

# Neighborhood Heterogeneity or Homogeneity

The field of Man-environment studies<sup>1</sup>

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## Summary

This paper is in two parts. The first briefly describes and summarizes the field of Man-environment studies. The second applies an approach typical of this field to the specific example of urban neighborhoods. Man-environment research has two major impacts on the understanding of neighborhoods: their subjective definition and the role of perceived homogeneity. This paper concentrates on the latter. Three principal points are discussed: the advantages and disadvantages of homogeneity as contrasted to heterogeneity, the scale of homogeneous areas, and the impact of homogeneity on social interaction.

## Résumé

L'article se présente en deux parties. Dans la première partie, le domaine d'étude des relations entre l'homme et l'environnement est brièvement décrit. Dans la deuxième partie une approche typique à ce domaine est appliquée à l'exemple spécifique de quartiers urbains. Les résultats des travaux du domaine des relations entre l'homme et l'environnement ont eu deux impacts majeurs sur le concept de quartier: l'importance de la définition subjective de ce que c'est un quartier et le rôle de l'homogénéité perçue d'un quartier. Cet article se limite à prendre en considération ce deuxième aspect. Trois points principaux font objet de la discussion: les avantages et les désavantages de l'homogénéité par opposition à l'hétérogénéité, l'échelle de quartiers homogènes et l'impact de l'homogénéité ou de l'hétérogénéité sur l'interaction sociale.

## 1. Introduction

The purpose of this paper is to communicate the principal argument in a brief and succinct form by briefly summarizing some of the central themes. It will be impossible to give exhaustive references to the evidence supporting the importance attached to heterogeneity by planners

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(Sarkissian, 1976) and for the prevalence of socially homogeneous groupings in urban areas since it is both very large and diverse. (e.g. Rapoport, 1977; Evans, 1976; Herbert and Johnston, 1976; Guttentag, 1970).

This task will be approached under two headings. In the first part the nature of Man-environment studies will be briefly described. In the second part an approach typical of the field will be applied to the example of urban neighborhoods. This application will also be brief and simplified, particularly since it will only deal with one aspect of the material known as perceived homogeneity. The second major way in which Man-environment research has influenced the way one looks at neighborhoods (the fact that they are subjectively defined) will be neglected although that separation is artificial and can only be made for analytical convenience, particularly since neighborhoods are both social and spatial entities. One more preliminary note is in order. This paper deals with urban design rather than planning. While the distinction is not always clear-cut, generally urban design is more concerned with the nature of the built environment than planning is although, as we shall see, the built environment is always more than purely physical. The distinction between planning and urban design is also one of scale and the discussion will be about the neighborhood scale rather than the city : while we can no longer design the city as a whole we can still design neighborhoods.

## 2. What is Man-Environment Studies ?

In the last 10-12 years there have been two principal new developments in design. One is design methodology, the other Man-environment studies. Both developed as a response to a set of felt needs having to do with dissatisfaction with the way design was being done and with its relative ineffectiveness. Whereas design methodology concentrated on the way information was structured and how designers processed it, Man-environment studies approached the question of what kind of information should be used in design. The basic premise which was associated with this field was that since design is for people, then to design properly one needed to know about human behavior in the broadest sense. Thus, almost by definition, the field is interdisciplinary : it exists at the point of intersection or overlap of a number of fields. At the same time it also tends to be very research oriented : in designing for people, its approach is to endeavour to discover how people behave, their desires, needs and preferences rather than guessing or making arbitrary assumptions.

Since it began, the field has grown fast. There are now several professional organizations, many conferences, journals of which the present one is an example and an explosive growth in the rate of publication : generally all the signs of a maturing field. The most significant thing about Man-Environment studies other than its interdisciplinary nature and research orientation is its way of looking at things. There is a tendency to see design as a type of hypothesis of the form : if so and so is done, such and such will happen. This implies that, firstly, goals must be explicitly

stated, secondly, that predictions must be evaluated and, thirdly, that knowledge must be cumulative if design is to improve, *i.e.* one must learn from one's successes and failures.

In setting goals and formulating design hypothesis one needs to understand how the human mind works, the role of perception, cognition, preference, meaning and symbolism; one needs to consider the role of culture in man-environment interaction, *e.g.* differences in preferences and standard (*e.g.* Rapoport and Watson, 1972; Rapoport, 1977) so that, in an urban context, for example, it is far from clear what a "slum" is and hence what an "improvement" might be. In the process of "modernisation" in the Third World it is necessary to consider the meaning of elements in the environment, the role of images in this process and even the nature of this process itself (*e.g.* Rapoport, 1979). To give another example, it is far from simple to define what a dwelling is in a given culture in a way to allow for valid cross-cultural comparisons, *i.e.* this apparently simple concept can be seen to be fairly complex. Even more complex are questions such as what makes a good dwelling for particular groups — an example of the more general issue of the variable which go into the subjective definition of environmental quality.

This brings up an important issue. Planners and designers can be seen as constituting a subculture, with a particular set of values and objectives which may be different to, and at odd with, those of particular groups who are the users of environments; these users themselves are also variable. While there are differences between needs and wants, so that users do not always "know best", or at least cannot always articulate what they know, it is also clear that there are different notions of environmental quality among different groups and also that real needs may be variable. It is also clear from research that when one works with desires and wants, small design elements can have major effects in predicted directions, whereas if one works against known human desires and behavior tendencies, even major design elements will not work at all, or will not work in predicted ways. It is thus important to establish what should be done if environments are to have desired effects. If the goal is always to have "better" design for people, then we need to know what "better" is.

Clearly a field as large and complex as this cannot be summarized in a few pages. But, it can be argued that any specific question about man-environment interaction can be seen as falling into one of three general questions (or, more usually, a combination of these):

(1) What *characteristics of people*, as individuals, as members of groups or members of the human species are important in understanding environments and in designing them?

(2) What are the *effects of the physical environment* on people and how important are these effects?

(3) Given that there is a *mutual interaction* of people and environments, what are the principal mechanisms linking them?

The second question, dealing with the effects of environments on

people is the central and critical question for designers : if there are no effects, or they are minor — then major efforts in design are unnecessary; if, however, the effects are major and significant, then a strong rationale exists for improving design effectiveness. Unfortunately this question is also a very difficult one. One difficulty is that it is often stated wrongly, almost as though people were placed in environments which then act on them. In fact, in most cases people select environments by matching the perceived qualities of those against images (which are both culturally and personally variable). Habitat selection is the major effect of environment on people; blocked habitat selection is often a major environmental problem (Rapoport 1977).

Also difficult is the degree of influence of environments on people. In general, one can identify three positions : environmental determinism, the view that environments determine human behavior, well-being and happiness (this is still fairly strong in the design professions); an anti-determinist position which argues for minimal effects, and a third position, currently dominant, that there are important, but not determining, effects, and that these effects have to do with environments being either supportive and facilitating or inhibiting. Furthermore, it can be suggested that while positive determining effects are rare, environments can be negatively determining by blocking behavior, particularly in situations of high criticality, *i.e.* situations where people, for various reasons, such as reduced competence, environmental press, rapid change and so on, are unable to cope with the extra demands and stress of overcoming inhibiting effects (Rapoport 1977, 1978 (a), 1978 (b)).

A distinction also needs to be made between “direct” and “indirect” effects of environments on people. The former are those where the settings in which people find themselves exert direct effects on them and their mood. The latter are those where environments communicate certain meanings and cues which are used to define the social situation and it is the latter which influences behavior. In this connection, then, the environment can be seen as a form of non-verbal communication providing cues for behavior. These cues need to be noticed, they need to be understood (or “read”) and one must be prepared to obey them. The latter is not a function of design (although it may be a function of planning in the sense of matching cues to people who are prepared to obey them and also matching cues to acceptable and appropriate rules for behavior). On the other hand, the ability of cues to be noticed and their legibility are design matters and are intimately related to both perception and culture : basically such cues only work when they are sufficiently strong and redundant to be noticed and are culturally appropriate, *i.e.* they occur within cultural contexts where the cues can be decoded and they are congruent with people’s unwritten rules (Rapoport 1977; 1978 (c)).

The ideas of facilitating or inhibiting environments and of indirect effects via cues and meanings come together in the notion of the behavior setting, where the physical setting, the cues and the ongoing behavior are all congruent. Behavior, which is a system of activities, occurs in *systems*

*of settings, i.e.* one needs to consider activity systems in space and time. At the same time, an important point needs to be made about activities which include both manifest and latent aspects. Activities in general, and particularly their latent aspects, tend to be culturally variable. More specifically, any activity can be understood as comprising: the activity itself, how it is done, any associated activities and the symbolic meaning of the activity. The latter ones tend to be more variable and also to comprise the more latent aspects of the activity. Consider two examples at the urban scale. At its most manifest, shopping comprises the exchange of goods for other goods, either directly or via the medium of money. The specific way of shopping may vary, supermarket or bazaar, greatly influencing many things and being differentially acceptable. The total activity system will be affected by the associated activities whether they are talking, bargaining, eating, socializing, getting messages to people, finding out what goes on, arranging marriages or whatever. Finally, the symbolic meaning of shopping may be display, conspicuous consumption, shopping as recreation or a way for women to get out of the house. An understanding of all these aspects is necessary in order to properly plan and design for it. In the case of recreation, a similar analysis may lead to the realisation that one needs to consider settings such as streets rather than, or in addition to, parks; in the case of parks one may realise that the latent function is to raise the status and character of an area so that parks may be doing their job even when they are not "used" in the manifest or instrumental sense of people playing games, or lying in the grass; their very presence may be sufficient (cf. Rapoport, 1977).

Conflicts may often arise when two groups attach different meaning to activities and have different rules about where they should happen, when and who should be included or excluded *i.e.* what is appropriate where and when. Thus there are conflicts about the use of streets for certain activities which other groups believe should occur in buildings or courtyards, there may be conflicts about activities appropriate to front or back areas, there may be conflicts about activities appropriate at particular times or involving particular people. The basic question is: who does what, where, when, in what context and including or excluding whom?

In all these cases we are dealing with the congruence of subjectively defined activities and behaviors, rules, etc. and settings for these: both the definition and the congruence are culturally variable. Here, once again, we see the coming together of notions such as the setting, the rules for behavior in it, the cues which indicate this behavior, etc. — we are dealing with the meaning of settings, the legibility of cues, and the appropriateness of the rules.

In fact, one can suggest that the design of the environment involves the organization of four variables: space, time, meaning and communication and that the organization of all four needs to be congruent for the environment to work for given people. We can further suggest that these variables are organized differently by different cultures on the basis of varying schemata and that the conflicts referred to above occur when the

schemata of different groups differ and are incongruent. Thus, to return to the question of how a "slum" is defined, it is often found that behavior occurring in a front region, considered as appropriate only to a back region, will lead to the area being interpreted as a "slum". This may also happen on the basis of certain levels of maintenance, certain forms of planting, the use of certain materials or the presence or absence of certain cues (e.g. Rapoport, 1977; Royse, 1969; Sauer, 1972). In all these cases the definition is extremely subjective and variable and it is difficult to give objectively valid criteria for such definitions.

One final general point. Such systems of settings (organizations of space, time, meaning and communication) do not only support activity systems but they support lifestyles typical of cultures (of which activities are just one, although important, element). Lifestyles can be understood as the outcome of a series of choices among alternative use of resources (time, money, energy, materials, etc.) based on culturally differing priorities (e.g. Michelson and Reed, 1970). Design can also be seen as particular designs (and *styles*) reflect particular sets of priorities, hence the choices made through the inclusion and exclusion of various alternatives (Rapoport, 1976; 1977). It is through this process that particular settings acquire particular environmental qualities seen as desirable or undesirable, or as supportive or inhibiting to particular activities, lifestyles and cultures.

Neighborhoods are one particular type of setting or, more correctly, one particular organization of a *system of settings*. Thus, the above discussion is highly relevant to the topic of neighborhood design.

### 3. Urban neighborhoods

All planners and designers are familiar with the arguments in the literature about whether neighborhoods exist in modern cities or not, how important they are if they do exist and, hence, what design and planning decisions need to be made.

In terms of a man-environment approach this is a non-argument on the basis of several points. At the very least, the following points can be made :

(1) It is not a question of whether neighborhoods exist or not. More frequently it is a matter of neighborhoods existing for some purposes and not for others. Just because neighborhoods no longer constitute the setting for *all* of life does not mean that they cannot be important for certain activities and aspects of life.

(2) Due to habitat selection, in terms of matching desired forms of neighborhood against ideals and images, different groups finish up living in different neighborhoods with different characteristics. Hence the existence of areas of different character both continues and is important.

(3) The concept of neighborhood has differential importance for different groups and populations depending on culture, context, age or sex,

lifestyle (e.g. localites vs. cosmopolites), the social system, etc. In other words the salience of neighborhood varies with the group in question.

(4) Also, a neighborhood does not necessarily have to be seen as the setting for all of life or even only for important parts of it. Since cities, and metropolitan areas, are becoming larger, people can neither know nor use the whole urban area. Such urban areas thus become non-uniform and the neighborhood becomes an area intermediate between the dwelling and the whole city, which is better known, with which one has more identification (however minimal) than the larger, unknown area : it becomes a figure against the ground of the city. In this sense it is a cognitive construct.

This latter point is of great importance and, possibly, the major innovation of the new approach to neighborhoods introduced by Man-environment studies. Neighborhood as a cognitive construct is *subjectively defined* and the major question is, then, how this occurs and how it coincides with what planners and designers do. It appears that the subjective cognitive definition is a socio-spatial schema, *i.e.* a combination of social and spatial factors; that it is a matter of size rather than population, that it is significantly smaller than the traditional planners' neighborhood unit. It also appears that in order for maximum agreement about its extent there needs to be maximum redundancy of cues, so that the physical characteristics, social characteristics, boundaries and so on, all coincide and agree. Under those conditions the maximum number of people will agree although this definition will still be probabilistic rather than absolute (Rapoport, 1977). Given this extremely brief discussion of the subjective definition of neighborhood one can turn to the topic of homogeneity in neighborhoods and ask three questions :

- (1) Should neighborhoods be homogeneous or heterogeneous and what do these concepts mean?
- (2) What should be the scale of homogeneous or heterogeneous units, *i.e.* the social "grain"?
- (3) Are homogeneous or heterogeneous neighborhoods more likely to lead to interaction among different groups?

### 3.1. Homogeneity or heterogeneity ?

It will be accepted, without attempting to "prove", that homogeneous neighborhoods have been extremely prevalent throughout history and that this is supported by both historical and archaeological data. It has been more formalized in some places than in others (*e.g.* India, the Middle East) and at some *times* (*e.g.* periods of massive migrations or rapid culture change). It is also clear that it is more important, and hence more prevalent, for some groups than others (*e.g.* those under stress, localites, *i.e.* those for whom "place" has high salience, etc.) since it provides mutual support.

The variables whereby groups are seen as homogeneous have varied in different places and times but have always resulted in areas homogeneous on the basis of those particular variables. Among them have been :

religion, class, race, place of origin, kinship, caste, language, stage in life-cycle, education, community of interests, occupation, age, etc. Increasingly today *lifestyle* (the choice of how to use resources, attitudes to childrearing, food habits, time patterns, etc.) is becoming a major variable defining homogeneity. But the principal point to bear in mind is that in all cases it is, once again, a *subjective definition* by the people concerned rather than any *a priori* set of variables. In other words we are dealing with *perceived homogeneity*. It is this which explains the success of an area such as LaClede Town in St. Louis, Missouri which is often described as extremely heterogeneous on the basis of standard measures of race, income and the like. However, the people who have chosen to live there share an *ideology* of wanting to live in the central city in a heterogeneous area. Paradoxically their shared heterogeneity on ideological grounds gives them an unusually high degree of perceived homogeneity.

It can also be suggested that when the natural processes of selection by perceived homogeneity are blocked, other forms of homogeneity will tend to emerge which are less desirable because artificial rather than natural (e.g. Petonnet, 1972). These may be based on imposed and arbitrary rather than subjectively defined criteria and hence not work nearly as well.

If neighborhoods based on perceived homogeneity have been so prevalent, then, what reasons might there be for that tendency? It is quite easy to list large numbers of possible reasons:

3.1.1. Homogeneity *increases predictability*, or reduces unpredictability, thus reducing stress, the need to process information and hence reduces information overload.

3.1.2. Homogeneity *reduces perceived density* of areas, again reducing information levels (e.g. Rapoport, 1975).

3.1.3. Homogeneity *allows for* a large number of psychological, cultural and other "*defenses*" to operate much more effectively and is in itself a major defense (e.g. Rapoport, 1978 (b)).

3.1.4. Homogeneity allows meanings to be taken for granted, *i.e.* it *leads to* much clearer and more *effective non-verbal communication*. It becomes easier to understand body language, clothing, behavior and physical cues in the environment, to relate them to rules and hence to appropriate situations and contexts.

3.1.5. Homogeneity *leads to agreement* about notions of environmental quality and hence reduces conflict about various standards such as maintenance, front lawns, children's behavior, and many others. It also makes self-governance much easier and hence makes possible the use of informal rather than formal rules and controls. This makes working together, cooperation, involvement and participation much easier and thus has major



implications for open-endedness. All this becomes possible due to agreement on goals based on shared values.

3.1.6. Homogeneity *provides mutual support* at times of stress and culture change. Through the ability to share symbols, shops, language, food, festivals, rituals and religion, family and kinship, etc. environmental stress can be greatly reduced. Through the use of all these institutions the mutual support provided can, in fact, help cultural groups survive and can help in the success of migrant groups in new environments (*e.g.* Ehrlich, 1971, Eidt, 1971). Also, the effects vary for different groups, *e.g.* depending on the degree of stress, rapidity of change, whether the group is space-bound or not.

3.1.7. The existence of many homogeneous areas *increases choice* at the city scale.

3.1.8. In terms of the design quality of urban areas, homogeneity *results in personalization* not being random but taking on a coherent character. This leads to complexity at the urban scale rather than to chaos, by producing consistent character within areas and noticeable differences among them. Also, by producing areas with distinctly different and comprehensible character it helps groups, and individuals in these groups, to communicate social identity.

Even this partial listing clearly shows that there are very good reasons for the propensity of people to cluster on the basis of perceived homogeneity. Interestingly, this is becoming increasingly acknowledged in recent reports dealing with the success of housing projects (*e.g.* Francescato *et al.*, 1979; Beck & Teasdale, 1977).

### 3.2. *The scale of homogeneity/heterogeneity*

Given the evidence that homogeneity in neighborhoods is desired and prevalent, an obvious and important question is the scale of such areas, that is *their grain*. Unfortunately, there is no research on this subject. It seems clear that the block should be homogeneous, whilst an area of 10 000 people who are all the same may well be too large, although some of the recent retirement communities in the U.S. seem to be most successful although larger. It may well be that the area subjectively defined as neighborhood may also be too large — since its population varies with density, and since homogeneity depends on social variables, that population may be too big. All that can be noted here, on the basis of the examination of cities in many cultures, and on the basis of the research literature, is that what we might call the *micro-neighborhood* is the most likely unit although, in some cases, the neighborhood *may* be the unit of homogeneity. There will clearly also be variations due to culture and context. Finally, one can suggest that the boundaries around such areas are

of great importance as is the nature of the groups in adjacent areas; generally such groups should be reasonably close in their lifestyles, perceived homogeneity and the like *i.e.* adjacent areas, ideally, should be inhabited by groups which are not too dissimilar in terms of relevant perceived characteristics.

### 3.3. *Interaction among groups in homogeneous vs. heterogeneous areas*

The last point leads very naturally to the question of the interaction among various groups in the city. One could, in fact, ask why planning theory has been concerned with the design of heterogeneous neighborhoods. If that concern is not arbitrary, or based on ideology, then the major reason would seem to be the desire to ensure that different groups in the city interact with each other: heterogeneous neighborhoods are seen as a mechanism for maximizing such interaction (*e.g.* Sarkissian, 1976; Evans, 1976). Also, opposition to homogeneous neighborhoods is frequently expressed using similar ideas (*e.g.* Sennett, 1970).

Generally, one of the functions of culture is to define groups in terms of "us" and "them". This seems to be one of the most basic cognitive taxonomic classifications. It is also significant that people interact with others much more easily of and when they can place them in social space — *i.e.* when they are not "strangers" (*e.g.* Lofland, 1973; Reed, 1974). If one cannot place people in social space on the basis of accent, clothing, hairstyles or other such variables, then location in space becomes a most significant variable. It is often remarked that as some of the traditional ways of "knowing" people disappear, address becomes more significant. Hence, homogeneous areas help in this process since people living in them can be identified as belonging to a particular self-defined group on the basis of perceived homogeneity.

There is also a very general, and *counterintuitive*, finding from Man-environment research at a number of scales from rooms, through dwellings, groups of dwellings, open spaces to neighborhoods, that people interact most if they can remain in, or retreat to, a "private" area (whether "belonging" to the individual or to the group) (for a review see Rapoport, 1977). On the other hand they interact least if they are grouped together without having such secure areas. In fact, interaction can only be seen and understood as one phase of a larger system of interaction and withdrawal: both phases of the system must be possible for any one to occur (Rapoport, 1976; Altman, 1975).

Clearly individuals of varied groups must be able to be aware of others, hence the requirement for the scale of homogeneous areas to be reasonably small. Furthermore, in order to interact, people must have something in common, *i.e.* propinquity does not necessarily lead to interaction. There is no determinism; propinquity may lead to avoidance or conflict. This is the *rationale* both for the homogeneity within areas and for the argument that people in adjacent areas should not be too different.

Finally, in order for interaction to occur, there should be what might be called "*neutral*" areas (Rapoport, 1977).

Once again, these “neutral” areas must be subjectively defined as such. For example, parks are frequently proposed as such areas but a number of studies have found that they did not work as such although, in other cases, they well might (e.g. James and Brogan, 1974). Shopping facilities such as markets or supermarkets often work (e.g. Suttles, 1968) as do workplaces (e.g. Marsh, 1973) whereas schools which are often proposed by planners rarely do, since schools are crucial in lifestyle definition, involving, as they do, the upbringing of children, their language and behavior, etc. and are often a major concern when people select neighborhoods — they, in fact, help define homogeneity. Generally, then, being subjectively defined, “neutrality”, in terms of location, use and the cues indicating it is culturally variable and specific, but reflects certain general, basic processes and behaviors.

One concept which is helpful in discovering the nature and location of neutral places is to study the *house-settlement system* in given areas (Rapoport, 1977). This is a specific type of behavior setting system which links the dwelling with a set of other settings in the urban milieu where important activities occur. If one takes certain critical activity systems one finds that they occur in different parts of the house-settlement system (and, as we have already seen, at different times, including or excluding different people). Some of these settings are not at all clear or obvious *a priori* and need to be discovered in any given case. Once discovered, and related to the rules which define their use, and who is included or excluded, one has a very good chance of discovering the subjectively defined, most appropriate neutral places. These places together with the right scale of areas of groups of appropriate perceived homogeneity may maximize interaction.

#### 4. Conclusion

One of the themes which has repeatedly been stressed is that one is frequently dealing with the subjective definition of variables. Thus Carr (1970) speaks of the “city of the mind”. On the other hand, Wohlwill (1973) warns about the dangers of ignoring the “real world” and argues that the “environment is not in the head”. One of the significant findings of Man-environment research is that it is *the subjective environment which influences behavior* (for a review see Rapoport, 1977). In that sense it is the environment in the head which is important and which influences behavior, but that subjective environment is not completely arbitrary, it does not spring full-grown in our minds. It is related to the environment “out there”, although it may be transformed, it is the “objective” environment which is so transformed. One of the subjects of Man-environment research (for example environmental cognition) is precisely the nature of these transformations; another important topic is the nature of the mechanisms linking people and environments which are involved in this process.

The designer’s task then, seems to be to provide environments which

will help people to construct those environments in their heads, which are appropriate, which they desire, which match their images and ideals. Only such environments are supportive for people's lifestyles and activities. In other words, the designer's task is to make more predictable and effective the relations and congruence between the "objective" and "subjective" environments.

In the context of the present topic, for neighborhoods to work for particular groups of people in particular ways they need to be designed on the basis of our knowledge of Man-environment interaction rather than on the basis of either guesses, or wishful thinking. In terms of the question "homogeneity or heterogeneity" the answer seems to be homogeneity.

#### BIBLIOGRAPHY

- ALTMAN, I. (1975), "The Environment and Social Behavior" (Brooks/Cole, Monterey, Calif.).
- BECK, R.J. & TEASDALE, P. (1977), User Generated Program for Lowrise Multiple Dwelling Housing: Summary of a Research Project, *Centre de Recherches et d'Innovation Urbaine* (Université de Montreal).
- CARR, S. (1970), The City of the Mind, *Environmental Psychology* (Proshansky, H.; Ittelson, W. & Rivlin, L., Eds.) (Holt, Rinehart & Winston, New York).
- EHRlich, A.S. (1971), History, Ecology and Demography in the British Caribbean: An Analysis of East Indian Ethnicity, *Southwest J. Anthropol.*, 27 (1971) No 2, 166-180.
- EIDT, R.C. (1971), "Pioneer Settlement in Northeast Argentina" (University of Wisconsin Press, Madison).
- EVANS, A. (1976), Economic Influences on Social Mix, *Urban Studies*, 13 (1976) No 3, 247-260.
- FRANCESCATI, G. et al. (1979), Residents' Satisfaction in HUD-Assisted Housing: Design and Management Factors, *US Dept. of Housing and Urban Development (Document PDR 390)* (Washington, DC).
- GUTTENTAG, M. (1970), Group Cohesiveness, Ethnic Organization and Poverty, *J. Soc. Issues*, 26 (1970) No 2, 105-132.
- HERBERT, D.T. & JOHNSTON, R.J. Eds. (1976), "Social Areas in Cities", Vols 1 & 2, (Wiley, London).
- JAMES, L.D. & BROGAN, D.R. (1974), The Impact of Open Urban Land on Community Well-Being, *Social Impact Assessment, Proc. 5th E.D.R.A. (Vol. 2)* (Wolf, C.P., Ed.) (Milwaukee, Wis.) 151-167.
- LOFLAND, L.H. (1973), "A World of Strangers. Order and Action in Urban Public Space" (Basic Books, New York).
- MARSH, A. (1973), Race, Community and Anxiety, *Ekistics*, 36 (1973) No 213, 111-114.
- MICHELSON, W. & REED, P. (1970), The Theoretical Status and Operational Usage of Lifestyle in Environmental Research, *Center for Urban and Community Studies (Research Paper 36)* (University of Toronto).
- PETONNET, C. (1972), Reflexions au sujet de la ville vue par en-dessous, *L'Année Sociologique*, 21 (1972), 151-185.
- RAPOPORT, A. (1975), Towards a Redefinition of Density, *Environment and Behavior*, 7 (1975) No 2, 133-158.
- RAPOPORT, A. (1976), Socio-Cultural Aspects of Man-Environment Studies, in "The Mutual Interaction of People and their Built Environment" (Mouton, The Hague) 7-35.
- RAPOPORT, A. (1977), "Human Aspects of Urban Form" (Pergamon, Oxford).
- RAPOPORT, A. (1978a), Nomadism as a Man-Environment System, *Environment and Behavior*, 10 (1978) No 2, 215-246.
- RAPOPORT, A. (1978b), Culture and the Subjective Effects of Stress, *Urban Ecology*, 3 (1978), 241-261.
- RAPOPORT, A. (1979), An Approach to Designing Third World Environments, *Third World Planning Review*, 1 (1979) No 1, 23-40.
- RAPOPORT, A. (in press), The Effect of Environment on Behavior, *Pathways to Human Survival. Perspectives on Adaptation, Environment and Population*. (Calhoun, J.B., Ed.,) (Praeger, New York).

- RAPOPORT, A. & WATSON, N. (1972), Cultural Variability in Physical Standards, *People and Buildings*, (Gutman, R., Ed.)(Basic Books, New York).
- REED, P. (1974), Situated Interaction : Normative and Non-Normative Bases of Social Behavior in Two Urban Residential Settings, *Urban Life and Culture*, 2 (1974) No 2, 460-487.
- ROYSE, D.C. (1969), Social Inferences via Environmental Cues, *Unpublished PhD Dissertation*, (M.I.T., Cambridge, Mass.).
- SARKISSIAN, W. (1976), The Idea of Social Mix in Town Planning : an Historical review, *Urban Studies*, 13 (1976) No 3, 231-246.
- SAUER, L. (1972), The Architect and User Needs, *Behavior Design and Policy. Aspects of Human Habitats*, (Smith, W.M., Ed.)(University of Wisconsin Press, Green Bay) 147-170.
- SENNETT, R. (1970), "The Uses of Disorder" (Knopf, New York).
- SUTTLES, G.D. (1968), "The Social Order of the Slum. Ethnicity and Territory in the Inner City" (University of Chicago Press, Chicago).
- WOHLWILL, J.F. (1973), The Environment is not in the Head, *Environmental Design Research, Proc. 4th E.D.R.A. (Vol. 2)* (Preiser, W., Ed.)(Dowden, Hutchinson & Ross, Stroudsburg, Pa.) 166-181.