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## PUBLISHER'S NOTE

Last month some of us went to Portland to cover, each in his own way, the mainland portion of this year's AIA annual convention. (For one report see page 38.) As it turned out the convention itself was more busily engaged in covering us than we it.

For instance, Oregon Governor Tom McCall in his welcoming address set the stage for what was to come by quoting liberally from the book, *God's Own Junkyard* by FORUM Editor Peter Blake. The opening Theme Session, Man, was moderated by former managing editor Don Canty, now a member of FORUM's Board of Contributors. Whitney M. Young Jr., the first speaker, delivered a stirring address resulting later in a series of resolutions which, if pursued with the sincerity that supported their adoption, can change the very nature of the AIA. Mr. Young is a Trustee of Urban America.

At the Awards Luncheon on the same day, long time Art Director Paul Grotz, now our managing editor, received the association's Industrial Arts Medal. At the same luncheon, it was notable that seven jobs receiving honor awards had been published previously in the pages of *The FORUM*. Nor did that end it. Former senior editor Walter McQuade, now FORUM columnist, was honored as a new AIA Fellow that evening and Urban America Trustee John Gardner, formerly Secretary of HEW, now chairman of the Urban Coalition, an Urban America offspring, became an honorary AIA member.

The following morning Lawrence Halprin, another Urban America Trustee, chaired a working panel entitled, "Design for Preservation." The Purves Memorial Lecture was delivered this year by Lady Barbara Ward Jackson. She, too, is a member of FORUM's Board of Contributors. And, finally, when Gold Medalist Marcel Breuer (see *St. John's University*, May '68) received the AIA's top award, it was with a citation written by Peter Blake.

As we have been saying *The FORUM* is a magazine about architecture—today's architecture—for architects.—L.W.M.

# MASS HOUSING: SOCIAL RESEARCH AND DESIGN

BY BRENT C. BROLIN  
AND JOHN ZEISEL

A prototype study in which observations on social behavior are translated into requirements for appropriate architecture

Technically adequate mass housing is often socially inadequate. An important reason for many failures in large-scale modern design is that it does not fit the way people live. The designer, unable to intuit the needs of a group with which he is unfamiliar, often imposes his own values and needs on those for whom he builds. To prevent this, he must be able to identify social patterns necessary to the group and incorporate them into his plans. This paper, with its design solutions based on observations of behavior, will attempt to show one way in which social research can be used to help the architect.

Since the beginning of the Industrial Revolution, mass housing has been designed *for* the worker, not *by* the worker, and has had a dehumanizing and degrading effect in imposing new ways of life on its tenants. This is in sharp contrast to unplanned housing—built by the inhabitants themselves, changing over a long period of time, and serving social functions not apparent to architects who are not of that culture. Urban redevelopment and new town programs are often based on what the designer considers adequate for himself. Often when he consciously tries to build for those different from himself, he unconsciously imposes his own values.

Modern architecture asserted the principle of functional design, but the architect's concept of function has usually been limited to *manifest* functions: kitchens for cooking, stores for buying, streets for driving. He does not usually take into account the *latent* functions of behavior required for social and psychological stability in cultures or subcultures other than his own: for example, driving a car as a means of demon-

Mr. Brolin received his B.A. and M. Arch. from Yale. He has had several years of professional experience, and has been a visiting critic in city planning at Yale. Mr. Zeisel received his B.A. from Columbia, and is now completing his Ph.D. in sociology there. He has worked at Columbia's Bureau of Applied Social Research, and has been a visiting critic at Columbia's School of Architecture. This fall they will be visiting lecturers at Yale University, giving a joint seminar in city planning and sociology.

strating a certain status as well as a means of transportation.

In building for different cultures or subcultures, architects have introduced — along with modern sanitary standards—middle-class assumptions of privacy, comfort, forms of sociability, and community living. Western middle-class norms, as we can see, have often proved inappropriate.

- The Brazilian government built apartment buildings in Pedregulhos for the inhabitants of the shantytown around Rio de Janeiro and then destroyed their primitive shacks. Several months later, the tenants of the project rebuilt their shacks and moved back.

- A modern low-income community was built by the Hungarian government in Budapest for families from a physically deteriorated district in the city. Many of these people sold their new apartments to middle-class families from the old district and, exchanging apartments, moved back to their old but familiar physical slum.

- Riots in Kingston, Jamaica, in the summer of 1966 reportedly "were partly prompted by resistance to public housing proposed to replace familiar 'slums.'"

Although the cause of these violent reactions is complex and demands investigation, the situation is partly encouraged by socially inadequate, though technically adequate, mass housing.

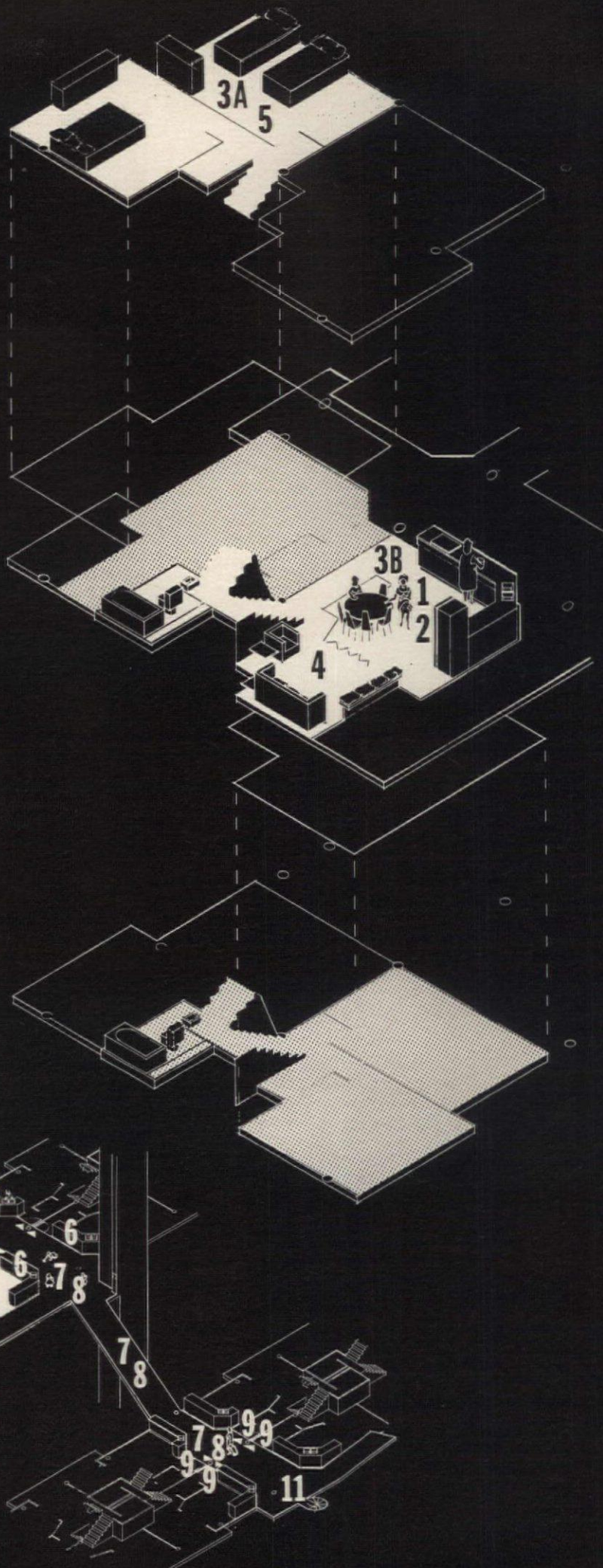
## Unfamiliar cultures

When a person moves from the country or from a small urban neighborhood into urban mass housing, one way of life is cut off for him and another begins. His new environment is often incompatible or hostile to his way of life. When traditional living patterns are denied him, it is always with the implication that they are wrong or inappropriate, and that he must now imitate the new way of life around him. But if left to his own choice, the urban migrant often seeks to retain his cultural identity.

It is easy to document the many socially exclusive towns

OBSERVATIONS AND REQUIREMENTS

- 1 OBS: Cooking is a way for a woman to demonstrate her skill as a mother and housewife, especially to relatives and other women who visit.  
REQ: Area for cooking visible to where women gather.
- 2 OBS: Owning many modern kitchen appliances is important for the standing of the family.  
REQ: Area for using kitchen appliances visible from where women gather socially.
- 3 OBS: The adolescent is away from home a lot. When he is home, he often fights with his parents.  
REQ: (A) Separation of adolescents' area from adult area.  
(B) Direct access to exit from adolescent area.
- 4 OBS: When there are guests, the men separate from the women by going into the living room. Men and women often stay apart the entire evening. Even at the kitchen table, men will stay at one end and women at the other.  
REQ: Privacy between men's and women's social gathering areas.
- 5 OBS: West End working-class men expect to have little to do with child-rearing.  
REQ: Children's areas separate from men's gathering areas.
- 6 OBS: West Enders have a different sense of privacy than middle-class families. They do not mind the crowded tenements if they do not have to climb many stairs.  
REQ: Maximum connection between apartments.
- 7 OBS: West Enders enjoy staying up late and socializing loudly.  
REQ: Connection between apartments.
- 8 OBS: Visual contact between apartments is often the basis for "neighboring."  
REQ: Visual contact between apartments.
- 9 OBS: Neighbors help each other in emergencies.  
REQ: Ready access from apartment to apartment.
- 10 OBS: Unmarried men make frequent visits to relatives' apartments. These visits allow them the small amount of contact with children that is required of them.  
REQ: Apartments for single people not isolated from other apartments.
- 11 OBS: Friendships between different peer-groups are often based on living together and sharing facilities.  
REQ: Common facilities for groups of apartments.



NOTE: Typical floor is either all bedrooms or all living-kitchen areas. Any bedroom area is thus either above or below another apartment's living-kitchen area.

which grew up across the country in the 19th century; it is more difficult to find examples of the successful integration of different cultures within a single city. The assimilation of ethnic groups was a challenge that the American city met with neither grace nor efficiency. In addition, cultural integration may not be felt possible, or desirable, by all minority groups. Instead of asking if America has lost its power of integration, we should ask whether America ever had that power.

For moral as well as for practical reasons, it is vitally important to respect the different customs of groups within our own society, and within urbanizing societies throughout the world. The social parameters of housing are as important as the legal, economic, and physical. The architect and planner need detailed information about the living patterns of people who are of different cultures or subcultures. This information about the functional requirements of urban subcultures, or rural cultures in transition to urban life, can be provided by analyzing the *latent social structure* and living patterns as they relate to the architectural environment. The architect must then be able to translate this information into a form useful in three-dimensional planning.

### Observations

To determine what information about social behavior is useful to the designer we have drawn freely from Herbert Gans's *The Urban Villagers*, an insightful description of working-class Italian life in the West End of Boston. This group was chosen for our study because of the availability of substantial information. Our method could be applied to any group—ethnic, class, age, institutional. Although it was not originally intended to be used by planners, we have put part of Gans's material into guidelines for the designer. From these guidelines we have designed housing which might have replaced the physically substandard housing in the neighborhood Gans studied without destroying

the healthy, low-income community.

The West End has since been torn down by urban renewal. Thus, although we had considerable information about people's behavior, we had little knowledge of their surroundings. To demonstrate the method of using specific research for design, and to place our study in a relevant physical context, we chose an existing site in the North End of Boston. This area is physically, ethnically, and demographically similar to the old West End.

From Gans's report, which followed his living in the West End and studying it over a period of months, we chose statements about the social behavior of the inhabitants. Since these observations were not intended to indicate how the architect should adapt his designs, we translated them into specific requirements for the architect to meet. Some samples of the original observations, and their translation into architectural requirements, follow:

• *Observation*: "Food preparation serves as an example of the woman's skill as a housewife and mother. When company is present, it enables her to display her skills to relatives and peers." *Requirement*: Area for cooking visible to where women visitors gather.

• *Observation*: ". . . the normal tendency is for men and women to split up, the men in one room and the women in another." *Requirement*: Privacy between men's and women's social gathering areas.

• *Observation*: "While the teenage groups were sexually segregated, girls' groups in the West End met near the corners where the boys hung out." *Requirement*: Adolescent girls' areas visible to boys' areas.

We then grouped together the requirements that referred to behavior taking place in the same physical area: apartments, groups of apartments, areas of informal social activity, and commercial areas. The architectural design followed from this. Therefore, on each of the drawings, there is a set of observa-

tions as well as the requirements met by the drawing.

### Relevance of observations

Since Gans did not aim at a specifically architectural orientation, this pilot study and the resulting drawings are not able to cover all aspects of design-related living patterns. Furthermore, it is not quite clear what an "architectural orientation" is. At first we picked those comments we felt could help the architect to meet the social needs of that community. We began with over 200 observations of behavior, most of which described an activity taking place in a physical setting. Many of these, although telling us how the West Enders behaved, were not necessarily helpful to the architect: "Girls from about age ten are expected to help with the household tasks . . . Adolescents and young adults are frequent movie-goers."

Whether or not young girls help around the house does not tell us about the preferred apartment layout or the size of rooms. Nor does the second observation, as it stands, guide the architect's work; he knows no better whether the movie theater should be in the center of the area or its outskirts, or whether the movies downtown are just as good. He must know who else is involved in movie-going. If he knew, for instance, that when going to the movies, teenagers were seen by other young people from the neighborhood—and avoided adults—he would know that the social significance of this activity is related to its physical location in the area. The theater should be visible to teenagers doing other things and not be easily visible from areas of adult activity.

Another type of observation tells us more about physical location: "The peer group meets regularly in the kitchens and living rooms of innumerable West End apartments." But here, too, we do not know what factors, physical or otherwise, make these rooms more desirable than others. Further, we do not know which peer groups meet regularly in the

kitchens and living rooms.

In sum, the observations we found to be useful to the architect possessed the following attributes: 1. a primary actor and his activity; 2. the significant others in the situation; and 3. the relationship between the primary actor and the significant others. This relationship is the means of including or excluding the significant others from the realm of the primary actor.

In the example above, the movie-going teenagers are the actors, the significant others are nonmovie-going teenagers and adults. The relationship in the teenagers' case is visual and auditory connection, and in the adults' case, visual and auditory separation. The field observer, by asking: "Who is doing what, including or excluding whom?" will most likely encompass all of the necessary sociological components in his observations.

Furthermore, in spelling out the relationship—the means of inclusion or exclusion—we get the "requirement" to be fulfilled by the new physical form. This is the link between social behavior and physical form, by which we can specify how an area in which a given activity takes place should be connected to or separated from another area. From the sample list of observations and requirements:

- Area for cooking visible to where women visitors gather.
- Privacy between men's and women's social gathering areas.
- Adolescent girls' areas visible to boys' areas.

These requirements indicate the social connection that the designer can either break or allow to exist. If we see the design process in large part as putting up or leaving out different kinds of barriers, by defining where these walls are socially desirable, we can help the designer meet people's needs.

### The existing environment

The requirements are the design implications of social behavior. We must also see the social implications of the existing physical environment that is to be replaced. Although a simple

2 OBS: After they are ten years old, boys are generally unsupervised while outside, and enjoy the freedom to roam the neighborhood.

REQ: Many places for pedestrian movement.

3 OBS: Groups of teen-agers of different sexes spend a lot of time "hanging around" or looking for something to do. Often they do this with adults or teen-agers of the opposite sex.

REQ: (A) Connection between boys' group and peer groups of other statuses. (B) Connection between boys' and girls' outside areas and apartments.

4 OBS: Teen-agers gather on corners near small stores.

REQ: Areas for informal congregating outside and around commercial areas.

5 OBS: Although boys meet with boys, and girls with girls, the girls meet near the corners where the boys hang out.

REQ: Adolescent girls' areas visible to boys' areas.

6 OBS: Young teen-age girls take care of younger children on the streets.

REQ: Adolescent girls' areas near children's play areas.

7 OBS: Both men and women use dress as a means of self-expression, spending much money on clothes.

REQ: General visibility among pedestrian, apartment, commercial, and recreational areas.

8 OBS: Men wash their cars on the streets as often as once a week. For men, the car is important as a means of expressing their identity.

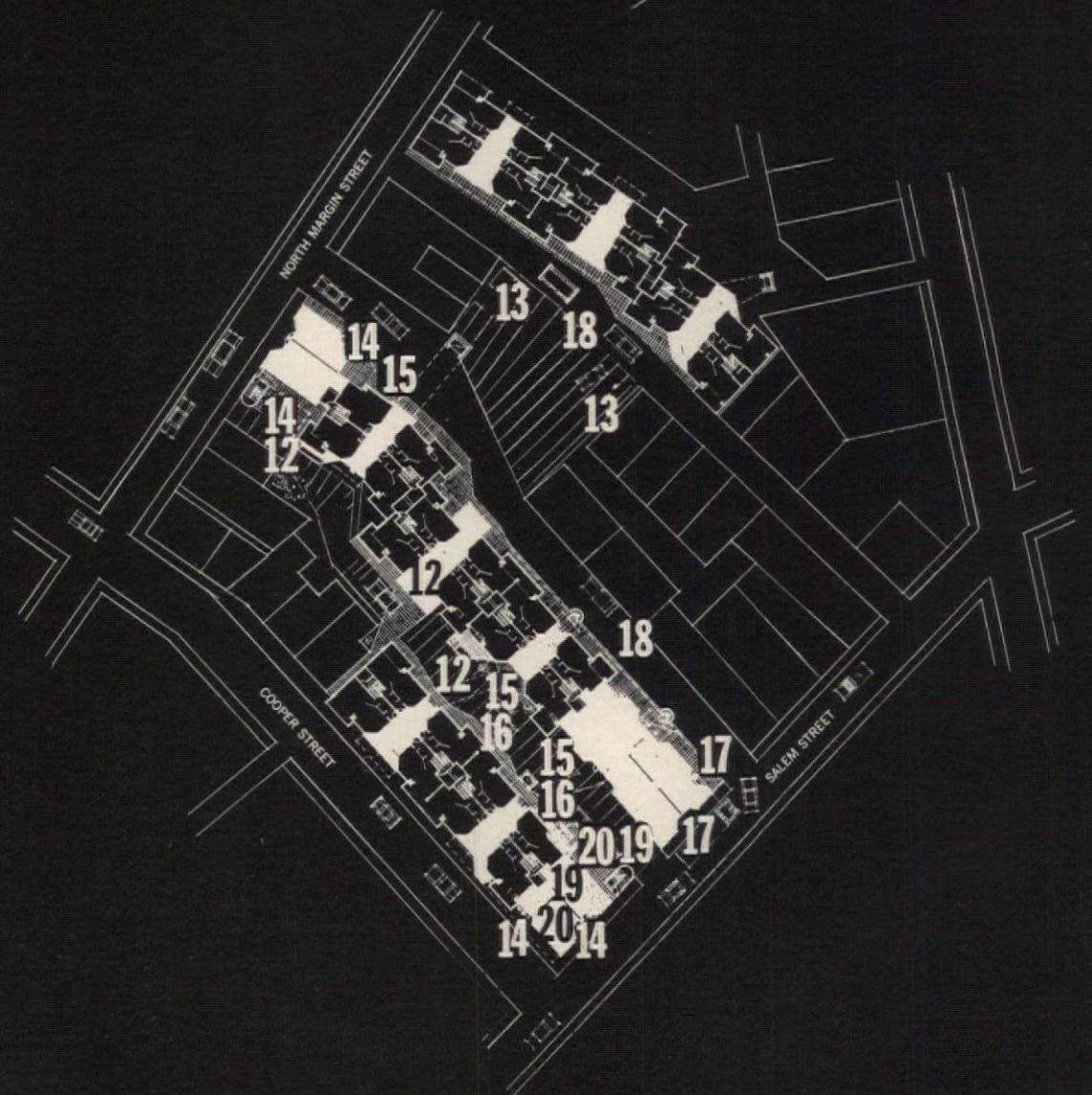
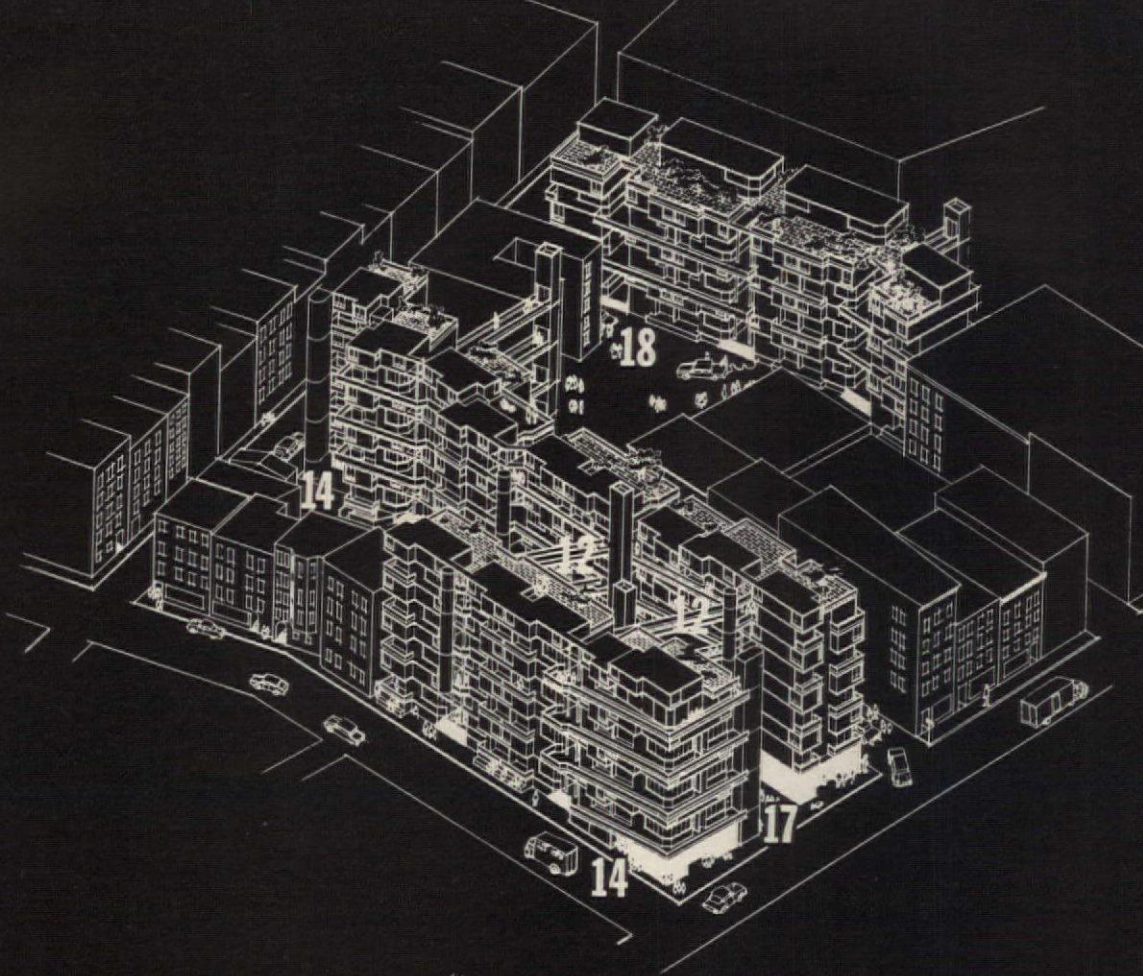
REQ: Visibility for areas related to automobiles.

9 OBS: Bars and luncheonettes are places to exchange news and gossip, as well as message centers for regular customers.

REQ: (A) Commercial area connected to living areas. (B) Commercial area visible from street and other commercial areas.

20 OBS: Women socialize while shopping.

REQ: Commercial areas visible to and from streets.



description is necessary—apartment layouts, relationship among spaces, size of rooms, where the stores are, where the playground is—this is not sufficient. Two things must be established: 1. Is the existing physical form compatible with the prevalent social patterns? and 2. What patterns does the physical form make difficult or easy?

Some indicators of *incompatibility* between the existing physical form and social needs are: changes made in the original form—windows painted black, doors nailed shut, ramps built over stairs; aspects of the environment totally unused—playgrounds, balconies, park benches; and aspects falsely used—children playing in the street instead of a nearby park, dinner cooked on the fire escape, the car parked in the living room.

Indicators of *compatibility*, on the other hand, will be the absence of these changes in form or use, as well as little destruction, much use, relatively low turnover, and conscious efforts at beautification by the inhabitants.

### Avoiding mistakes

To find out what patterns the physical form allows, we translate an observation of the existing physical environment into the requirement it seems to fulfill. If that aspect is compatible, the requirement is one to be fulfilled by new designs, while the requirements reflected in incompatible form are clearly to be avoided. By taking into account both the social implications of the environment and the indicators of conflict, we can avoid present mistakes.

The field observer could apply the method we have described in the following ways: 1. *Looking at behavior*. He notices repeatedly that boys play ball in the street. Looking for the significant others in the situation, he finds that girls of the same age often sit around watching the boys, while adults stop to look and comment. The primary actors—the boys—are related visually to two groups of significant others—the girls and the adults.

This complete observation is translated into the requirement: boys' play areas should be visibly connected to where the girls hang out and to where adults are. If other observations indicate a similar requirement, the designer might build a playground near the shopping area or subway station, as well as near the stoops where young girls get together. 2. *Looking at the environment*. A playground with basketball courts is far from both the busy life of the street and from the door stoops and shops where the teenage girls hang out. By asking, "Who can play in the playground, including or excluding whom?" we translate this simple observation into the social pattern it allows: teenagers, mostly male, can play basketball there. While other boys, both younger and older, may be included, both adults and girls of the same age are excluded. Since this playground is rarely used by anyone, it is evident that we should avoid the separation of the boys' play area from that of the girls' and from "where the [adult] action is." More simply, we come up with the previous requirement: The boys' play area should be visibly connected to these other places.

This observation alone would, of course, not be enough to make a final judgment. Both repeated observations and the use of other techniques—surveying attitudes, informal interviewing, counting how often people do things—are necessary to validate findings.

### Appropriateness of the method

Although it should be augmented with survey techniques, this observational method is very different in content. Most people will answer questions about a proposed plan in terms of what they have experienced or what they want. When the respondent is a potential buyer in a housing market, it is important to know his preferences. But this often has little to do with the latent functions of behavior that are integral to the social stability of a group. We therefore distinguish these conscious wants from unconscious needs.

This approach and method is appropriate for both new and redeveloped urban areas. It may be applied to people already living in cities and to rural immigrants. Its value in the last case should be clear. When people move from the country to the city or from primitive to more modern housing, their patterns of living undergo strain. Taking these patterns into account when planning new housing will not limit behavior, but, by accommodating familiar life styles and providing alternatives, it will make the transition easier for them.

In urban redevelopment it has been argued that, when the architect tries to reinforce the social structure, he reinforces the pathology of the slum. The distinction between a physical and a social slum must be clarified. A physical slum refers to an area with a large percentage of substandard housing. A social slum, on the other hand, might be characterized by a loosely connected social structure, anomie inhabitants and a social pathology reflected in violent crime, suicide, drug addiction, and other deviant behavior. Often these two go together, but often they do not. City planners, as they did in the West End, often tear down a physical slum and at the same time tear apart a healthy social climate in which social pathologies are relatively low and people take an active part and interest in the community. Applying the approach of this paper may not enable the architect to revive this healthy social atmosphere, but it may help him to avoid contributing to its decline and to the eventual development of social as well as physical slums.

We must be aware that the designer has only limited control over the social lives of the people in his buildings. He can neither limit people's social behavior nor force them to change by building a socially inhibiting environment. Their living patterns will stay the same or change regardless of the physical environment in which they live. If the designer does try to limit behavior when change is imminent, or to force change when the inhabitants neither

want it or are ready for it, he can cause potentially harmful conflict. This conflict can have several consequences: the physical environment may be altered, misused, or not used at all, and the people may suffer social and psychological stress. To stop this we would have the designer understand the social behavior of those who are to live in his buildings, and try to avoid putting up barriers to their way of life in the physical environment.

### Design freedom

The results of this type of research define a minimum set of social behavior patterns which the physical structure should not prohibit. The means that one designer uses to achieve this end as well as the number of non-conflicting alternatives he offers is in no way limited. For example, to separate the cooking area from the social area we use a folding partition. This allows the alternative of connecting these areas. Many different walls, both more stationary and more adaptable, could meet the same requirement.

The social parameters specified by these requirements are ideals; it is difficult to meet them all equally well. One essential next step is to determine the hierarchy of requirements, so that there is a basis for making choices when conflict occurs among the requirements. We must, therefore, determine the relative importance of the behavior's latent function to the social stability of the group. We might also define the architectural means for separating or connecting the activities related in the requirements.

In applying this research-design method we must consider that the living patterns of those for whom we design will eventually change. But any change will have its starting point in existing social patterns. If the Italian community of Gans's research becomes more middle-class it will still retain many of its present social customs. In any case, to design now in a way that we know will not fit existing life styles is to make the hypothetical misfit of the future a reality of the present.

**12 OBS:** After they are ten years old, boys are generally unsupervised while outside, and enjoy the freedom to roam the neighborhood.

**REQ:** Many places for pedestrian movement.

**13 OBS:** Groups of teen-agers of different sexes spend a lot of time "hanging around" or looking for something to do. Often they do this with adults or teen-agers of the opposite sex.

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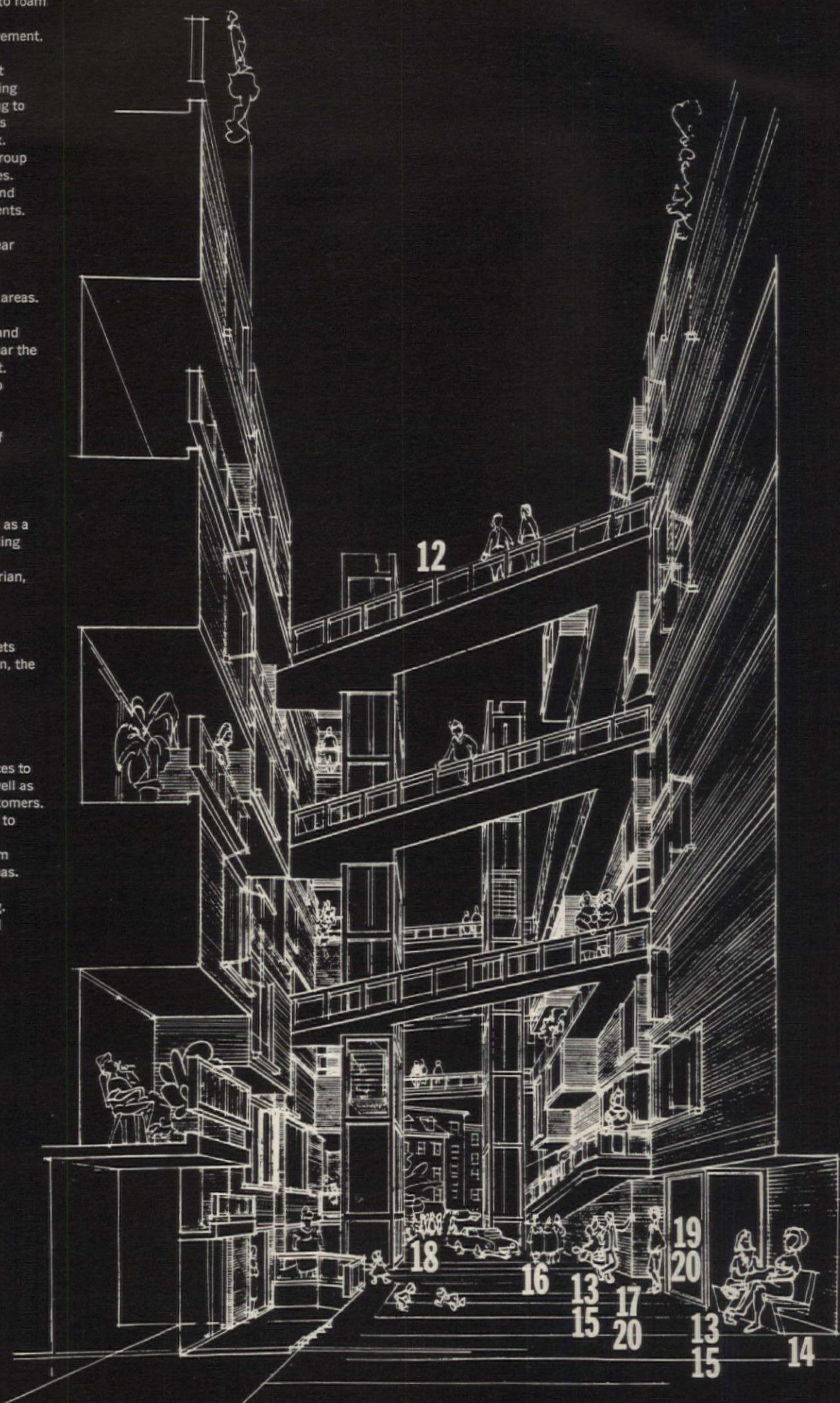
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