

26 Apr 1972

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Recommended Citation

Rothblatt, Donald N., "An Approach to Improving the Quality of Low Cost Urban Housing" (1972).
International Symposia on Low Cost Housing Problems. 82.
<https://scholarsmine.mst.edu/islchp/82>

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AN APPROACH TO IMPROVING THE QUALITY OF LOW COST URBAN HOUSING

by

Donald N. Rothblatt*

INTRODUCTION

Urbanization, as a world-wide phenomenon, has created enormous housing shortages for low income families. Almost every nation, industrialized and developing alike, is struggling to improve the quality of low cost urban housing.

A variety of programs may be required to meet the housing needs of low income families in a given society. (1, 2) It seems likely, however, that government involvement in the construction of housing units will be necessary in most countries in order to bridge the gap between the demand and the private supply of standard low cost housing units. (2, 3) Indeed, even nations which traditionally rely strongly on the private market recognize the importance of government assistance in the housing construction field. For example, programs such as Operation Breakthrough in the United States have emerged in order to find methods and procedures for large scale production of low cost housing.

Despite these new efforts, surprisingly little is known about the social and psychological implications of large scale-high density housing. Although several investigations suggest that changes in the design of housing and related facilities may have substantial social and psychological implications, the evidence is not conclusive. Several studies find important relationships between design features of the housing environment such as streets, courtyards, play areas, building arrangements and interior space, and social-psychological factors as self esteem, intrafamily relations, friendship patterns and group participation. (4, 5) Other investigations point to little or no relationship between the physical environment and social life. (6, 7)

While this confusion exists about the social and psychological effects of the housing environment on all income groups (8), middle and upper income families can at least exercise some of their preferences in the private market for new housing. Low income families, however, have had a limited opportunity to exercise their housing preferences mostly because they simply do not have enough income to participate in the private new housing market. Consequently, many low income families live in old housing, often in deteriorating condition, which were originally designed according to the tastes and standards of others many decades ago.

The low income families living in new housing are largely public housing residents. Although such housing provides modern facilities, they are often built with respect to standards devised by middle class tastes--tastes which may be markedly different from those occupying the housing. (9) Thus, paradoxically, the housing design and construction standards used in public housing may not reflect the needs, life styles and preferences of low income families although such housing is designed specifically for these groups.

This paper will present evidence which might help structure the social and psychological implications of the housing environment. The impact of large scale-high density housing on low income families will be examined through two case studies: Marlboro Houses, a New York City Housing Authority Project; and Bouwlust I Housing Estate, in The Hague, Netherlands.

MARLBORO HOUSES

Marlboro Houses, a New York State-aided low rent public housing project, lies in the southern edge of New York City in the Gravesend Section of Brooklyn. The project, which was completed in 1958, is adjacent to a well-kept middle-income residential neighborhood, characterized by two-family houses. Based on a variety of physical, social, economic and architectural criteria,

Marlboro Houses is considered one of the most successful low-income projects in New York City. (10)

The site, which is comprised of two superblocks, totals 33.8 acres in area. Located within the development are 25 seven-story doubly loaded halled buildings and three sixteen-story buildings having communal terraces on each floor. These structures house approximately 1,765 families, or 7,110 persons. The building coverage is 13.4% and the population density is 52 families or 210 persons per net residential acre.

Research Method

During the summer of 1963, a modest sample of the adult population of Marlboro Houses was studied. The effort compared some of the social and psychological effects of the public housing environment on two groups: families living in typical seven-story Housing Authority buildings; and families living in sixteen-story buildings having a communal open terrace on each floor.

Based on theories of personalities and development and recent social and psychological investigations concerned with the housing environment, the following Human Need variables, which seemed to be influenced by the design of housing, were formulated. (11)

1. Family Needs

- a) The relative ease with which parents can supervise children's activities outside the apartment.
- b) The frequency of mutually shared, leisure time, family activities within the home and immediate neighborhood.
- c) The extent of husband's participation in work activities within or near the home.

2. Belongingness Needs

- a) The relative ease of making friendships with one's neighbors.
- b) The degree of participation in informal and formal groups.

3. Esteem Needs

- a) The degree of pride in the appearance of family's apartment and building.
- b) The feeling of family status with respect to friends and relatives living outside the project.
- c) The husband's sense of accomplishment with respect to his leisure time activities.

4. Independence Needs

- a) Relative ease in obtaining family and personal privacy.
- b) Satisfaction with the size and arrangement of family's apartment.
- c) Feelings concerning the uniqueness of each individual apartment or building.

A series of questions concerning each variable was devised and put into the form of a questionnaire schedule. Some of the questions were weighted equally and a summated score was devised for each Need Variable. (11)

The field work, which was conducted outdoors on the grounds of the project, consisted of personal interviews lasting from one to one and one-half hours. After the data were collected, an attempt was made to relate the results to specific aspects of the physical environment.

Sample

All the families studied were of the conjugal type, consisting of a husband, wife, and one to three children with at least one child under seven years of age, and all children under fifteen. The ages of the adult members of the family varied from 27 to 41 for the wives, and 30 to 46 for the husbands. All families studied had resided in the project for at least two years.

Since about 90% of the total conjugal families in Marlboro were white, the sample included only white families. In addition, using the criteria of age, income, family size and site location,

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the sample residents appeared to be fairly typical of most of the conjugal families residing in the project. (12)

Of the total number of 1,747 families living in Marlboro Houses, 1,188 families were considered eligible for examination by the above-mentioned criteria. Of the latter, 40 families, or approximately 3.4% of those eligible, were interviewed through chance meetings of the respondents on the project site.

Study Group "A" consisted of 20 families living in the doubly loaded halled seven-story buildings, while Group "B" consisted of 20 families residing in the sixteen-story structures having a communal terrace on each floor. Both groups were divided into two subgroups consisting of ten families living on floors 1 to 3 (Groups "A1" and "B1") and ten families residing on floors 4 and up (Groups "A2" and "B2").

All study groups were generally matched with respect to income, race, age and education of adults, age and number of children and length of residence within the project. Because housewives usually have a greater familiarity with the housing environment than their husbands, all of the respondents interviewed were female heads of households.

Findings

While the sample employed was not large enough to offer irrefutable evidence, the data did yield strong directional tendencies which deserve serious attention. Some of our findings are shown in Figure 1 and are discussed below:

1. Family Needs

Group B, residing in the terraced buildings, had total scores which were substantially higher than those obtained by Group A, living in typical buildings. The most important factor influencing this finding appeared to be communal terrace which enabled Group B parents to easily observe their young children playing in a safe, semi-outdoor environment. The terrace also enabled Group B families to spend somewhat more free time together near the apartment, as it offered convenient semi-private outdoor family space. In addition, the terrace seemed to encourage husbands to do more work in the vicinity of the home, as it enabled them to conveniently perform work outdoors which would be difficult to do within the apartment (e.g., repairing household furnishings).

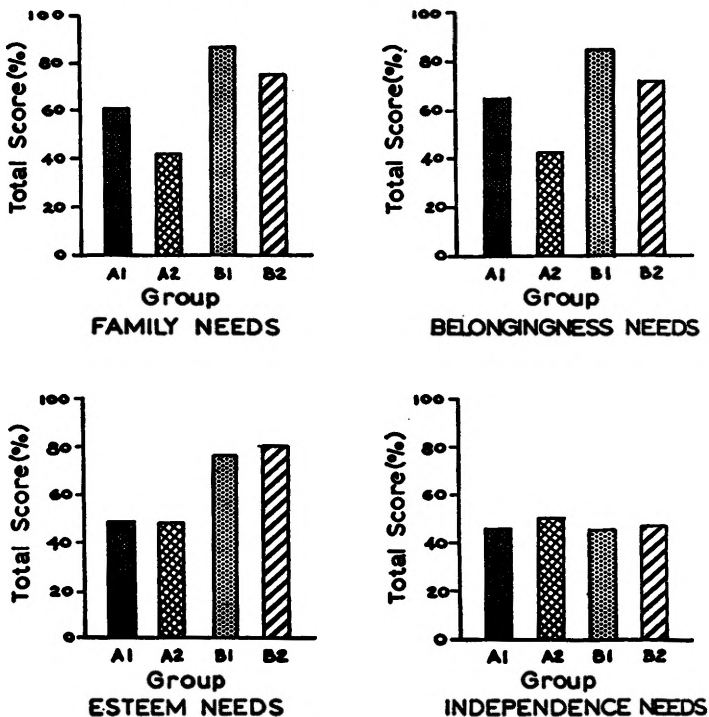


Fig. 1. Total Scores of Need Variables: Marlboro Houses

Thus, the satisfaction of Family Needs appeared to be substantially greater within the terraced buildings as compared to typical structures. Also, lower floor apartments, especially within typical buildings, seemed to more easily meet the Family Needs of the residents than upper floor units.

2. Belongingness Needs

Group B's total scores were considerably higher than those obtained by Group A. Again, the terrace seemed to play a major role in that it offered the adult members of Group B families an easily accessible outdoor area where they could loiter in close proximity to other adults doing the same. Thus, the number of close friendships and group membership was greatest among Group B residents. As before, lower floor position, particularly in typical buildings, appeared to more readily satisfy these needs than upper floors.

3. Esteem Needs

The total scores for Group B were again substantially greater than those obtained by Group A. Such results appeared to be due to the somewhat "more attractive" or different appearance of the terraced buildings. This difference in building appearance seemed to allow Group B residents to differentiate their buildings from Group A buildings which were generally stamped with the stereotypic public housing design. Moreover, friends and relatives living outside the project who visited Marlboro residents may have been similarly affected, as the score of "what others think of your living here" was significantly higher for Group B than it was for Group A.

Another factor responsible for the high score of Group B was the relative ease with which Group B husbands appeared to gain a sense of accomplishment from their leisure time activities near the home. The terrace again was a critical feature as it provided easy access to outdoor work space not usually available to typical apartments.

Thus, compared to typical structures, the terraced buildings were substantially more successful in meeting the Esteem Needs. However, with respect to floor position there was little or no difference in the gratification of the needs.

4. Independence Needs

There were little differences in overall satisfaction scores of Independence Needs between the two building types. However, there were two specific differences in that typical buildings afforded more audio and visual privacy and the terraced structures seemed to be more unique in appearance. With the exception of more privacy in upper floor apartments within typical buildings, there was no significant difference in the fulfillment of Independence Needs with respect to floor position.

BOUWLUST I HOUSING ESTATE

Bouwlust I Housing Estate, a publicly assisted housing project (13) is part of a larger Bouwlust-Berestein-Vrederust housing development on the southwest edge of The Hague. Although the project was built during the 1956-1964 period, roughly two thirds of the housing units were completed by the end of 1959.

The four superblocks of the site, which total approximately 4,870 acres, are grouped around a core of community facilities. Unlike the Marlboro project, this site contains 100 structures which represent a wide variety of building types ranging from two story row houses to 13 story apartment towers. These structures house about 2,457 families or 8,830 persons creating an overall population density of approximately 50 families or 200 persons per net residential acre. (13)

Research Method

In the autumn of 1964 we attempted to replicate the Marlboro study for a comparable sample of working class families living on

the Bouwlust I site: families living in non-terraced thirteen story buildings; and families living in seven story structures having a communal open terrace on each floor. The Marlboro questionnaire translated into Dutch was applied in a similar manner to that of the New York study.

Findings

As shown in Figure 2, the findings indicate that the terraced structures had the same general impact on Bouwlust I residents as on their counterparts in Marlboro Houses. Buildings having communal terraces appeared to meet more fully the Family and Belongingness Needs than the non-terraced structures, with the latter ranking somewhat higher on Independence Needs. From this data and the informal remarks of the respondents, it appears that the social forces explaining this scoring pattern in Bouwlust I were similar to those explained earlier for Marlboro Houses.

One major difference between the two housing developments is reflected in the scores for Esteem Needs. At Marlboro the score for Group B was substantially higher than that for Group A mostly because of the relatively unique and attractive appearance of the terraced structures compared to the other conventionally designed buildings having a clear low cost housing image. By contrast, at Bouwlust I Groups A and B had similar scores for Esteem Needs because both the terraced and non-terraced structures were found equally attractive and unique. This was due not only to the specific designs but also because of the wide range of building types on the Bouwlust site. In addition a substantial portion of the Bouwlust residents were middle and upper middle class which increased the overall social status of the project to which all other site residents could relate. (13) Thus, Groups A and B had similar scores for "what others think of you living here."

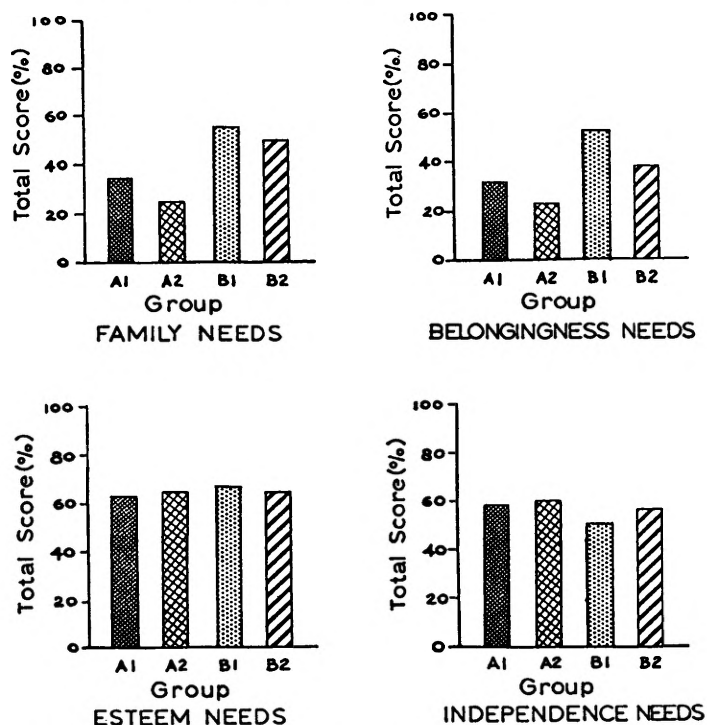


Fig. 2. Total Scores of Need Variables: Bouwlust I Housing Estate

CONCLUSIONS

As a general conclusion it appears that the data yielded strong tendencies favoring the Terraced Structures as well as some indication of lower floor superiority. As shown in Figures 1 and 2, with the exception of a small difference in the Independent Needs scores and mixed results for the Esteem Needs, the Terraced Buildings appeared to be considerably more successful in meeting the Family and Belongingness Needs than were the non-terraced structures. Moreover, lower floor apartments of both building

types seemed to be more responsive to Family and Belongingness Needs than were upper floor dwellings.

Based on these conclusions it would seem desirable to design low rise structures for families with children. If high rise-high density housing cannot be avoided, communal terraces should be provided on each floor which can serve as surrogates for the courtyards with related social activities available to low rise structures. For the sake of Esteem Needs particularly for lower income groups, it would seem desirable to create mixed housing developments in terms of social status and building type.

These conclusions, however, are far too general for direct application and if used blindly could reap negative social returns. For example, the perception and use of housing environments appear to vary with social status. Stable working class families often develop a "territorial sense" of external space, extending social relations well beyond their dwellings (14), while lower class residents might view such space as harboring potential dangers and withdraw to their individual apartments. (15) Thus, communal terraces found so helpful to the life styles of working class families in Marlboro Houses and Bouwlust I, had a disastrous impact on lower class families elsewhere due to the threats they generated to Physiological Needs--adequate shelter for safe, secure and healthful living. (15)

Clearly, the general conclusions outlined above need to be modified by many factors before they can be useful to designers and planners of the physical environment. Perhaps what is needed is a kind of "information system" (16) which could relate the needs, life styles and preferences of various client groups to environmental factors such as characteristics of building types, personal and family interior space, private and communal outdoor space, community facilities and the social and physical features of the neighborhood and larger community. (5, 17) With this kind of reference frame, designers and planners might be in a better position to create more sensitive and humane housing environments than is presently the case.

While the information required to complete such a system is not yet available, it could be obtained incrementally for each new large scale housing environment being planned. (18) In particular, efforts to incorporate the needs and preferences of client groups in the planning of their own environments could help considerably in generating the information needed. (19, 20) If this participatory approach were integrated with such efforts as the mass production of low cost housing and the development of new towns (21, 22), the quality of low cost urban housing could be substantially improved.

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