Lang, Jon. "Privacy . . ." from Creating Architectural Theory
New York: Van Nostrand Reinhold: 1987. 145-156

14

PRIVACY, TERRITORIALITY, AND PERSONAL SPACE—PROXEMIC THEORY

A piece of furniture, a work station, a room, a building, or a landscape may be very well designed from an anthropometric viewpoint but still be deemed "uncomfortable" by its users (Hall 1963). The purpose of this chapter is to bring attention to the subtler factors of privacy, personal space, and territorial behavior that affect the perceptions of environmental comfort and quality. The need for privacy, personal space, and territory is universal and contributes to the meeting of other human needs such as security, affiliation, and esteem (Hall 1959, Goffman 1963, Lyman and Scott 1967, Skaburskis 1974, Sommer 1969, Altman 1975). The form in which the need is expressed and the mechanisms used for its attainment are manifested very differently in different societies, however (Hall 1966, Altman and Chemers 1980).

Some of the buildings most admired by architects have not been very good at meeting privacy and territorial needs. The reason is simple. Most aspects of these behaviors occur subconsciously. If we are unaware of a behavior is it impossible to consider it explicitly in design. One of the major contributions of behavioral scientists has been to bring the attention of designers to these behaviors and the extent to which they need to be considered in design. One of the objectives of environmental design theory is to describe and explain how the layout of the environment affords these mechanisms and the importance of designing environments that do afford them.

PRIVACY

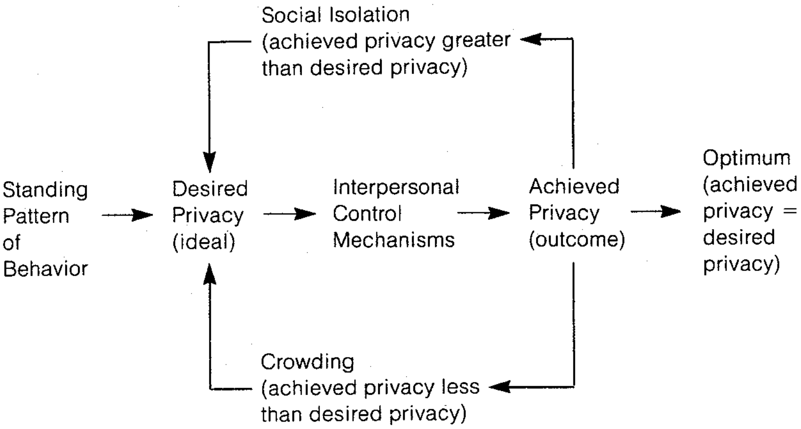
The concepts of privacy, territorial behavior, and personal space are closely linked. Irwin Altman (1975) proposes a conceptual organizing model in which he considers personal space and territoriality to be major mechanisms for attaining privacy. Figure 14-1 shows the dynamic nature of privacy. People strive to get the appropriate level of privacy for the activity in which they are engaged. The question then arises: What is meant by privacy?

Definitions of privacy have one thing in common. They stress that it has to do with the ability of individuals or groups to control their visual, auditory, and olfactory interactions with others. For example, Amos Rapoport (1977) defines it as "the ability to control interactions, to have options, and to achieve desired interactions." Privacy should not be seen simply as the physical withdrawal of a person from others in a quest for seclusion (Schwartz 1968).

There are several kinds of privacy, each of which serves a different purpose. Westin (1970) identifies four types: *solitude,* the state of being free from the observation of others; *intimacy,* the state of being with another person but free from the outside world; *anonymity,* the state of being unknown even in a crowd; and *reserve,* the state in which a person employs psychological barriers to control unwanted intrusion. Westin also identifies four purposes served by privacy: it provides for *personal autonomy,* it allows for the *release of emotions,* it helps *self-evaluation,* and it limits and protects *communication.* Thus, privacy is important in terms of the relationship between an individual or a group and the rest of society.

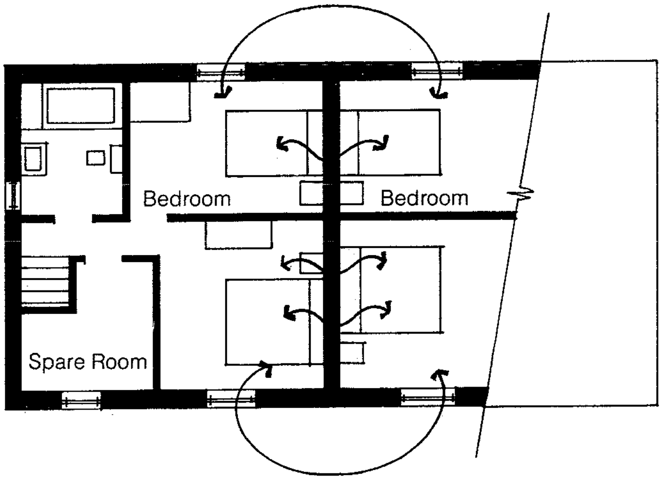
The type and degree of privacy desired depends on the standing pattern of behavior, on the cultural context, and on the personality and aspirations of the individual involved. The use of walls, screens, symbolic and real territorial demarcators, and distance are all mechanisms for attaining privacy which the environmental designer can control to some extent. The qualities of surfaces (translucent, transparent, sound-absorbing) cut off the flow of information from one area to another to a lesser or greater degree. One of the major causes of complaint about the built environment is its failure to provide desired levels of privacy.

Leo Kuper's analysis (1953) of an English housing development demonstrates some of the difficulties in attaining privacy requirements. While visual privacy was attained within the semidetached houses shown in figure 14-2, auditory privacy was not. The party wall was inadequate for this purpose and the window and door locations made it difficult to locate the beds in any position other than the one shown. People complained that they heard too much of what went on in their neighbor's house, and presumably that their neighbor's presence inhibited their own behavior.


Social Isolation
(achieved privacy greater than desired privacy)
Standing Pattern of Behavior
Desired Privacy (ideal)
Interpersonal Control Mechanisms
Achieved Privacy (outcome)
Optimum (achieved privacy = desired privacy)
Crowding
(achieved privacy less than desired privacy)

Source: Adapted from Altman (1975)

14-1. A Dynamic Model of Privacy.


Bedroom
Bedroom
Spare Room

Source: Kuper (1953)

14-2. The Infringement of Privacy Requirements.

Crowding

Too much privacy leads to feelings of social isolation, and too little privacy leads to subjective feelings of crowding (Altman 1975). Crowding is stressful because it limits personal autonomy and expression and breaks down desired communication patterns. It must be distinguished from population *density*, which usually is measured in terms of the number of people per unit area (people/hectare, for example). Crowding is associated with a feeling of lack of control over the environment. It is affected by the individual's perception of the degree of control others have over the intrusions they are making (Rapoport 1977). Thus, the noise from a radio or lawn mower is perceived to be more intrusive than higher levels of traffic noise because a radio can be turned down and a lawn can be mowed at a different time.

Crowded conditions lead to negative behaviors because they are related causally to "social overload." Russell Murray (1976) suggests that such behaviors as highly punitive actions by parents toward children are related to crowded conditions. Density, on the other hand, does not seem to be *causally* linked to such behaviors. The important factors are that behavior settings should not be overmanned—that is, the number of people should be appropriate to the standing pattern of behavior—and that people should have sufficient personal space and territorial control over what is important to them (Bechtel 1977).

PERSONAL SPACE

Providing for *personal space* needs is a basic mechanism for the attainment of privacy. Personal space should not be confused with *personalized space*, although in everyday language the terms are used interchangeably. The former refers to the distance that animals of the same noncontact species maintain among themselves except for the most intimate interactions (Hall 1966, Horowitz, Duff, and Stratton 1970, Becker and Mayo 1971). The latter refers to an area of the natural or built environment that has been marked as a territory (Becker 1978).

The concept of personal space came to the attention of environmental designers with the publication of Robert Sommer's book, *Personal Space: The Behavioral Basis of Design* (1969). In it, Sommer defined personal space as follows:

> Personal space refers to an area with an invisible boundary surrounding the person's body into which intruders may not come. Like the porcupine in Schopenhauer's fable, people like to be close enough to obtain warmth and comradeship but far enough away to avoid pricking one another. Personal space is not necessarily spherical in shape, nor does it extend equally in all directions . . . it has been likened to a snail shell, a soap bubble, an aura and breathing room.

If another enters this space, an individual feels encroached upon and shows displeasure (Goffman 1963). Even when outward signs of displeasure are hidden, intrusions lead to physiological responses such as heightened skin conductance levels. In work situations, this encroachment can lead to task impairment (Evans and Howard 1973). When a person is absorbed in a task or when close cooperation is required, however, this is not the case. People also seek intimacy with others and can be invited to infringe personal space boundaries.

While it is interesting as a behavioral variable, personal space does not contribute as much to the understanding of the built environment as Sommer originally thought (see Sommer 1974a). An understanding of personal space is, nevertheless, important in the design of fixed-feature environments where seating is built in. Examples of these are airport and bus terminal waiting areas and theater and park seating (Hall 1963). In other situations, people generally can array themselves comfortably or move the furniture around. Movable seats are one characteristic of many well-liked public places (Whyte 1980).

There are situations where the unwanted infringement of personal space is tolerated (Hall 1966). This occurs in behavior settings such as elevators, theater foyers, subways, and counters at fast-food restaurants. The costs to the individual are acceptable (Helmreich 1974). There are, however, behavioral mechanisms that are invoked to maintain privacy. Eye contact and conversation are avoided—people employ reserve. Many people, nevertheless, feel uncomfortable in such situations.

PERSONALIZATION AND PERSONALIZED SPACE

Personalization refers to the marking of places, or the accretion of objects within them, and thereby the staking of claim to them (see Becker 1978). The process may be a conscious one, but it is often unconscious. The behavior is a manifestation of a desire for territorial control and an expression of aesthetic tastes as well as the result of an effort to make the environment fit activity patterns better.

Some environments can be personalized without damage to them or without difficult surgery; others, called "hard architecture" by Sommer

(1974b), are more difficult to personalize. The degree to which a place is personalized depends on the affordances of the materials of its structure, the intensity of the inhabitants' need to change it, how large a stake they have in the place, and the social norms and administrative rules of the context (Rapoport 1967, Goetze 1968). In areas of homogeneous populations, streets and neighborhoods are personalized in such a way that the whole area becomes a cultural artifact of the group.

The built environment is full of examples of adaptations and personalizations. Philippe Boudon (1972) reports on the extensive changes made to Le Corbusier's Quartiers Modernes Frugès at Pessac near Bordeaux. The project consisted of seventy homogeneous "cubist" structures which have proved to be highly personalizable. The walls have been painted a wide variety of colors, many terraces and the spaces below the stilt-supported slabs have been enclosed. The original "pure" form has been lost, but what appeared to be hard architecture has turned out to be "soft."

Similar changes were made with a very different housing type in Levittown, New Jersey. Herbert Gans (1967) notes:

> Aesthetic diversity is preferred, however, and people talked about moving into a custom-built house in the future when they could afford it. Meanwhile, they made internal and external alterations in the Levit house to reduce the sameness and to place a personal stamp on the property.

The personalization of places thus serves many purposes: psychological security and symbolic aesthetic as well the adaptation of the environment to meet the needs of specific activity patterns. Above all, however, personalization marks territory.

TERRITORIALITY

Ethologists (such as Howard 1920, Nice 1941) were the first to record the territorial behavior of animals. The application of territoriality to human behavior is more recent. Leon Pastalan (1970) gives the following definition of a human territory:

> A territory is a delimited space that a person or a group uses and defends as an exclusive preserve. It involves psychological identification with a place, symbolized by attitudes of possessiveness and arrangements of objects in the area.

Irwin Altman's identification (1975) of territory as one mechanism for attaining privacy comes through in his definition of territorial behavior:

> Territorial behavior is a self-other boundary regulation mechanism that involves personalization of or marking a place or object and communication that it is owned by a person or group.

These definitions suggest some basic characteristics of territories: (1) the ownership of or rights to a place, (2) the personalization or marking of an area, (3) the right to defend against intrusion, and (4) the serving of several functions ranging from the meeting of basic physiological needs to the satisfaction of cognitive and aesthetic needs.

Humans and animals exhibit territorial behavior in different ways (Altman 1975). In animals it is biologically based. It is a localized possessiveness of place; marking is by urination and other physiological means, and defense is by fighting (often symbolic). In humans, even if territorial behavior is biologically based (Dubos 1965, Ardrey 1966), it is culturally biased. Human territories vary considerably in size and locale; not only are they of place but of artifacts and ideas as well, and they are marked by a wide array of physical barriers and symbolic markers. Humans simply have a much larger number of territories and ways of dealing with them.

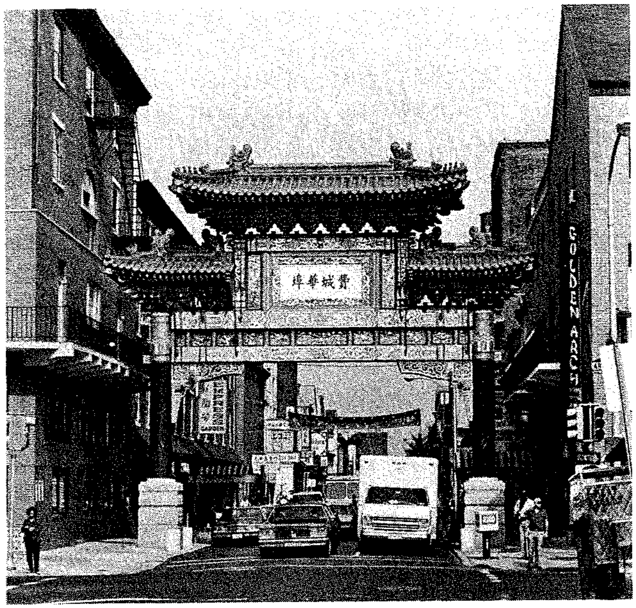
The Functions of Territories

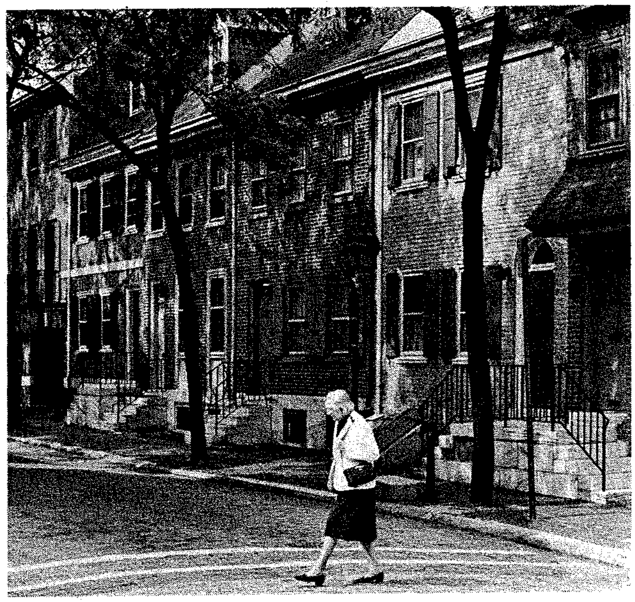
The ability of the layout of the environment to afford privacy through territorial control is important because it allows the fulfillment of some basic human needs: the need for *identity*, the need for *stimulation*, and the need for *security*. To these, Hussein El-Sharkawy (1979) adds a fourth: the need for a *frame of reference*. Although these are recurring themes in the architectural literature, the territorial function of the built environment fell outside the scope of the modern architectural concept of functionalism.

Identity—which is associated with the needs for belonging, self-esteem, and self-actualization identified by Maslow—is the need to know who one is and what role one plays in society. Stimulation needs are those concerned with self-fulfillment and self-actualization. Security needs take many forms: to be free from censure, to be free from outside attack, and to possess self-confidence. Frame-of-reference needs are those involving the maintenance of one's relationship with others and the surrounding environment. Ethologists explain these needs in terms of our biological pasts; behaviorists, in terms of reinforcement patterns within a culture; Jungian psychologists, in terms of the search for the "psychic truth."

A number of theoretical statements (for instance Sommer 1969, Altman, Nelson, and Lett

1


2


3

14-3. Symbolic Territorial Demarcators.
The ways people demarcate territories vary considerably. The demarcations may consist of real barriers such as doors and walls or they may be symbolic markers such as a sign (1), or a structure associated with an ethnic group (2), or a change in the materials of floors, or lines painted on a street (3). These markers all differentiate between one area and another and identify them with the people who control them—individuals or groups. Markers that are unrecognized do not form part of the effective environment of people.

1972, Edney 1976) explain the need for territory in terms of self-other boundary-regulating mechanisms that parallel Jungian concepts of the *self*. Altman (1975) describes territories not only as a means of attaining privacy but also as a means of stabilizing social relationships. Each of the behavior settings we inhabit has a territorial component associated with it, whether it is a residential accommodation or a work space (Becker 1981, 1982). Territorial considerations are more important in some instances than in others, however. Our lives are spent within a system of territorial definitions.

Systems of Human Territories

Recent efforts to identify types of human territories are of interest to environmental designers because they deal with people's desire to control and personalize space and behavior. J. Douglas Porteous (1977) identifies three spatial levels nested within each other: *personal space* as described above; *home base,* those spaces that are defended actively, whether they are work or residential or simply neighborhood areas; and *home range,* the behavior settings that form part of a person's life (Anderson and Tindall 1972). Some writers (such as Roos 1968, Rapoport 1977) introduce the concept of *jurisdiction* to denote the temporary ownership and control of a setting, in contrast to settings that are held more permanently by an individual or group. Jurisdictions generally are not personalized.

Hussein El-Sharkawy (1979) identifies four types of territory in his effort to build a model that deals specifically with the concerns of environmental design. These are: *attached, central, supporting,* and *peripheral.* An attached territory is one's personal "space bubble." Central territories, such as one's home, a student's room, or a work station, are those that are likely to be highly personalized unless there is strong administrative opposition to it. They are also highly defended. Oscar Newman (1972, 1979) refers to these as *private space.* Supporting territories are either *semiprivate* or *semipublic.* The former consist of places such as residents' lounges in dormitories, swimming pools in residential complexes, or areas of privately owned space, like the front lawns of houses, that are under the surveillance of others; the latter include such places as corner stores, local taverns, and sidewalks in front of houses. Semiprivate spaces tend to be owned in association, while semipublic are not owned by the users, who, nevertheless, still feel they have some possession over them. Peripheral territories are *public space.* They are areas that may be used by individuals or a group but are not possessed or personalized or claimed by them. The way the environment is laid out directly affects people's perceptions of what kind of space they are in. These perceptions are highly culture-specific.

Territorial Behavior and the Built Environment

There are many ways in which physical elements are used to demarcate territories. As an example of a central territory, the single-family detached home is "its own statement of a territorial claim" (Newman 1975). It represents the image of privacy, uniqueness, and protection held by many people in the United States, Canada, England, and Australia (Cooper 1974)—if not universally. Its continued popularity is due in part to the clarity with which territorial claims can be marked. Fences and hedges (particularly in backyards) and other symbols of boundary are easy to add.

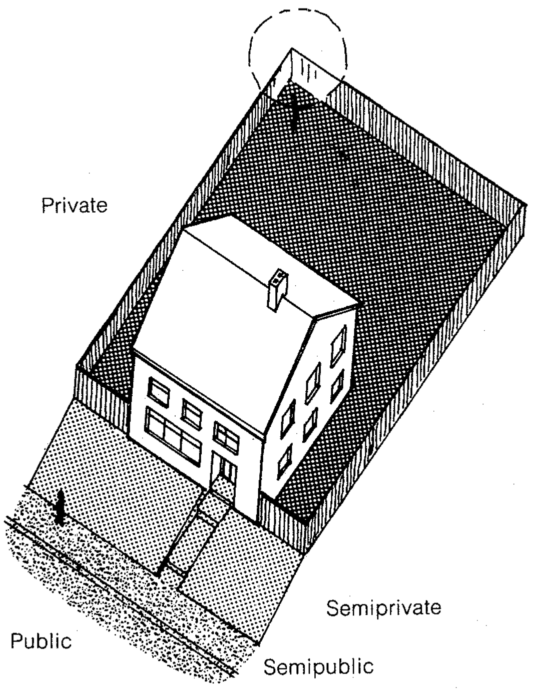
The single-family detached home is also one that provides supporting territories without much difficulty. Supporting territories come in many forms: a frontyard, a porch, or even a flight of steps that separates the public domain from the private one by means of a semiprivate area. Clare Cooper (1974) suggests that the house is divided into two components: an intimate interior and a public exterior—"the self as viewed from within" and "the self we choose to display to others." In some instances this break occurs at the front door, in others it is at the point where semiprivate interior spaces are separated from truly private spaces.

The pattern of single-family homes almost inevitably provides a clear hierarchy of territories—from public to private, or, in El-Sharkawy's terms, from central to peripheral. Oscar Newman (1972, 1979) believes that such hierarchies of territory, or gradients in privacy, are essential to a feeling of well-being and help provide people with a sense of security (see fig. 14-4). This seems to be true of people within the mainstream of North American culture.

The typical double-loaded-corridor apartment building (such as the Van Dyke Houses, New York City) affords very poor territorial demarcators (Newman 1972). The private space, or central territory, consists of the apartment unit and stops at the door. Unlike the single-family house, there is no transition space between the public space (the corridor) and the private space (the unit). This type of layout is not an inevitable characteristic of high-rise residential buildings, however.

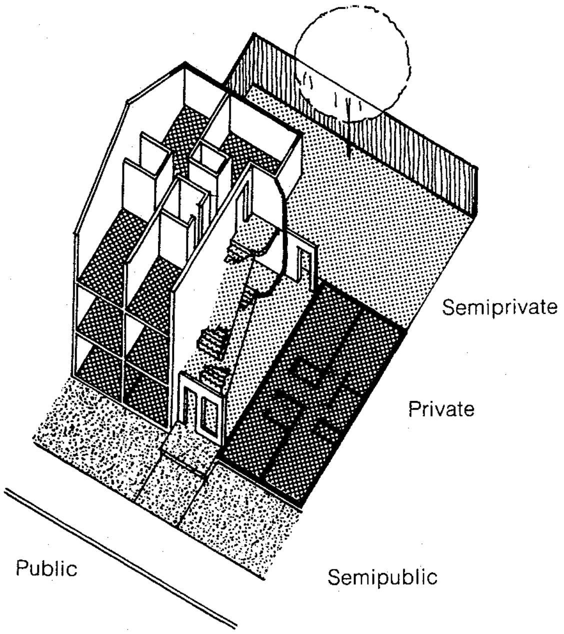
Newman (1972) provides a number of examples of high-rise buildings that do have a clear hierarchy of territories as part of their basic structure. Stapleton Houses on Staten Island and Riverbend Houses in Manhattan are two of them. In Stapleton Houses, entrance doors of corridors are recessed affording tiny transition buffers between semipublic and private territories. The Riverbend example is more complex. It consists of two-story duplex apartments on single-loaded corridors. Each apartment opens onto a patio, which serves as a transitional space. A wall 4 feet high on the inside separates the patio from a public walkway. There are a couple of steps from the apartment door down to the walkway, so the patio wall is 6 feet high on the walkway side. The steps serve as a symbolic gateway, and the difference in elevation between patio and walkway affords privacy on the patio side as well as visual control over the walkway.

The campus dormitory is another example of a residential building type in which territorial-control factors make a major difference in residents' satisfaction levels. Where two students share a room, it is often difficult to create separate territories because the furniture is built in such a way that access to areas of the room cannot be controlled because they do not belong clearly to one or the other of the roommates (Sommer 1974b). This kind of arrangement is not inevitable either.



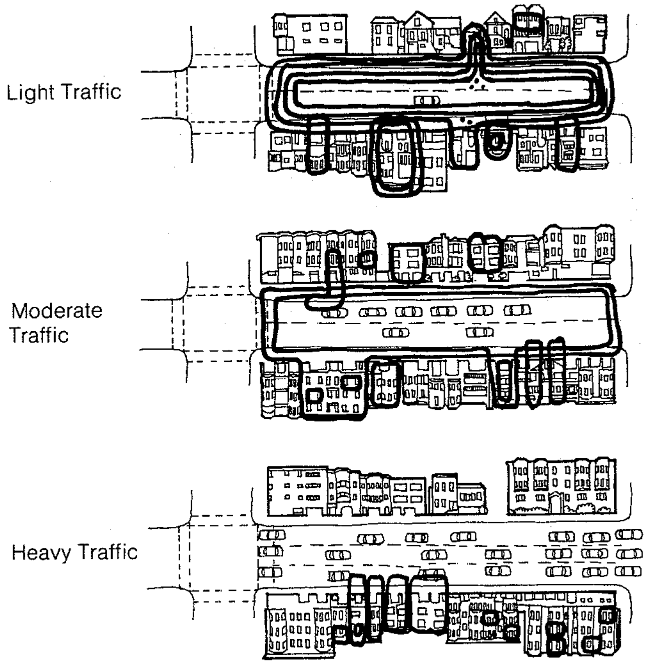
1

Source: Newman (1979)



2

Source: Newman (1979)



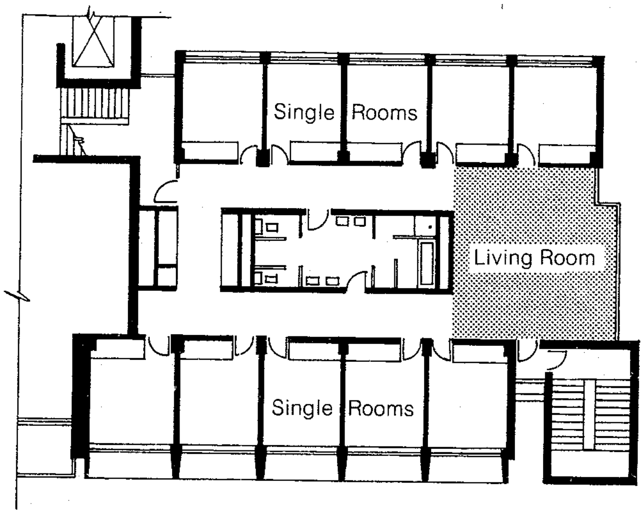
3

Source: Adapted from Appleyard and Lintell (1972)

14-4. Territorial Hierarchies.
It is relatively easy to achieve a clear territorial hierarchy in a single-family house as indicated in (1). In multifamily housing a clear gradation of territories is more difficult to achieve (2). In both cases, whether or not a semipublic space would be perceived as such depends not only on the house-street relationship but also on the amount of traffic on the street (3). If there is heavy traffic, the *claim* over the exterior space is substantially reduced (Appleyard and Lintell 1972, Newman 1979).

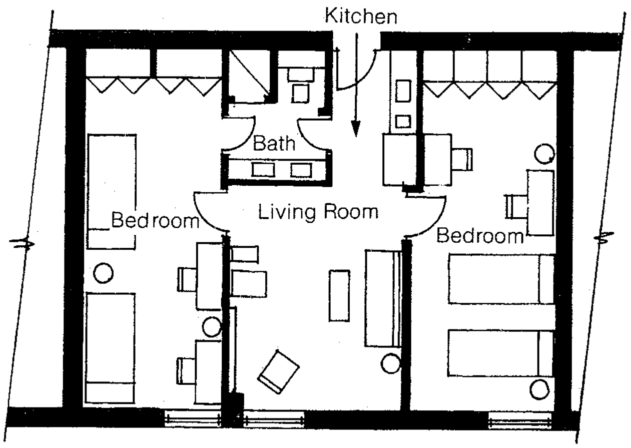
The suites of rooms in International House in Philadelphia have common living and toilet facilities (see fig. 14-5). The rooms are thus private spaces while the living areas are semiprivate because they are only accessible to the residents of the residential units. The members of the suite have free access to it but others have to be invited in (El-Sharkawy 1979). Sim van der Ryn and Murray Silverstein (1967) suggest similar configuration for dormitory buildings in their study of student housing at Berkeley. In the multicultural context of International House there are some residents who find the sharing of bathrooms very difficult, but even for them the territorial hierarchy works well.

These hierarchies of territories seem particularly important in societies where there is a great need for security. In many areas of the United States, for instance, social mechanisms for deterring crime are not very effective. Oscar Newman has a number of hypotheses about how these mechanisms might be restored through enhancing the territorial control that individuals and groups have over their environments. These control mechanisms are bundled together into the concept of *defensible space*.


Single
Rooms
Living Room
Single
Rooms

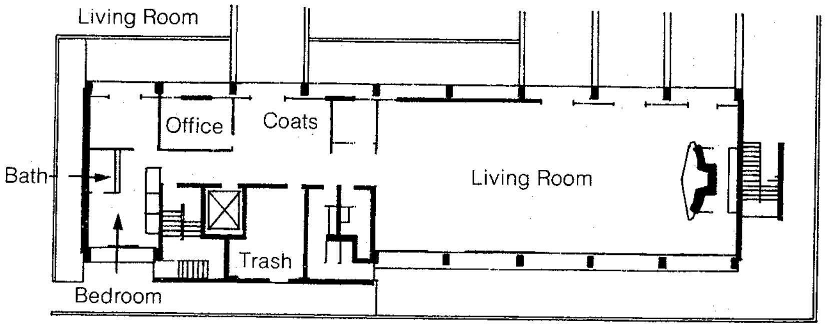
Source: el-Sharkawy (1979)

1

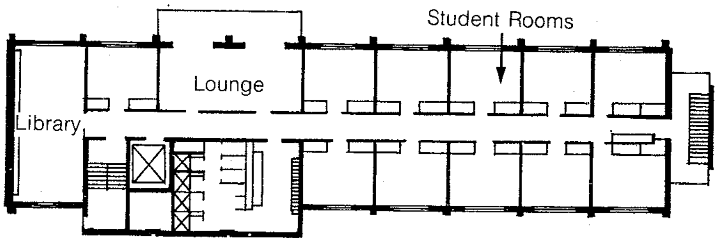

Kitchen
Bath
Bedroom
Living Room
Bedroom

3

GROUND-FLOOR PLAN


Living Room
Office
Coats
Bath
Living Room
Trash
Bedroom

TYPICAL FLOOR PLAN


Student Rooms
Lounge
Library

Source: Van der Ryn and Silverstein (1967)

2

14-5. Territoriality in Buildings.
The layout of some buildings affords territorial behavior much more easily than others. Thus the layout of International House, Philadelphia suites (1) clearly demarcates private, semiprivate, and semipublic territories, whereas a more typical dormitory floor plan (2) does not. Student apartment layouts such as that shown in (3) are difficult to territorialize because of the placement of built-in furniture, doors, and windows. In a study of dorms at Berkeley (Van der Ryn and Silverstein 1967), 94% of the population sample expressed a desire for rooms easier to territorialize.

DEFENSIBLE SPACE

Newman (1972) defines defensible space as follows :

> Defensible space is a surrogate term for the range of mechanisms—real and symbolic barriers, strongly defined areas of influence, and improved opportunities for surveillance—that combine to bring an environment under the control of its residents. A *defensible space* is a living residential environment which can be employed by its inhabitants for the enhancement of their lives while providing security for their families, neighbors and friends.

A defensible space is thus one whose users perceive it as affording easy recognition and control of the activities that take place within it. The assumption is that there is a predisposition, within the culture of the United States, at least, for people to exert such a control over the environment. The layout of the built environment will not cause such a predisposition to exist but it may arouse latent predispositions that will come into play once the opportunity exists (see also Gardiner 1978).

Newman provides considerable statistical evidence to support the observation that some environmental structures express a social fabric better than others. These data were obtained from interviews with the inhabitants of housing areas and project managers, from the records of crime types kept by the New York City Housing Authority, and from observations of different patterns of housing layouts. From the study of the relationships between design characteristics and crime statistics, it was possible to conclude that some building patterns afford criminal activity more readily than others.

Newman identifies four characteristics of the layout of the environment that on their own or in conjunction with each other create defensible space (see fig. 14-6). They are:

1. a clear hierarchical definition of territories, from public to semipublic, semiprivate to private;
2. the positioning of doors and windows to provide natural surveillance opportunities over entrances and open areas;
3. the use of building forms and materials that are not associated peculiarly with vulnerable populations; and
4. the location of residential developments in "functionally sympathetic" areas where residents are not threatened.

The first of these can be established through the use of symbolic barriers such as surface textures, steps, lamp posts, and bollards, or of real barriers such as walls. It works because it subdivides a development into zones over which people establish proprietary interests. The second occurs when people can see the public and semipublic areas of their environments as part of their day-to-day activities (Jacobs 1961, Angel 1968, Newman 1972); this reduces the possibility of unseen antisocial behavior. The third occurs when the massing, site planning, and materials have positive associations for people as predicted by balance-theory models (F. Heider 1946). The fourth reduces sources of antisocial behavior. It must be remembered that the layout of the environment does not cause or stop criminal activity. The roots of criminal activity lie in the social and cultural structure and environment of a society.

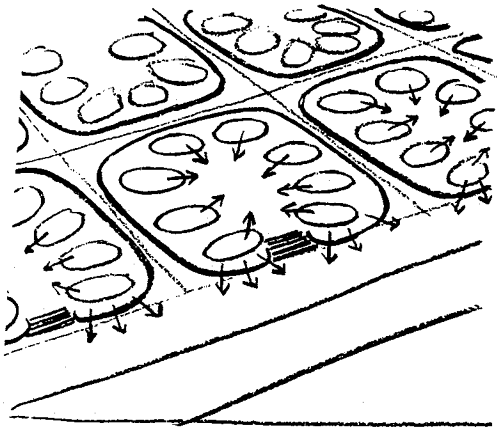
Recent research (Brower 1980, Brower, Dockett, and Taylor 1983), suggests that symbolic barriers are not very effective in areas of high perceived threat unless there is also a clear physical presence of residents. Under high levels of threat more redundant markers are needed to establish boundaries and claims. Apparently such elements as plantings are stronger markers of claim than artifacts such as wall decorations. The hypothesis is that plantings display a higher degree of concern because they display a greater degree of involvement with the environment; litter, weeds, and trash are marks of a lack of care. Fences are the best markers.

Newman's findings are important because, as Maslow suggests, security is a fundamental human need. For many low-income groups who live in what amounts to a hostile environment, security is a very pressing need (Rainwater 1966). Newman suggests that the ramifications of his work are even more important than they might appear. If one is insecure in one's environment then a negative attitude toward oneself, one's environment, and one's capabilities manifests itself in negative attitudes toward such things as job-seeking.

INDIVIDUAL DIFFERENCES IN PRIVACY DEMANDS

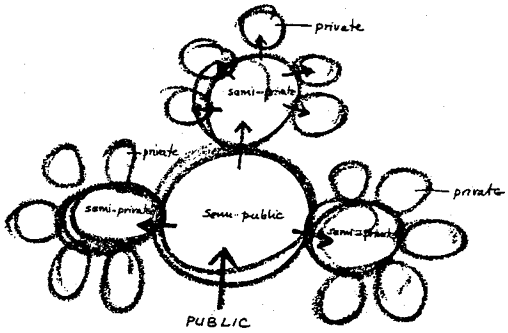
There are differences in privacy needs and in the mechanisms used to fulfill them from person to person and from group to group. Some of these differences have been researched systematically and documented but others remain as untested hypotheses based on anecdotal evidence.

Those individuals with organismic frailties are especially vulnerable to antisocial behavior. Their behavior is very much affected by their perceptions of opportunities for others to subject them to such



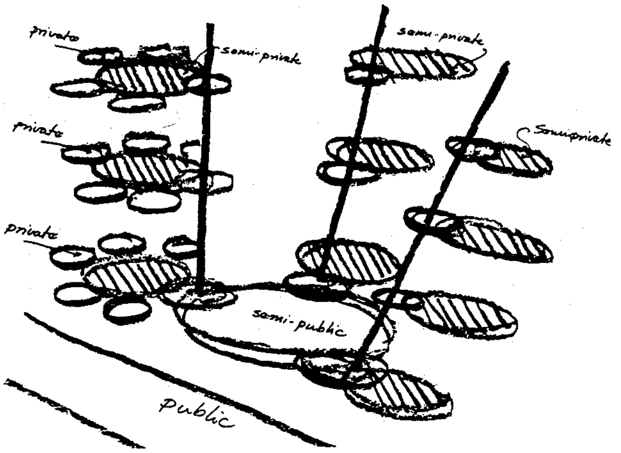
1

Source: Newman (1974)



2

Source: Newman (1974)



3

Source: Newman (1974)

14-6. Defensible Space.
Oscar Newman (1972) uses three diagrams to illustrate his basic hypotheses. In (1) the combination of territorial definition and natural surveillance opportunities is displayed conceptually. The hierarchy of territories from public to private that Newman found necessary to enable people to establish control over their environment is shown in (2), while the use of the hierarchy in high-rise residential buildings is shown in (3).

behavior (Lawton 1975). Their defensible-space needs are high. Similarly, their social-space distances are likely to be reduced if a perceptual system is impaired, because the amount of information picked up at a given distance will be less than it is for other people. Privacy needs may be greater for people with physical deformities, although this may be the prejudiced view of the healthy who want to be protected from seeing the infirm.

One might suspect that personality differences will be reflected in different needs for privacy (Marshall 1970). The research is confusing. There is general agreement that personal-space zones are larger for violent people (Kinzel 1970), but this has few, if any, environmental design implications. Other research findings are contradictory.

Contrary to what one might expect, some research shows that the need for privacy is greater for extroverts than for introverts (Mikellides 1980). Daniel Cappon (1970) suggests that extroverts like contact with the environment, introverts prefer courtyard houses, misanthropes prefer buildings with complex internal relationships and clear territorial patterns, and mixers like strong central-plan houses. Other research (such as Evans and Howard 1973) does not corroborate this. A partial explanation for the variability of the research results on privacy and proxemic behavior may be differences in the moods of the individuals—their ego states—at the time the study was done. When people are under stress, for instance, they show a greater need for privacy than when they are not (Klopfer 1969).

There is another way in which house-form preferences and adaptations reflect personality differences. In a study of child-rearing attitudes, it was found that mothers who are restrictive and coercive exercise greater control over their children's privacy than mothers who are not (Parke and Sawin 1979). Such children are accorded less privacy and territorial control in their sleeping accommodations. It is difficult to make generalizations about the environment and design from such studies.

Differences in the need for privacy are partially attributable to *social group* attitudes—the roles people play in society and their socioeconomic status. The development of a person's attitude toward privacy is part of the socialization process; it is a learned value. As children grow older they need more privacy and use more privacy markers (Guardo 1969, Meisels and Guardo 1969). These developments correlate with the child's growth in physical maturity (Parke and Sawin 1979). Throughout their development, however, children in conversations keep less physical distance from their peers than from older children (Willis 1969).

In any particular housing type, space is an indicator of status and becomes a symbol of it. It must be recognized, however, that the norms of privacy for any group represent adaptations to what they can afford within the socioeconomic system of which they are a part. In low-income groups, for instance, crowded living conditions force a lack of privacy so privacy norms are much less severe than for high-income groups. Some high-income populations have major privacy demands. Alexander Kira (1966) notes:

> There are situations where all the facets of daily living are treated as an art and where only the most carefully contrived and controlled images are permitted to obtain, i.e., what is sometimes regarded as the ultimate in good breeding and civilized behavior. Here, role and format are everything, leading to separate bedrooms, bathrooms, and sitting rooms, where people come together only when fully prepared and "on stage." In these situations, privacy demands may also be regarded as being based on a sense of aesthetics.

Privacy needs are very much a part of a culture (Watson 1970, Altman and Chemers 1980). The layout of districts, buildings, and rooms depends on how people relate to each other in space, and thus it varies considerably by culture. Amos Rapoport (1969, 1977) finds that there are major cultural differences in the privacy gradients sought by people. This is reflected in both the internal and external organization of houses. The internal organization of houses in which people feel comfortable very much reflects their culturally based attitudes toward privacy (Rapoport 1969, Zeisel 1974, Brolin 1976, Porteous 1977). While some people accept almost any relationship between the living, cooking, eating, and sleeping areas of a house, others have privacy needs that may affect not only the location of rooms but also, as in Saudi Arabia, the location of doors (Baleela 1975). In this case, the privacy needs of women are particularly high.

Rapoport stresses the importance of the threshold in establishing and reflecting privacy norms and territorial behaviors. The point at which the occupant of a house is aroused by the approach of a stranger varies from culture to culture. In the traditional Islamic dwelling it occurs at the entrance from the street. In this case there is no semipublic or semiprivate territory. The transition is from public to private. The open planning of the traditional American suburb stands in strong contrast to this.

Clare Cooper (1967), Amos Rapoport (1969, 1977), and Saim Nalkaya (1980) stress the differences in the nature of privacy expected and the nature of the personalization that takes place in frontyards and backyards in North America. Frontyards are for display—few activities take place there—while the backyard is for private activities. Not all subcultures in the United States use their frontyards in this way, and there are also socioeconomic differences in attitudes as to what a frontyard should be. These differences often lead to conflicts about how frontyards should be used and kept. Such conflicts are not unique to the United States. They are particularly acute in countries like Israel where people of very different cultural backgrounds live side by side (Nesher 1981).

Rapoport (1977) summarizes much of the research on privacy attitudes and house form as follows:

> There is a scale from self-display to extreme privacy with corresponding treatment, decorations and barriers admitting people, depending on their relationship and status, to various parts of the system—i.e., with penetration gradients. This is also related to rules about whether the street, for example, is seen as front or back region. . . . It is related to the social organization and the definition of groups so that if a whole quarter is composed of kin, it may be seen as a backstage region with a small front region for the reception of strangers, whereas in the case of an area with many nuclear families there are many front and back regions (one per house) and the treatment of the fronts defines the group front region.

Transportation technology has changed the relationship between street alley and house in many older American and European cities. Mews were once the backs of houses; visually they may still be so, but behaviorally many have become houses themselves.

Interpersonal affective behavior is influenced by ambient temperatures (Griffitt 1970, Griffitt and Veitch 1971). It is also likely that there is a trade-off between privacy and territoriality needs in housing to meet the needs for comfort, or vice versa, in different geographic settings. This results particularly from the migrations of people from one climatic zone to another. They bring their behavioral patterns developed in one place to another. Amos Rapoport (1969) shows that people often give up considerable physiological comfort to maintain cultural requirements. This is particularly evident in colonial cities.

CONCLUSION

Associated with any standing pattern of behavior is a desired level of privacy. The structure of the built environment screens activities and provides affordances for personal space and territorial needs if properly configured. The configurations and materials of the built environment also affect the ease with which it can be personalized. There is a correlation between our ability to call an area our own and our psychological comfort with it and our willingness to look after it.

The way in which buildings and the spaces between them are designed affects people's perceptions of who should be in control of them. There is a hierarchy of strengths of territorial claims. Each level in the hierarchy involves different degrees of personalization, ownership, and control. The perceived quality of the built environment is partially dependent on our ability to achieve desired levels of privacy.

Until recently these behaviors were poorly understood and difficult to consider explicitly because they are largely subconscious. Some architects have intuitively, or accidentally, incorporated features that afford these behaviors into the buildings they have designed. The research of Edward T. Hall (1959, 1966), Robert Sommer (1969, 1974a, 1974b), Irwin Altman (1975), and Oscar Newman (1972, 1979), in particular, has elucidated these processes in such a way that interior designers are better able to understand the relationship between room geography and human behavior, and architects, urban designers, and landscape architects are better able to meet privacy needs through the provision of real and symbolic barriers to demarcate territories in the internal organization of buildings and the design of open spaces.

While the desire for privacy through personal space and territorial controls may be universal, its manifestations vary considerably from culture to culture. Some cultures have more complex privacy demands and gradients than others. The work of Amos Rapoport (1969, 1977) and of Irwin Altman and Martin Chemers (1980) provides the framework for asking questions about the significance of privacy for the design of buildings and open spaces within different cultural and geographic settings.

ADDITIONAL READINGS

Altman, Irwin, and Martin Chemers. *Culture and Environment.* Monterey, Ca.: Brooks/Cole, 1980

Becker, Franklin D. "Personalization." In *Housing Messages.* Stroudsburg, Pa.: Dowden, Hutchinson and Ross, 1977, pp. 51–69.

Gardiner, Richard A. *Design for Safe Neighborhoods.* Washington, D.C.: U.S. Government Printing Office, 1978.

Hall, Edward T. *The Hidden Dimension.* New York: Doubleday, 1966.

———. "Meeting Man's Basic Spatial Needs in Artificial Environments." In Jon Lang et al., eds., *Designing for Human Behavior: Architecture and the Behavioral Sciences.* Stroudsburg, Pa.: Dowden, Hutchinson and Ross, 1974, pp. 210–220.

Mehrabian, Albert. *Public Places and Private Spaces: The Psychology of Work, Play and Living Environments.* New York: Basic Books, 1976.

Newman, Oscar. *Community of Interest.* New York: Anchor, 1979.

Saarinen, Thomas E. "Personal Space and Room Geography." In *Environmental Planning: Perception and Behavior.* Boston: Houghton Mifflin, 1976, pp. 19–43

Sommer, Robert. "Looking Back at Personal Space." In Jon Lang et al., eds., op. cit., pp. 202–309.

Skaburskis, Jacqueline. "Territoriality and its Relevance to Neighborhood Design: A Review." *Architectural Research and Teaching* 3, no. 1, (1974):39–44.