continued



State of Repair of Dwelling



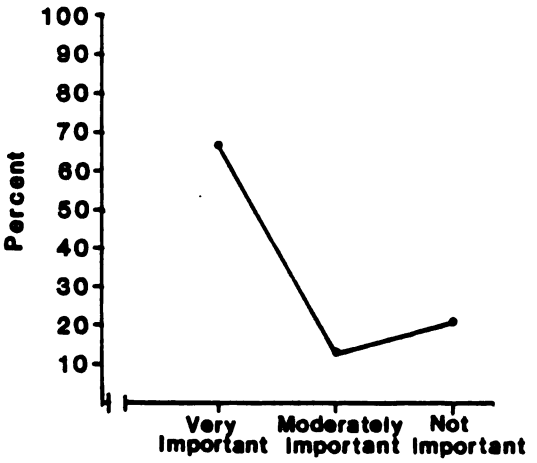
Quietness of the Area



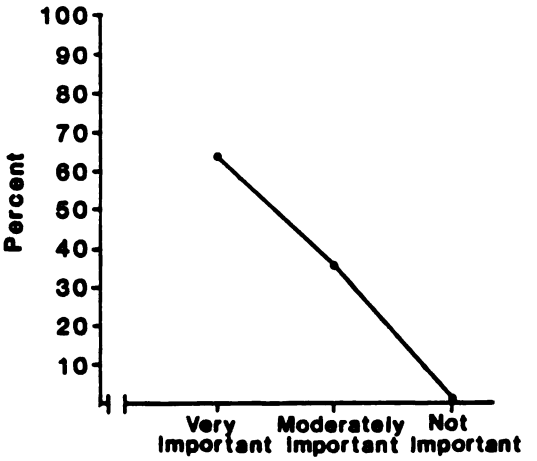
Type of People Living in the Area

Social Composition of the Area

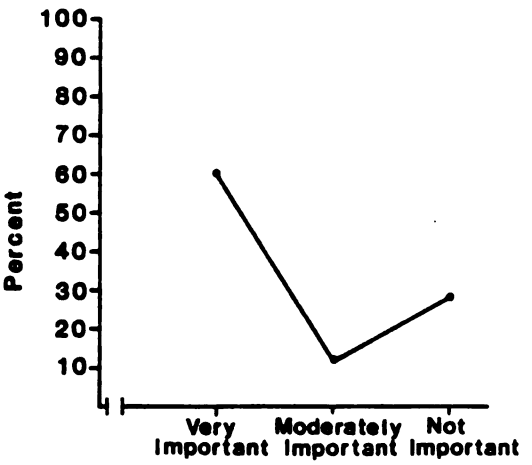
Figure (15) Continued



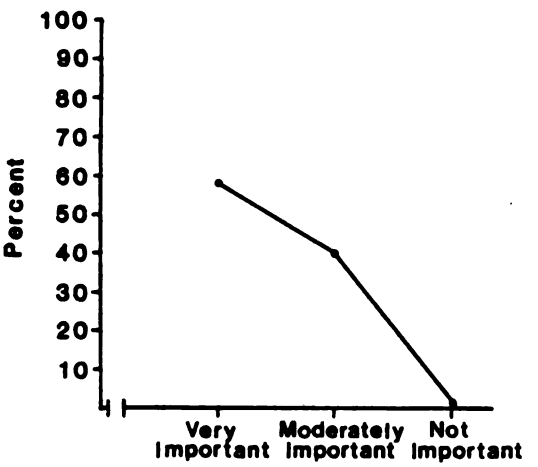
Spacing Between Houses in the Area



Not in Area With High Population Density



Proximity to Friends



Not in Old Housing Area

Low Street Traffic in the Area

an indication that this group of the population did not allow this factor to interfere with their choices of where to live. Indeed, none of these factors by itself has a causal effect on the decision-making process, and it is difficult to explain why proximity to the workplace was not an important factor for the Americans. It may be argued that the proximity to the workplace is an important factor for a large number of ethnic populations in Jeddah City, but somehow this factor figures very low in the Americans' priorities. It may be that the Americans, because of their very high paying jobs, find the cost of commuting to work immaterial. Perhaps their hours of work are so staggered that the time consumed to reach the place of work does not matter to them.

It is interesting to note, as Lansing and Barth (1964) point out, that proximity to the workplace is an important factor for lower-income groups like clerks and sales and blue-collar workers, but not to the higher income level group of professionals, to whom most Americans belong, by reason of incomes and jobs. Besides, most Americans in Jeddah City own their own transportation, and consequently, commuting to work is not a problem.

While proximity to the workplace was not viewed as very important by the majority of Americans in Jeddah City, proximity to other services and to amusement facilities was important--probably as part of the trade-off between the proximity to the workplace and the

proximity to shopping centers, medical facilities, parks, and playgrounds. Indeed, these facilities and conveniences were considered very important respectively by 41.6 percent, 40.0 percent, and 37.2 percent of the Americans in Jeddah City. Among the least important facilities cited by the Americans in Jeddah City were the proximity to schools, transportation facilities, and the city center. Only 13.8 percent considered proximity to the children's school as a very important factor in the selection of a residential site. This low response can be attributed to the fact that the young American population in Jeddah City consists of a large number of childless families, for whom proximity to a school has little significance. Also, proximity to transportation facilities and to the city center were among the least sought-after attributes for Americans in Jeddah City. Only 4.5 percent cited proximity to transportation facilities as very important, and only 18 Americans (3.8 percent) considered closeness to the city center (central business district) as a very important factor in selecting a residential site. This indicates that the majority of Americans in Jeddah City prefer to live farther from, rather than closer to, the city center. This can be partially explained by the fact that most locations in Jeddah City are easily accessed by public transportation, and the improvement in the transportation networks has made it possible for all residents of the

outlying sections of the city to enjoy the downtown life that was restricted formerly to city-center dwellers.

With regard to proximity to friends and relatives, Americans in Jeddah City are more clearly differentiated. While only 2.8 percent considered proximity to relatives to be very important, almost three-fifths (59.2 percent) took proximity to friends into account as a very important factor in their choice of houses. That is, relative to the proximity-to-relatives factor, the American population in Jeddah City shows a relatively strong preference for locating close to friends. (For a small, homogeneous population like the Americans living in a non-recreation-oriented place like Jeddah City, the selection of a residence must be influenced by opportunities to socialize with friends.) For most Americans, cultural communication with friends is an essential part of the sociological milieu. In this regard, the most often cited factor was the desirability of being in close spatial proximity to a fellow American and an American institution. Almost 90 percent considered proximity to a fellow American to be a very important factor in their choice of a residental location, followed by 80.3 percent who mentioned proximity to an American institution as a very important factor in their choice of a residential site. Such institutions as the U.S. Embassy and the American Cultural Center form nuclei of the American social and recreational life. The American

Cultural Center, for example, offers preschool programs for four-year-olds, schooling for older children (along the lines of U.S. public school education), and cultural and sporting activities for all age groups.

The desire to be close to a fellow American is motivated by the fact that the Americans in Jeddah City form a distinct group, as perceived both by themselves and by the host society. Americans find themselves in an alien socio-cultural setting with different norms, religion, and lifestyle among the host population. In this context, it is understandable that an American in the city, faced with the strangeness of a predominantly Saudi Arabian environment, should prefer to select a residence in an area inhabited by other members of his group, in order to find a semblance of the familiar lifestyle and values found in his or her social milieu and orbit. It may be conjectured that the Americans in Jeddah City consider proximity to fellow Americans to be a powerful motivation in the selection of a house because they wish to form a substratum of society and perhaps want to avoid the pains of mixing with the strange host society. In other words, it may be revelatory of a self-generated segregated way of life, reinforced by the bond of common language, religion, and social traditions.

The American population in Jeddah City seems indifferent to such attributes as "overall size of the

dwelling" and "number of rooms" in the dwelling. These attributes were cited to be of only minor importance in the selection of a residence. However, a substantial number of Americans in Jeddah City exhibit much greater concern regarding "design and outside appearance of the dwelling." Well over 42 percent cited this aspect as a very important factor in the selection of a residence. Moreover, approximately 4 out of every 5 Americans did anticipate a heavy amount of expenditures on the maintenance of the home, assigning a "very important" rating to "state of repair of the dwelling unit."

Americans in Jeddah City tend to be very much concerned with attributes that are part of the physical environment of their dwellings. While 43.1 percent of the American residents rated "low street traffic in the area" as important, a higher proportion of the American households (81.1 percent) expressed that "cleanliness of the area" was important, and 78.3 percent indicated that "quietness of the area" was a very important factor. To avoid old, high-population areas and congested housing layouts was regarded as important. More than 65 percent cited "spacing between the houses in the area" as a very important consideration in selecting a residence; well over 63 percent sought to live in an area of low population density; and 58.2 percent thought that avoiding an old housing area was a very important consideration when they went house-hunting. These findings confirm the

conclusion Peterson (1967) and Butler et al. (1969) reached, that the quality of the residential area most sought by householders is a low-density, quiet, clean environment. The findings of the present study further emphasize that the American respondents in Jeddah City show marked aversion to certain human-created physical environmental conditions, such as population and housing densities, heavy street traffic, and noise pollution. In other words, there are quite a few areas in Jeddah City, as indeed in many Saudi Arabian cities, that meet the characteristically distinctive preferences of the American population in Jeddah City.

The American population in Jeddah City is not oblivious to its immediate social needs in its residential environment, where its members are likely to spend a great part of their lives. The most important areal considerations for the Americans in Jeddah City related to the social environment of their residential location: "reputation of the area," "types of people living in the area," and "social composition of the area." These considerations form very important determinants in the minds of the Americans in Jeddah City seeking homes in an alien surrounding. The majority of them (85.1 percent) gave "reputation of the area" very high priority. Almost 77 percent gave the same rating ("very important") to "type of people living in the area," and 74.1 percent regarded "social composition of the area" as a very

important consideration in the selection of a house. These results reaffirm the widely held "like-me hypothesis" of sociologists, which asserts that people generally prefer to associate with men and women of their own socioeconomic class. People tend to actively search out their "own kind" to live with. In a well-known study examining the spatial patterns of Chicago, Duncan and Duncan (1975) came to the conclusion that people of like occupations among the highest- and lowest-status jobs strongly tended to spatially segregate themselves. This is also consistent with Johnston's (1966) study of Melbourne, which suggested that people tended to choose areas where their status could be determined from their address.

The Rank Ordering of the Factors

In an effort to ferret out the most important factors which were considered by the Americans for selecting a residential site, each respondent was asked to rank order three factors they considered most important. Such an open-ended question was designed to elicit the respondents' main order of priority which defines them at once as home-seekers and as a part of the total spectrum of considerations which enter into the selection process for most Americans in Jeddah City. Taken together, both the responses to this open-ended question and the findings obtained from the closed-ended ones should provide a comprehensive representation of the most important

considerations in Americans' selection of houses in Jeddah City. By affording each respondent a chance to rank-order three factors considered by him or her to be most important in the search process, the researcher enabled the respondent to scrutinize the answer carefully from the perspective consistent with his or her overall housing search objectives. Because of the way the open-ended question was framed and administered, it is most realistic to think of the cumulative frequency of the factors as an indication of the percentages of respondents who picked the three factors considered most important during the search process. The results of this trichotomous classification are presented in Table 14. The table shows a great deal of divergent opinion with regard to the rank ordering of the three factors considered most important in the selection process. However, there appears to be a common core of shared opinion regarding the pattern of the third rank order. Between 84.9 percent and 91.9 percent of the Americans in Jeddah City show a strong commonality of opinion with regard to the third rank order of the following factors:

1. Cleanliness of the area
2. Size of dwelling
3. a. Adequate services
   b. Closeness to shopping opportunities
4. Availability of on-street parking
5. Design of the house

TABLE 14

RANK ORDER AND CUMULATIVE FREQUENCY OF THE FACTORS INVOLVED IN THE SELECTION OF A RESIDENCE BY AMERICAN RESIDENTS OF JEDDAH CITY

Respondents' Rank Order	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
First	21.7	18.5	14.4	7.9	6.4	5.7	5.5	5.3	3.2	2.5	8.9
Second	50.8	28.0	22.0	15.1	8.9	9.3	9.5	9.5	8.1	10.8	28.0
Third	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a]Proximity to other Americans

[b]Reputation of the area

[c]Types of people living in the area

[d]Cleanliness of the area

[e]Design of the house

[f]Availability of on-street parking

[g]Proximity to shopping centers

[h]Adequate services

[i]Cost of the rent

[j]Size of the dwelling

[k]Others (Under this category 57 factors were listed, but few ranked them #1 or #2.)

6. Amount of the rent

The frequency pattern of the first rank order ranges between 2.5 and 7.9 percent for the Americans in Jeddah City who considered the previously listed factors. In all, more than one-fifth (21.7 percent) of the American population ranked "proximity to other Americans" as the first choice in the selection of the location of residence. This result indicates that the desire to be near other Americans is extremely pervasive in their decision. Most Americans in Jeddah City consider this factor to be the most important independent variable that determines their choice of residential location.

Post-Facto Evaluation of the Residential Environment

To determine the post-facto evaluation of the residential location selected, the sample population of Americans in Jeddah City was asked whether the houses they currently occupy have turned out to be "better than expected," "about as expected," or "not at all as expected." The results, tabulated in Table 15, indicate that 85.4 percent of the Americans found their current living environments to be as good as, if not better than, expected.

In order to explain the basis of the post-facto evaluation of the houses the Americans currently occupy, the respondents were asked to identify the quality of their houses by the degree of importance they attached

TABLE 15

POST-FACTO EVALUATION OF THEIR CURRENT RESIDENCES BY THE SAMPLE AMERICAN POPULATION IN JEDDAH CITY

Evaluation	Number of Respondents	Percentage of the Total
Better than expected	235	49.9
About as expected	167	35.5
Not at all as expected	69	14.6

to the attributes listed in Table 16. The tabulated results indicate that an overwhelming majority of the American respondents in Jeddah City displayed positive sentiments toward the area of their current residence. The most often cited concern was the safety and security of the area. Although the use of broken glass along the edge of the walls was observed at a few of the Americans' residences during the survey, 93 percent of them reported that they felt quite safe in the areas they had chosen. A typical response of the American resident: "There is no need for various ingenious devices for locking the door; you can sit here at night with the door unlocked."

The data tabulated in Table 16 also provide insight into the kinds of shortcomings the American residents observed in their home environments. Only a few Americans--fewer than 2 percent--found the areas unsafe, undesirable, or poorly maintained. However, as

TABLE 16

ABSOLUTE AND RELATIVE FREQUENCIES OF THE EVALUATIVE RESPONSES TO THE LISTED ATTRIBUTES OF THEIR OWN CURRENT DWELLINGS BY THE AMERICANS IN JEDDAH CITY (N = 471)

Area and Housing Attributes	Positive (I)		Negative (II)		Somewhere Between I and II	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Plan of the house	301	63.9	18	3.8	152	32.3
Services	269	57.1	97	20.6	105	22.3
Maintenance	331	70.3	9	1.9	131	27.8
Desirability of the area	379	80.4	6	1.3	86	18.3
Friendliness of the neighborhood	349	74.1	11	2.3	111	23.6
Pleasantness of the area	287	60.9	97	20.6	87	18.5
Safety of the area	438	93.0	5	1.1	28	5.9
Attractiveness of the area	241	51.2	113	24.0	117	24.8
Quietness of the area	247	52.4	186	39.5	38	8.1
Cleanliness of the area	351	74.5	103	21.9	17	3.6

many as 40 percent of the residents considered their environment noisy.

The American residents were also asked to record their perceptual response as to whether they were "very satisfied," "satisfied," or "dissatisfied" with their current living environments. The word "satisfied" was deliberately left undefined to allow the respondents to focus on their feelings and perceptions rather than on the definition of the word. The respondents were also asked to indicate whether their propensity to move was due only to their dissatisfaction with their residential environment, or to something else.

An attempt has been made in Table 17 to compare the satisfied and dissatisfied American residents to determine whether the satisfied group differed significantly from the dissatisfied in terms of age, educational level of the head of household, total family income, householder's occupation, length of residence in Jeddah City, or number of people living in the household. The data collected via the questionnaire were reduced to tabular form and converted into nominal and ordinal numbers to render them amenable to chi-square (χ^2) tests of significance.

An analysis of Table 17 shows that 338 American residents out of 471 surveyed--that is, 71.8 percent of the survey population--were satisfied or very satisfied with their current lodgings and environment. Of this

TABLE 17

ABSOLUTE AND RELATIVE FREQUENCIES OF THE SATISFIED, DISSATISFIED, MOVER, AND NON-MOVER RESPONDENTS BY AGE GROUP, LEVEL OF EDUCATION, INCOME LEVEL, OCCUPATION, LENGTH OF RESIDENCE, AND HOUSEHOLD SIZE

Independent Variables	N = 471		Dependent Variables							
			Satisfied		Dissatisfied		Movers		Non-Movers	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Age groups										
25-29 years	104	22.1	68	20.1	36	27.1	27	38.6	77	19.2
30-39 years	188	39.9	109	32.2	79	59.4	40	57.1	148	36.9
40-49 years	130	27.6	115	34.0	15	11.3	2	2.9	128	31.9
50-59 years	49	10.4	46	13.6	3	2.2	1	1.4	48	13.0
Degrees of freedom (df) = 3			χ^2 = 22.18 (p<0.01)				χ^2 = 68.99 (p<0.01)			
Levels of education										
High-school graduate	62	13.2	45	13.2	17	12.8	8	11.4	54	13.5
Technical school and some college	198	42.0	139	41.1	59	44.4	32	45.7	166	41.4
College graduate	82	17.4	60	17.8	22	16.5	10	14.3	72	17.9
Advanced or professional degree	129	27.4	94	27.8	35	26.3	20	28.6	109	27.2
Degrees of freedom (df) = 3			χ^2 = 2.11 (N.S.)				χ^2 = 6.13 (N.S.)			
Income levels										
Less than $10,000	19	4.0	14	4.1	5	3.7	3	4.3	16	4.0
$10,001-19,999	116	24.6	82	24.3	34	25.6	18	25.7	98	24.4
$20,000-29,999	137	29.1	97	28.7	40	30.1	20	28.6	117	29.2
$30,000-39,999	146	31.0	106	31.4	40	30.1	22	31.4	124	30.9
$40,000+	53	11.3	39	11.5	14	10.5	7	10.0	46	11.5
Degrees of freedom (df) = 4			χ^2 = 5.32 (N.S.)				χ^2 = 1.62 (N.S.)			

TABLE 17--continued

Independent Variables	N = 471		Dependent Variables							
			Satisfied		Dissatisfied		Movers		Non-Movers	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Type of occupation										
Technical and professional services	204	43.3	148	43.8	56	42.1	29	41.4	175	43.6
Administrative and managerial services	138	29.3	97	28.7	41	30.8	21	30.0	117	29.2
Finance and insurance services	58	12.3	41	12.1	17	12.8	10	14.3	48	12.0
Independent contractors	53	11.3	38	11.2	15	11.3	7	10.0	46	11.5
Teachers	18	3.8	14	4.1	4	3.0	3	4.3	15	3.7
Degrees of freedom (df) = 4			χ^2 = 1.43 (N.S.)				χ^2 = 5.17 (N.S.)			
Length of residence in Jeddah City										
Less than 2 years	40	8.5	23	6.8	17	12.8	19	27.1	21	5.2
2-4 years	84	17.8	49	14.5	35	26.3	18	25.7	66	16.4
5-7 years	129	27.4	87	25.7	42	31.6	22	31.4	107	26.7
8-10 years	101	21.4	76	22.5	25	18.8	6	8.6	95	23.7
10-12 years	57	12.1	45	13.3	12	9.0	3	4.3	54	13.5
13+ years	60	12.7	58	17.2	2	1.5	2	2.9	58	14.5
Degrees of freedom (df) = 5			χ^2 = 172.21 (p<0.01)				χ^2 = 99.31 (p<0.01)			
Household size										
1-2 members			100	29.6	52	39.1	33	47.1	119	29.7
3-4 members			157	46.4	68	51.1	34	48.6	191	47.6
5+ members			81	24.0	13	9.8	3	4.3	91	22.7
Degrees of freedom (df) = 2			χ^2 = 8.79 (p<0.01)				χ^2 = 11.38 (p<0.01)			

NOTES: Total respondents (N) = 471; total satisfied (S) = 338; total dissatisfied (D) = 133; total movers (M) = 70; total non-movers (NM) = 401.

percentage, a sizable proportion of American households in Jeddah City is fully satisfied with its houses and environments. In response to the question, "Are you planning to move because you feel dissatisfied with your residential housing?" 52.6 percent replied that they wanted to move, while 47.4 percent of the dissatisfied American residents, despite their expressed dissatisfaction, said they did not want to move. This finding confirms that it is natural for householders who do not attain the housing satisfaction they desire to be more likely to move. In other words, if satisfaction falls below a threshhold level, dissatisfaction will be in evidence, and the householder will declare a desire to move. The findings about intention to move because of dissatisfaction with the house and the environment are consistent with the traditional view of the moving behavior of inner-city residents. Rossi (1955, p. 178) explains that "mobility is the mechanism by which family housing is brought into adjustment to its housing need." That is, the motivation to change residence is most frequently related to changing housing needs; as Foote et al. (1960) indicate, at least 60 percent of all intra-urban moves are made to increase housing satisfaction. In this connection, Speare more recently asserted that if residential satisfaction is an "intervening variable" between the background variables and the intention to move, then it should be more strongly

related to plans to move than to any of the background variables.

As shown in Table 17, such background characteristics of the respondents as their level of education and income and their occupation show no significant difference with regard to either level of satisfaction with housing or prospects of mobility. However, a significant difference in the level of housing satisfaction was discernible among respondents with different-sized households. That is, the smaller households (with fewer than five persons living in the same dwelling) were more dissatisfied with their housing and considerably more mobile than were the larger households.

The length of residence in Jeddah City is a better explanatory variable in terms of the Americans' level of satisfaction and possibility of changing residence. Those who had lived in Jeddah City the longest --that is, more than 13 years--tended to display a high degree of satisfaction with their residences. On the other hand, those Americans who had lived in Jeddah City for fewer than two years manifested a high level of dissatisfaction and were more likely to change their residences. This suggests that the recent American arrivals in Jeddah City have failed to make residential adjustment and that the high level of dissatisfaction they display is a temporary manifestation, likely to taper off with time.

Finally, a significant difference in the level of housing satisfaction was noticed among different age groups among American residents in Jeddah City. The findings indicate that older respondents (40 and over) tended to be more satisfied with their residential housing than did the younger respondents, and among the dissatisfied older Americans the desire to move was less pronounced than among the younger dissatisfied residents. While the relationship between desire to move and dissatisfaction with one's residential environment is not altogether coincidental, the general lack of mobility displayed by the dissatisfied older Americans in Jeddah City is consistent with the theory that residential mobility declines with age. However, the findings need further investigation, as the data for the present study did not make an explicit distinction between different age cohorts--for example, between the middle- and older-aged groups.

CHAPTER V

SUMMARY AND CONCLUSIONS

Background

Prior to 1900, no estimates of Americans overseas were available. Estimates since 1900 indicate that the number of Americans residing in foreign countries has steadily increased, from a few thousand to more than two million by 1980. This increase is attributable to many factors, among which the most important are increased American political and military involvement and increased sharing of expertise in business technology with the less-developed countries of the world.

The present study and many others have established that Americans abroad represent all types of families and come from different regions of the United States. They bring with them a stock of cultural baggage and national traits which make them strange and distinct in their host countries. These cultural differences become critical if the American abroad has to deal with such foreign value systems as those embodied in, for example, the culture of the Middle East--a culture which has well-defined roles and is tradition-bound.

When living abroad, Americans (as well as members of other national groups) face the problem of how to select their housing and where to locate themselves within the territorial limits of a foreign city. Studies that have examined the problem are legion. The problems of Asians in Nairobi, Pakistanis in Dundee, Chinese and Germans in Sydney, Dutch in Auckland, Algerians in France, Italians in Bedford, Russians in Sacramento, and others have been studied. However, the studies on Americans abroad have essentially concentrated on their cultural adjustment and/or disruption owing to differences in culture and outlook. These studies confine themselves largely to a sociological perspective, and are limited in the sense that they tend to play down a geographical perspective regarding the distributional patterns arising essentially out of socio-economic and cultural causes. This investigator is not aware of any study that has examined overseas Americans' spatial distribution patterns from the geographic perspective.

It was felt that a dialogue and a more cross-disciplinary framework between geographers and other social scientists, in which each could contribute his/her unique disciplinary expertise, was needed. Continued searching in this vein will improve our theoretical and empirical understanding of overseas Americans' distributional patterns, about which very little research has

been done.

Basically, the present study has sought to accomplish three objectives: (a) to determine the current geographic distribution of the American population in Jeddah City, Saudi Arabia; (b) to identify the variables that affect the decision-making process regarding the selection of a residential site; and (c) to assess the general characteristics of the residential patterns of the American population living in an altogether alien socio-cultural environment.

Summary of Findings

The Americans in Jeddah City constitute a unique foreign-born population in Saudi Arabia. Almost to a person, this population is in Jeddah City because it has well-paying jobs. Indeed, an overwhelming majority, nearly 90 percent, are in the economically most productive 25-to-49 age group. The age group between 30 and 49, generally considered rich in education and experience, constitutes nearly 68 percent of the Americans in Jeddah City. This investigation did not find a single individual in the surveyed population who was below 25 years of age or over 59, or who had not had at least a high-school education; nearly 87 percent of the population of Americans in Jeddah City had had post-high school training, in many cases possessing college or advanced degrees.

These facts place the American population among the most professional group which, in turn, determines its income level and the kind of residential housing and area these people would seek to live in. Indeed, of the 471 Americans in Jeddah City questioned for this study, only 53 were engaged as independent contractors for their livelihood, and the rest, a sound 89 percent, were either in professional or skill-related jobs. Perhaps because of their poor knowledge of the Arabic language, there were hardly any Americans in the public-service positions.

It is interesting to note that the American population in Jeddah City comes largely from only 41 states, and strangely enough, the oil-producing states in the United States have very few citizens in Jeddah City. This is perhaps because Jeddah is located very far to the west of the majority of the Saudi Arabian oil industry.

Despite the fact that the American population in Jeddah City has the wherewithal and the facilities to locate itself in the best parts of the city, the present study did not discover pockets or areas of population that could be characterized as exclusively American in the 28 districts (out of 35 in the city) where Americans are generally located.

The highest number of American households found in any one of the 28 districts is 308, but none of the households has indicated interest in locating in any of the districts of the Old City because of the very heavy

concentration of commercial activity there. Yet some heavily commercial districts around the Old City have attracted a small population of Americans. Next to this small part of the population, a significant portion of the Americans are spread out in areas away from the city center, which is sometimes bedevilled with noise pollution. However, the highest populations of Americans in Jeddah City are concentrated in the western and northwestern sections of the city's periphery, where the houses are built in Western style, with open spaces around them; are less than five years old; and give no feeling of overcrowding or congestion.

With the help of the concentration ratio index (R), the distribution of the American population in the districts was tested for clusters of American population, but it was found that no such clusters existed at the district level. (Clusters were found to exist among the Asian and African foreign-born populations resident in the city.) This non-existence of American clusters defies the generally observed fact in the literature that ethnic populations tend to congregate in ethnic enclaves in the host country.

In order to determine the congregation patterns of the American population at a smaller, street level, a contiguity index was used to determine the total number of American households next door to other American households, or in the same building on any street of more than

twenty dwellings. At this level of analysis, it was found that the location of the American population did show patterns of ethnic clustering in the northern and northwestern sections of the city, indicating self-generating separation from the host population. But in view of the total absence of any racial tension in the city, this self-generating separation does not take the form of "ghetto"-type clustering; nor is it difficult to understand it in view of the fact that the lifestyle, religion, and language of the local population are alien to the Americans.

In order to understand the influences that generate these observed clusters, a matrix of 11 socio-economic, locational, and geographic variables, as related to the percentages of Americans in different parts of Jeddah City, was developed. In this matrix, both the negative and the positive correlations were studied for contributory as well as inhibitive effects on the percentages of Americans locating themselves in certain areas of the city.

The analysis of the matrix reveals that the "filtering" or "conversion" theory (which holds that the poor live in the central parts of a city, where houses are old and of low quality, while the rich and the well-to-do move progressively away from the central parts of the city to where the houses are comparatively new and furnished with modern amenities and conveniences)

holds true in Jeddah City with regard to the local Saudi Arabian population, and the American population.

There are areas in Jeddah City that have high status and prestige associated with them, and with regard to these areas it was found that the higher the percentage of these prestigious and high-status areas in a particular section of the city, the higher was the percentage of the Americans in that area. In fact, most Americans in Jeddah City have addresses predominantly in the upper-class areas in the northern and northwestern suburbs.

The matrix analysis further revealed that the highly educated population of Americans in Jeddah City was not necessarily living in the areas where the highly educated population of Saudi Arabians resided. In fact, there is a weak correlation between the level of education and the wealth and social class of the Saudi Arabians. This weak correlation is due to the fact that most wealthy Saudi Arabians are nonetheless illiterate or semi-literate. When the distribution of the American population was measured against the distance of its location from the city center, it was found that the greater the percentage of higher-income Americans, the greater was the distance of their houses from the heart of the city. This finding affirms the observed pattern of distribution of populations--that the farther the location of the residents from the center

of the city, the wealthier are the residents.

As expected, the analysis of the correlation between the desire of the Americans to inhabit an area and the percentages of traditional Arab-style houses showed a strong negative relationship between the two, suggesting that the Americans do not consider those areas as an option. Further, the analysis confirmed that the higher the value of the house, the higher the percentage of Americans attracted to it.

To further clarify the picture as to what factors specifically influenced the Americans in the final selection of a home, the sample population was presented with 30 well-tested attributes of housing that an average home-seeker looks for, and were asked to rate them as either very important, important, or not at all important. As a whole, the attributes received fairly heavy weights as a function of the entire sample population. However, surprisingly enough, the American population in Jeddah City did not attach much importance to the cost of the houses, proximity to the workplace and to schools for children, size of the dwelling, or the number of rooms in the house as it sought to decide where to settle.

Among the most important attributes listed as very important by the population were the proximity to fellow Americans, to American institutions, and to friends. Indeed, 90 percent of the respondent population

thought proximity to fellow Americans was important or very important, 80.3 percent said the same for proximity to an American institution, and 59.2 said proximity to friends was important or very important. The importance the population attached to these attributes while selecting a home can be explained by the fact that Saudi Arabians are culturally so different from the Western world that if the American population did not pay adequate attention to locating close to a familiar setting it would be totally at sea and isolated.

To put their priorities in order, the sample population was asked to identify three most important attributes in the order of their importance. The results revealed that between 85 and 92 percent of the American population saw great importance in cleanliness, size of the house, services available, shopping facilities and street parking nearby, design of the house, and rent --naming these as the most important third-order factors. The attribute which received a maximum rating in the first order was proximity to a fellow American citizen.

Finally, the respondents were asked to evaluate the houses they currently occupied. In this post-facto evaluation, 85.4 percent found their current dwellings either better than expected or as good as expected. The sample population was also asked to indicate its response to the dwellings in terms of whether it was very satisfied, satisfied, dissatisfied, or very

dissatisfied. Of the total sample, 71.8 percent expressed satisfaction or being very satisfied with their current dwellings. Of those who were dissatisfied, 52.6 percent intended to change their dwelling locations, while 47.4 percent did not. Further analysis of the data revealed that the longer the period of residence of an individual in Jeddah City, the less that person was inclined to move to a new place, even if the householder was dissatisfied. Those American residents who found their expectations about their current housing fulfilled attributed their satisfaction to the safety of their dwellings and a sense of security about life in their current locations.

Conclusions

In reference to the basic research questions and hypotheses posed at the outset of this study, the principal empirical findings have yielded the following conclusions:

1. In the present study, ten variables that were expected to have significant roles in explaining the spatial distribution of the American population in Jeddah City have been quantified. Correlation analysis revealed significant positive relationships between the percentage of Americans in a district and the percentage of Europeans, percentage of people with high income levels, percentage of people with high educational

attainment levels, percentage of newly constructed homes, percentage of homes with high average values, and percentage of homes with high average monthly rents. Also, the correlation analysis revealed significant negative relationships between the percentage of Americans in Jeddah's districts and percentage of dwellings with substandard conditions, percentage of traditional Arabic houses, and high population densities per hectare. The use of the step-wise multiple regression model has isolated five variables (percentage of newly constructed dwellings, percentage of houses with substandard conditions, distance from city center, level of population density, and percentage of Europeans) as a subset of predictors that best explain the spatial distribution of the Americans in Jeddah City. These five variables explained only 56 percent of the variance, however, leading us to conclude that a substantial portion of the variance is still to be explained by other variables.

2. Although variation of specific attributes in available dwellings in Jeddah City has led to considerable variation in the selection of housing locations, more Americans are found progressively away from the center of the city toward peripheral districts where houses are comparatively new and are furnished with better amenities and services. Moreover, dwelling units occupied by Americans tend to be in better structural condition than those occupied by other foreign-born

population groups, such as Yemenis and African non-Arabs, for example. The magnitude of this variation is smaller when Americans are compared with the European population of Jeddah City.

3. The attempt to explain the level of concentration of the American population in Jeddah's districts by using the Index of Concentration method, which considers the American distribution relative to the city's total population, was largely unsuccessful. However, the use of the Contiguity Index, which considers the level of agglomeration at a house-to-house and street level, was more fruitful. This analysis revealed that although the Americans were found in 80 percent of Jeddah City's districts, certain significant nucleations were apparent on the street level, indicating a clear tendency of Americans to live near compatriots in selected localities. Such a residential pattern creates isolation and decreases the likelihood that the Americans in Jeddah City will come into much social contact with the indigenous population. Americans' predilection to live in close physical proximity to one another is understandable, since they are faced with the strangeness of a predominantly Arab city.

4. Most American household heads are centripetal to residential areas where most other Americans live. This emphasis was supported by the fact that "proximity

to an American or fellow citizen" was quoted as a predominant reason for the selection of a particular location by 89.9 percent of the sample. Although the desire for certain housing objectives is unique to each American individual in Jeddah City, the Americans show certain consistencies in their overtly expressed choice of what factors seem very important to them in their selection of housing.

5. Americans in Jeddah City do not seem to hold "cost of dwelling" and "proximity to workplace" as major determinants of where to live in that city. That is, cost of dwelling was found to be of no importance in establishing residential choice, and Americans did not allow proximity to place of work to significantly influence the choice of residential location. They care more for social graces, as it were, than for any other factors in the choice of a residential site.

6. Though the design of the present study did not allow a comparison of the Americans with other foreign population groups in Jeddah City, it would seem possible to conclude that the level of satisfaction on the part of the Americans with their residential housing was fairly high. With 72 percent of them indicating a positive sentiment toward their residential housing, it would be difficult to conceive of another group being significantly more satisfied with its housing.

7. The level of satisfaction with regard to

residential housing was found to be somewhat variable, depending on the respondent's age, size of household, and length of stay in Jeddah City. Young householders and heads of small families tended to be dissatisfied with their current dwellings more often than did older American residents, but few of the dissatisfied residents showed an inclination to actually move.

Avenues for Further Research

The bibliography at the end of this dissertation indicates that very few studies of the American population living abroad have been made. This fact itself should suggest that research in this area has received very poor attention from scholars. Studies of American populations abroad in similar or unrelated areas can help clarify and expand such geographic concepts as spatial concentration or dispersion, mobility and spatial interaction, residential isolation and propinquity. Studies can attempt to answer such questions as: Are there different distributional patterns of the American populations in Jeddah City; in Peking; and in Sa-na, North Yemen, for example? Why in western Saudi Arabia does only Jeddah City have a sizable American population?--Why aren't Americans found in comparable numbers in cities located in the northern, southern, and central provinces of Saudi Arabia, in cities like Tabuk, Abha, or Riyadh, the capital? What are the reasons for the American

population of Jeddah City to be larger than that of Peking but smaller than that of Sydney, Australia--or within the Middle East itself, of Cairo, Kuwait City, or Beirut? Are these differences related to the "nature" of these cities or areas in terms of what the expatriots believe they have to offer?

A full-fledged comparative study of American versus European populations, and of Americans and Europeans versus the non-Western populations of Jeddah City, can provide valuable insights to urban planners, political scientists, and economists.

Other studies can relate to the factors--economic, political, and social--that attract the American population to Saudi Arabia for long stays. Research of this type can address questions like: What professions of Americans are most attracted to Saudi Arabia? What racial, ethnic, or religious groups of U.S. citizens want to make a living in the Arabian Peninsula? What makes an American population's stay in such a morally and culturally different milieu bearable? How does the indigenous population view the Americans in its midst?

The above-listed questions illustrate the kind of thinking that a comparative approach stimulates. Likewise, if we are to continue studying the overseas American population in different parts of the world, we should include as part of the research design a set of

questions about the reasons for the presence of this population group in a particular city, the factors which keep it there, the views that overseas Americans hold of the city they live in vs. any other comparable city, and perhaps the views that the indigenous population holds of the Americans. Moreover, considerable attention should be paid to evaluating to what degree different and changing urban environments are either beneficial, harmful, or neutral toward overseas Americans, and how they cope with each. Focus should be placed on the relative merits of varied "less-developed" and "developed" urban settings. Related to this issue is the need for research on how overseas Americans appraise or perceive various aspects of their milieu; this has obvious implications for understanding their coping processes.

Such studies cannot be accomplished within the narrow bounds of a single discipline. Studies of the nature this investigator has recommended would require the interdisciplinary resources of more than one social science. Indeed, it is scarcely conceivable that this can be achieved without a more unified perspective from among different social sciences.

Finally, a very fruitful study can be undertaken to determine why certain racial groups, like blacks and Hispanics, are poorly represented in the American population in Jeddah City. Is disproportionate representation due to some kind of color prejudice, or to other causes

related, perhaps, to the categories of jobs available in Saudi Arabia? Is the racial discrimination that marks the population distribution in the United States discernible even in an alien setting?

This study, it is hoped, will give rise to other valuable research investigations into the geographic distribution of alien populations in unfamiliar settings.

APPENDICES

APPENDIX A

AMERICAN POPULATION RESIDING IN FOREIGN COUNTRIES: A WORLDWIDE DISTRIBUTION

APPENDIX A

AMERICAN POPULATION RESIDING IN FOREIGN COUNTRIES:
A WORLDWIDE DISTRIBUTION

Countries (U.S. Government Agencies Dependent Areas)	(a)	(b)	American Residents	Total
Afghanistan	55	89	99	243
Algeria	24	38	4100	4162
Angola	-	-	-	-
Argentina	88	144	7575	7807
Australia	108	1168	45600	46876
Austria	131	257	10800	11188
Bahamas	76	318	6310	6704
Bahrain	23	69	1000	1092
Bangladesh	66	95	807	968
Barbados	160	162	2980	3302
Belgium	459	4600	32800	37859
Belize	87	3	1200	1290
Benin	17	2	79	98
Bermuda	288	1185	5000	6473
Bolivia	81	170	1850	2101
Botswana	143	62	311	516
Brazil	220	366	40375	40961
Bulgaria	17	33	85	135
Burma	43	60	23	126
Burundi	15	11	94	120

APPENDIX A--continued

Countries (U.S. Government Agencies Dependent Areas)	(a)	(b)	American Residents	Total
Cameroon	184	4	583	771
Canada	318	1598	253380	257296
Cape Verde, Republic of	6	1	70	77
Central Africa Republic	82	9	211	302
Chad	18	4	25	47
Chile	175	183	4297	4655
China, People's Republic of	42	49	400	491
Colombia	263	305	16784	17352
Congo, People's Republic of	8	4	15	27
Costa Rica	202	110	14110	14422
Cuba (Guantanamo)	207	2460	700	3367
Cuprus	39	50	655	744
Czechoslovakia	31	40	620	691
Denmark	47	110	5200	5357
Djibouti	13	6	-	19
Dominican Republic	151	190	20000	20341
Ecuador	149	302	5000	5451
Egypt	193	371	4764	5328
El Salvador	166	95	2800	3061
Ethiopia	38	33	290	361
Fiji Islands--Australia	183	31	191	405
Finland	28	70	1120	1218

APPENDIX A--continued

Countries (U.S. Government Agencies Dependent Areas)	(a)	(b)	American Residents	Total
France	340	585	32315	33240
French West Indies	4	-	300	304
Gabon	51	15	140	206
Gambia	32	7	46	85
Germany	18938	223027	78827	320792
Ghana	273	95	1300	1660
Greece	310	4377	49438	54125
Guatemala	244	187	10050	10481
Guinea	15	7	9	31
Guyana	35	27	500	562
Haiti	121	189	4100	4410
Honduras	266	149	5000	5415
Hong Kong	99	192	6410	6701
Hungary	22	35	1685	1742
Iceland	104	2178	343	2625
India	186	341	2693	3220
Indonesia	192	385	6715	7292
Iran[c]	150	81	27210	27441
Iraq	11	6	700	717
Ireland	15	54	15463	15532
Israel	110	209	62140	62459
Italy	1074	16294	92671	110039

APPENDIX A--continued

Countries (U.S. Government Agencies Dependent Areas)	(a)	(b)	American Residents	Total
Ivory Coast	167	162	876	1205
Jamaica	100	114	9000	9214
Japan	2800	37104	22444	62348
Jordan	62	143	2000	2205
Kenya	347	222	5000	5569
Khmer Republic (Cambodia)	-	-	-	-
Korea	1527	14978	6200	22705
Kuwait	43	98	2500	2641
Laos	6	8	7	21
Lebanon	45	13	2300	2358
Lesotho	145	22	323	490
Liberia	376	346	4100	4822
Libya	10	15	2198	2223
Luxembourg	32	39	925	996
Madagascar	13	12	172	197
Malawi	32	28	580	640
Malaysia	259	91	2890	3240
Mali	112	49	337	498
Malta	9	13	1300	1322
Mauritania	51	-	3	54
Maritius	16	13	37	66
Mexico	443	749	207187	208379
Morocco	92	206	1148	1446

APPENDIX A--continued

Countries (U.S. Government Agencies Dependent Areas)	(a)	(b)	American Residents	Total
Mozambique	11	18	45	74
Nepal	189	52	346	587
Netherlands	334	3445	10250	14029
Netherland Antilles	4	2	1600	1606
New Zealand	45	266	7600	7911
Nicaragua	-	-	-	-
Niger	188	62	158	408
Nigeria	89	115	6150	6354
Norway	49	517	14500	15066
Oman	48	29	265	342
Pakistan	109	271	854	1234
Panama	204	1818	7000	9022
Papua New Guinea	-	-	-	-
Paraguay	208	95	1274	1577
Peru	123	246	11010	11379
Philippines	1586	22541	59500	83627
Poland	55	94	7350	7499
Portugal	199	2233	6980	9412
Portuguese Azores	20	6	1388	1414
Qatar	6	9	250	265
Romania	35	48	550	633
Rwanda	19	18	113	150

APPENDIX A--continued

Countries (U.S. Government Agencies Dependent Areas)	(a)	(b)	American Residents	Total
Saudi Arabia	1063	1170	29394	31627
Senegal	180	89	301	570
Sierra Leone	254	25	435	714
Singapore	51	108	6500	6659
Somali Republic	26	30	100	156
South Africa, Republic of	76	149	9109	9334
Soviet Union	143	246	1492	1881
Spain	848	14185	37300	52363
Sri Lanka (Ceylon)	50	43	302	395
Sudan	48	61	550	659
Surinam	6	7	425	438
Swaziland	132	32	460	624
Sewden	46	80	6132	6258
Switzerland	121	203	20080	20404
Syria	57	82	600	739
Tanzania	43	63	1002	1108
Thailand	635	665	3017	4317
Togo	135	38	185	358
Trinidad and Tobago	20	37	2393	2440
Tunisia	65	142	556	763
Turkey	297	4326	1847	6470
Uganda	-	-	-	-

APPENDIX A--continued

Countries (U.S. Government Agencies Dependent Areas)	(a)	(b)	American Residents	Total
United Arab Emirates	19	27	2300	2346
United Kingdom	1440	32586	102350	136376
Upper Volta	152	47	123	322
Uruguay	44	108	1059	1211
Venezuela	74	198	23000	23272
Vietnam	-	-	-	-
Yemen Arab Republic	146	67	2240	2453
Yugoslavia	67	108	2197	2372
Zaire	172	241	1832	2245
Zambia	21	30	867	918
Other: Undistributed	-	352	-	352
TOTALS	43875	405142	1559246	2008263

[a]Employees, excluding military personnel

[b]Dependents, including military and civilian personnel's dependents

[c]The information for Iran is dates Dec. 31, 1978.

SOURCE: Douglas R. Casey, International Investing (New York: Everest House, 1981), p. 5.

APPENDIX B

SURVEY QUESTIONNAIRE WITH COVER LETTER

بسم الله الرحمن الرحيم

KINGDOM OF SAUDI ARABIA
Ministry of Higher Education
KING ABDULAZIZ UNIVERSITY
Faculty of Arts and Humanities

المملكة العربية السعودية
وزارة التعليم العالي
جامعة الملك عبد العزيز
كلية الآداب والعلوم الإنسانية

Ref. M 5130/188
Date Dec. 22 1982

الرقم م ٥١٣٠/١٨٨
التاريخ ٦/٣/١٤٠٣

Dear Resident:

I want to learn more about the way people like yourself choose their residential housing. You have been selected from a list of American people who have chosen their residence within Jeddah City. I would greatly appreciate it if you would take a few minutes to answer a few questions about how you selected your present house or apartment. Your responses will remain anonymous and will be treated with utmost confidentiality.

Given the great number of possible housing choices available in the Jeddah area, the questions largely focus on what you wanted in a house, how you chose your present residence, and how well you like your present home and residential area now.

Most questions can be answered without much effort, as your personal response. I would be grateful for your answering each question, and your cooperation in this regard would be greatly appreciated.

I thank you in advance for your help.

Sincerely,

Asaad M. Atiyah

Asaad M. Atiyah
Doctorate candidate
Michigan State University

ص.ب ١٥٤٠ جدة برقياً جامعة عبدالعزيز تلكس ٤٠١١٤١ كاوني ☎ ٦٨٧٩٢٠٢/٦٨٧٩٤٠٤ ☎ 6879202 6879404
P.O. Box 1540 Jeddah Cable Jameatabdulaziz Telex 401141 Kauni SJ داخلي : عميد ١٢٩٠ وكيل ١٢٩١ سكرتارية ١٢٠٨

RESIDENTIAL PATTERNS AND THE SELECTION OF RESIDENTIAL HOUSING: THE CASE OF THE AMERICAN POPULATION IN JEDDAH CITY, SAUDI ARABIA

Questionnaire

Sample Number ☐☐☐
District Number ☐☐

Please give your answers to the following questions by writing in the appropriate space or by marking an "×" in the boxes as indicated.

Each of the following 30 questions contains a "factor" that people consider when selecting residential housing. For each question, please check in the appropriate box to show how important each factor was for you.

Very Important means that you gave a great deal of thought to the factor.

Moderately Important means that you may have considered the factor.

Not Important means you did not think about the factor at all.

1. Overall size of dwelling

very important ☐ moderately important ☐

not important ☐

2. Number of rooms

very important ☐ moderately important ☐

not important ☐

3. Design and outside appearance of dwelling

very important ☐ moderately important ☐

not important ☐

4. State of repair of the dwelling

very important ☐ moderately important ☐

not important ☐

5. Age of dwelling

very important ☐ moderately important ☐

not important ☐

6. Costs of dwelling

very important ☐ moderately important ☐

not important ☐

7. Type of people living in the area

very important ☐ moderately important ☐

not important ☐

8. Social composition of the area

very important ☐ moderately important ☐

not important ☐

9. Reputation of the area

very important ☐ moderately important ☐

not important ☐

10. Not in old housing area

very important ☐ moderately important ☐

not important ☐

11. Not in high population density area

very important ☐ moderately important ☐

not important ☐

12. Quality of children's school in the area

very important ☐ moderately important ☐

not important ☐

13. Quietness of the area

very important ☐ moderately important ☐

not important ☐

14. Cleanliness of the area

very important ☐ moderately important ☐

not important ☐

15. Low street traffic in the area

very important ☐ moderately important ☐

not important ☐

16. Low crime rate in the area

very important ☐ moderately important ☐

not important ☐

17. Privacy from people in the area

very important ☐ moderately important ☐

not important ☐

18. Spacing between houses in the area

very important ☐ moderately important ☐

not important ☐

19. Availability of city services in the area

very important ☐ moderately important ☐

not important ☐

20. Proximity to workplace

very important ☐ moderately important ☐

not important ☐

21. Proximity to children's school

very important ☐ moderately important ☐

not important ☐

22. Proximity to medical facilities

very important ☐ moderately important ☐

not important ☐

23. Proximity to parks and playground

very important ☐ moderately important ☐

not important ☐

24. Proximity to transportation facilities

very important ☐ moderately important ☐

not important ☐

25. Proximity to city center

very important ☐ moderately important ☐

not important ☐

26. Proximity to shopping opportunities

very important ☐ moderately important ☐

not important ☐

27. Proximity to friends

very important ☐ moderately important ☐

not important ☐

28. Proximity to relatives

very important ☐ moderately important ☐

not important ☐

29. Proximity to an American household or fellow citizen

very important ☐ moderately important ☐

not important ☐

30. Proximity to an American social institution

very important ☐ moderately important ☐

not important ☐

31. Now, after you have seen these numerous factors, please rank in order the three most important factors that affected your decision to select your present residence.

First_____

Second_____

Third_____

32. Compared with what you wanted before you selected your present residence, how would you say the selection of your current dwelling has worked out?

Better than expected ☐

About as expected ☐

Not at all as expected ☐

33. Here are some descriptions which I would like to use to describe your residential area as it seems to you. By residential area I mean just what you can see from your house or yard; that is, the nearest ten or so homes to yours.

Residential Area

well planned ☐	poorly planned ☐	somewhere in between ☐
good services ☐	poor services ☐	somewhere in between ☐
well kept up ☐	poorly kept up ☐	somewhere in between ☐
desirable ☐	undesirable ☐	somewhere in between ☐
friendly people ☐	unfriendly people ☐	somewhere in between ☐
pleasant ☐	unpleasant ☐	somewhere in between ☐
safe ☐	unsafe ☐	somewhere in between ☐
attractive ☐	unattractive ☐	somewhere in between ☐
quiet ☐	noisy ☐	somewhere in between ☐
clean ☐	unclean ☐	somewhere in between ☐

34. How satisfied are you with your present residence?

very satisfied ☐

satisfied ☐

dissatisfied ☐

very dissatisfied ☐

35. If dissatisfied, please describe the specific unsatisfactory features of your residence.

_____

_____

_____

_____

36. Are you planning to move from your present residence only because you feel dissatisfied with its features?

yes ☐ no ☐

37. How many vacancies have you seriously searched before you finally chose your present residence? _____

38. How long did it take you to do such search? _____

39. How long have you lived in your present residence?

years_____ months_____

40. How long have you lived in Jeddah City?

years_____ months_____

41. What was the place of your last residence in the United States? Please give name of state_____

42. How many persons live at this address? (Do not include visitors)_____

43. What is your age?_____

44. What is your occupation?_____

45. How much education have you completed?

didn't complete high school ___

high school graduate ___

technical school or some college experience ___

college graduate ___

advanced or professional degree ___

46. Please indicate which letter--A, B, C, D, or E--best describes your annual household income?

A. Less than $10,000

B. $10,000 - $19,999

C. $20,000 - $29,999

D. $30,000 - $39,999

E. $40,000+

Thank you very much for answering these questions.

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