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PSYCHOLOGICAL AND SOCIOLOGICAL CONSIDERATIONS
IN THE DESIGN OF LOW COST HOUSING UNITS

by James J. Abernethy, Lecturer *

Recently opinion surveys were distributed by a U.S. Congressman in an attempt to accurately appraise national priorities. The constituents were asked to indicate priorities for the following areas; crime control, education, national defense, pollution control, space and urban problems. The results of the survey conducted by Congressman Jack H. McDonald of Michigan were:

M&N	WOMEN	18-21
crime control	crime control	pollution control
pollution control	education	crime control
education	pollution control	education
urban problems	urban problems	defense
national defense	defense	urban problems
space	space	space

If this survey is an accurate reflection of current thought, it is evident that urban problems including crime, pollution and education have become the concern of the majority of our population.

Two of the most pressing urban problems are crime and education. Many experts have concluded that a definite relationship exists between them and a third problem; housing. It is felt that meaningful improvement in any one of these areas depends in some degree upon improvement in all. As designers of the physical environment we have only an indirect influence upon education and crime. This influence may be more meaningful than we currently realize. However, we are directly involved in the shaping of housing and communities. Our physical structures provide the needed backbone for community development or redevelopment. It is essential that strong, healthy backbones are created.

Adequate housing is a basic human need required by all. Education is not limited to the formalized school program. An immeasurable amount of learning occurs in or near one's home. To a considerable degree we shape our environment and then our environment influences us. Our housing units and our communities are most important elements of our environment. Today, due to various social, political, and economic reasons, adequate housing is not available to all who need it. An increasing portion of our population does not have sufficient resources to privately obtain an adequate dwelling unit. The fulfillment of this basic need of adequate housing deserves high priority.

The emphasis of this paper will be upon an examination of an alternative which appears to hold some promise toward a partial solution to the problem. The comments expressed herein reflect the bias of a designer of the physical environment and the viewpoints of other disciplines which have studied urban problems.

Presently, a shortage of adequate housing exists for a significant portion of American families. Reporting on numerous opinion studies, Nathan Glazer concluded that "whenever given the opportunity, most American families express their desire to own their own homes." This conclusion has been valid for a number of decades, and accurately expresses the opinion of both home owners and renters. Today many families consider home ownership a far-off dream or an unlikely possibility. They have been forced to accept a dwelling unit which stretches the definition of the term "adequate", or they have been forced to live in a housing development which stretches the definition of the term "community".

An appropriate objective from many viewpoints, is to provide the opportunity to gain an equity in types of housing which are currently in demand by

the middle class. Environments affect both those who have such and the unfortunate. Basic human needs of stability, shelter, orientation, and security are required by all humans, regardless of their economic situations. To offer less to the unfortunate seems highly questionable. I think that this viewpoint, though fraught with many serious problems has sufficient compelling advantages over other approaches that it should be seriously considered.

Today in most American cities, housing for the poor is very obvious. The design, location, and the use of building materials clearly point out the housing for the unfortunate. The housing is usually of very sterile, institutional design, easy to spot. The unfortunate are usually corralled together into definite boundaries making them even easier to identify. Little ownership potential is offered. A high degree of transients are present. A high degree of crime exists. Educators often spend more time being policemen than teachers.

The current approach to housing for the poor is successful from the viewpoint of "shelter" and from few others. Future housing efforts, even with modern technological advances, should not perpetrate this poor approach.

In his book, Streetcar Suburbs, Saul B. Warner comments on similar housing problems for the poor in 19th C. Boston:

"Though Paine's houses and narrow streets may have been suitable in Philadelphia, where there was a long and continuous tradition of row housing, in Boston these buildings had a strong philanthropic air. They were brick and fireproof and had a full set of plumbing facilities, but for all their safety and sanitation they remained mean, crumpled row houses built a full decade after the main body of the middle class had ceased building row houses for itself. Like the wooden barracks and tenements of the neighborhood, these houses were suited to the momentary needs and capabilities of their inhabitants -- all too suited to them, and not at all suited to their aspirations. . . . Because Paine had built minimal structures, and built without regard to some of the important middle class aspirations of the day, his houses suffered the fate of all the other homes in the area. For the last forty years they have served as slum dwellings, and despite Paine's careful construction, they are falling to the ground."

Paine's second undertaking was a "cheap project". . . but the streets do follow the contours of the land and are designed to make a traffic cul-de-sac. Such site planning was just then coming into vogue for expensive subdivisions in Brookline and other parts of greater Boston. . . .

"the houses themselves came in several styles of detached frame single and two-family structures. A variety of contemporary ornament was also offered. The houses were more than twice as big as the little row houses of the 1880's and sold for twice as much. . . . The whole suburban "cottagey" effect of this hundred-house subdivision was underlined with street names of "Round Hill" and "Sunnyside". . . .

"Paine's houses are still kept up because for sixty years they have been the best choice of the neighborhood. They have been the best choice because they were more in keeping with the housing aspirations of Bostonians than any of the other cheap alternatives of the 1890's."

"The success of Paine's experiment suggests that slum housing is one of the prices that a society pays for allowing any major amount of its building to proceed at a level below its common understanding among the middle class as to what constitutes a satisfactory home environment."

What type of housing is currently in demand by the middle class? What features of new communities are considered to be very desirable by contemporary standards? An actual community will be used in an attempt to illustrate answers to these vital questions.

In the late 1920's the first subdivisions for the proposed new town of Radburn, New Jersey were constructed. Most of the homes were either frame or asbestos siding, and had anything but award-winning design. The housing was designed for moderate income workers from nearby Paterson. The Depression halted the project with only 600 dwelling units constructed, and it was never completed.

However, due to its far-sighted site planning with provision for a park system and separate pedestrian and vehicular traffic flows, an extremely strong

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community spirit was established which remains to this day. Many of the dwelling units, by some standards, should be in a state of disrepair. However, the opposite is true. Dwelling unit ownership is extremely high. Most families have lived there for much longer than the 5-year national average. The subdivision has now become the home of middle income New York City commuters.

Why? A few personal observations;

Radburn contains a mixture of housing types. Mid-rise apartments are present near the shopping center. Two-story duplex houses are found throughout the project. The predominant housing type is the two-story single family detached house. Houses with two, three and four bedrooms are randomly present throughout the community. As a result of this mixture, a very stable, close-knit community became possible. Families frequently move from one unit to another within the project. Most sales of homes are to existing, or second generation, Radburnites. It is possible for a family to go through a complete life cycle without being forced to leave the community because no housing type is available for their current requirements. The basic human need of "stability" has been satisfied.

Positive separation of vehicles and pedestrians has been provided within the project. Walking is encouraged, and is often the shortest path to the major destination points of education, recreation and commerce. The automobile, while present, is not dominant. The subdivision is located adjacent to a commuter line thereby further reducing the necessity for the auto. As a result, Radburn is an extremely safe place to live. Automobile accidents are almost non-existent. One aspect of the basic human need of "security" has been satisfied.

Open space is very evident at Radburn. The open space has been designed to be either very private or completely public. The no-mans land of front and side yards have been reduced to a minimum. The resulting space has been collected and placed into a much used park system.

As a result of the organization of open space, a strong feeling of "community" has developed. Man is a social being. That part of his nature was not frustrated. Sufficient visual and acoustic enclosure is present indoors and outdoors to fulfill the inherent desire of man for privacy. One of the residents said "extroverts love the place, but we have many introverts who have been here for a long time."

The organization of the open space is such that very positive orientation exists. Maps or street signs are not required to successfully negotiate the community. Such positive orientation is a little realized need of man which contributes in some measure to a secure feeling.

Design for choice, security, stability and positive orientation, combined with a close relationship to "nature", are the features currently considered desirable in newly planned communities. These features are not fads or in-vogue trends. They represent attempts at fulfillment of basic human needs which are present regardless of income or circumstance.

The complex problem of housing for low income families has very complex solutions. The emphasis in this paper will be upon the establishment of design/development policies for housing based upon the recognition and fulfillment of basic human needs. It is felt that these policies must be prerequisites to the large scale use of new technological advances in design and construction. Guidelines should be established which reinforce, rather than frustrate or ignore those constants which are considered by social scientists as permanent and intrinsic needs of the human being.

Abraham Maslow, in his book, Motivation and Personality, has organized human needs into a most useful hierarchy;

HIERARCHY OF NEEDS

1. **PHYSIOLOGICAL:** air, food, liquid, rest, shelter, activity, elimination of waste, freedom from noxious stimuli, sex
2. **SAFETY:** (eliminate danger) lack of support, loud noises, flashing light, unusual sensory perception, rough handling, illness, no routine or rhythm, disorganized environment, unrestricted permissiveness, getting lost, uncontrollable, unfamiliar objects
3. **BELONGINGNESS & LOVE:** (giving and receiving) love, affection, need for friends, role playing or place in a group, attainment of position
4. **ESTEEM:** self respect, respect of others, strength, achievement, adequacy, mastery, competence, confidence, independence, freedom, reputation, attention, importance, appreciation, being useful and necessary
5. **SELF ACTUALIZATION:** (what a man can be, he must be!) athletics, ideal mother, creativity, developing potential, self-fulfillment

Maslow's studies have shown interesting relationships between the higher and lower needs:

- a. Living at the higher level means greater biological efficiency, greater longevity, less disease, better sleep, appetite, etc.
- b. Higher need gratifications produce more desirable subjective results, i.e. more profound happiness, serenity, and richness of inner life.
- c. Pursuit and gratification of higher needs represent a healthward trend.
- d. The higher need has more preconditions.
- e. Higher needs require better outside conditions to make them possible.
- f. The pursuit and the gratification of the higher needs have desirable civic/social consequences (loyalty, friendliness, civic consciousness)
- g. Satisfaction of higher needs is closer to self-actualization than is lower-need satisfaction.
- h. The pursuit and gratification of the higher needs leads to greater, stronger, and truer individualism.

An apparent conclusion is that one cannot presume that a man or a family can develop esteem or self-actualization when the basic physiological and safety needs have not been satisfactorily fulfilled.

John Simonds, in his book, Landscape Architecture, contends that it is indeed possible to induce a predetermined emotional or psychological response through the use of design techniques. For example, the response of "fright" can be induced through the following design qualities:

FRIGHT

"Sensed confinement. A quality of compression and bearing. An apparent trap. No points of orientation. No means by which to judge position or scale. Hidden areas and spaces. Possibilities for surprise. Sloping, twisted or broken planes. Illogical, unstable forms. Slippery hazardous base plane. Danger. Unprotected voids. Sharp, intruding elements. Contorted spaces. The unfamiliar. The shocking. The startling. The weird. The uncanny. Symbols connoting horror, pain, torture, or applied force. The dim, the dark, the eerie. Pale and quavering or, conversely, blinding garish light. Cold blues, cold greens. Abnormal monochromatic color."

If it is possible to design an environment which produces a high level of anxiety, it should also be possible to create the opposite.

DESIGN CRITERIA

It is my feeling that design/development guidelines should be established to provide at least the following features to fulfill basic human needs:

POSITIVE ORIENTATION:

The community should be so designed that it is readily comprehensible and understood by its occupants. A high degree of understanding will yield a higher degree of use. A strong feeling of security can be expected to develop.

COMMUNITY:

The community should be so designed to encourage the frequent meeting of the residents. Commonly used facilities should be provided in such a way that they are frequently used. Increased stability can be expected, with a higher degree of interest in local affairs.

PRIVACY:

Individual and family privacy must be provided. The desires for contemplation and "peace and quiet" should not be frustrated. The housing units should be designed and located to provide positive visual and acoustic privacy within, and between, units.

SECURITY:

The community should be a safe place in which to live and raise a family. The automobile should not be a threat. Pedestrian circulation should receive considerable attention. Pedestrian/vehicular confrontations should be minimized. Efforts should be expended to reduce feelings of "fright". Anxiety should be designed out of the community as much as possible.

EXTREME TEMPERATURE CONTROL:

Shade, materials, solar orientation, natural topography, and wind direction should be utilized to moderate the yearly temperature extremes so that facility use is optimized.

NOISE CONTROL:

Sounds can be utilized for positive orientation and interest. However, noise levels should be controlled through effective use of sound retardant materials inside and outside of the dwelling units. Positive noise control is essential to privacy.

PRESERVATION OF THE FAMILIAR:

Existing evidences of the past (buildings, trees, roads, etc.) should be seriously considered for retention in an effort to preserve tangible evidences of a by-gone culture and to allow meaningful identification with the past.

CONTACT WITH NATURE:

Nature should be close at hand, especially for families with young children. A variety of natural features should be immediately present to provide meaningful educational experiences. Certain natural features should be preserved and made highlights of open space.

SOCIAL CRITERIA

Social guidelines should be established to compliment the design/development guidelines previously listed.

COMMUNITY INTEGRITY:

The "bulldozer" approach should be used only as a last resort. When total clearing occurs, the community affected receives a telling, possibly fatal, blow. Rehabilitation and conservation, coupled with strict code enforcement, should predominate whenever possible. The blighted community does have a meaningful inner fabric of organization. This fabric should be strengthened to stabilize the community rather than destroy it.

HOUSING TYPE MIXTURE:

The old "project" type approach should not be repeated. While shelter had been achieved for the poor, many other problems were unintentionally created. A better solution seems to be to design a mixture of housing types of slightly varying quality and size within a community. Ownership should be encouraged even by means of subsidy, if necessary. The more economically successful families should not be excluded by policy. If they are, the positive models of "success" will be eliminated from the community and other, less satisfactory methods such as bussing children to far-off schools in order to fill this void may result. The housing mixture will also increase the stability of the community by providing a variety of housing types so that a family can go through various facets of its "life cycle" within a given community if they so choose.

HOUSING ASPIRATIONS:

The legitimate aspirations of housing types should be provided. Housing for the poor should be difficult, if not impossible, to spot. Subsidies should be used to allow the incorporation of the desirable design/development features previously listed. The poor should be an integral part of society rather than a group of outcasts collected together and clearly marked.

The urban renewal process has often done more harm to the cause of low-income housing than good. However, the process is not intrinsically evil. It may be the only effective process currently available to remove blight. Urban renewal must become more concerned with community stability. It is not sufficient just to provide housing units. What is far more important is the provision of a healthy community with no clearly marked outcasts.

The approach presented in this paper is an effort based upon the unchanging basic human nature of all individuals. It is felt that design/development based on the fulfillment of these basic needs and desires is a superior approach to any previously attempted. Many "bugs" remain in it. For example, how do you reduce the potential for crime in a community through design? Also, the controversial suggestion of subsidies is frequently assumed. The underlying concern of the approach is to significantly improve the quality of life for all, including the unfortunate. Too often in the past the poor have been unintentionally made more unfortunate by housing design and policies. Today with the increasing concern for urban problems we have a better grasp of the needs of people. Hopefully, a marked improvement in the quality of life will result.