

The Social Psychology Of Space: Measuring Territorial Behavior Of Elderly People In Public Housing

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In order to design better housing for the elderly, sponsors, planners and architects need to know more about the territorial behavior of elderly people. The purpose of this study was to develop a scale to measure the amount of territorial behavior in public housing apartment buildings for the elderly. The product, named the Territorial Behavior Scale, is composed of 15 items on each of three sub-scales; i.e., Control, Demarcation and Defense. The Territorial Behavior Scale will be useful for studying the impact of social and physical environments on the well-being of elderly people.

Introduction

The purpose of this study was to construct a scale for rating individuals on territorial behavior in relation to their residential areas.¹

Although humans and other animals show many similar behaviors that appear to be territorial, their means and motives differ. Animals ward off intruders by dominance display, fighting and mutual avoidance (Eibl-Eibesfeldt, 1970). But humans can also communicate verbally and put up fences and walls to protect their privacy (Altman, 1974; Goffman, 1961). They also use symbols and personal possessions to show attachment to a residence (Edney, 1972; Newman, 1973). Man, therefore, has more complex tools at his disposal to communicate his intentions and manipulate his physical environment.

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Altman recognized the need for research into areas that suggest reciprocal interaction between Man and his environment. The concept of territoriality has been considered in many constructs such as personal space, crowding, jurisdiction and privacy. These constructs, however, are so closely related that it is difficult to isolate a measure for any one of them. They all are encompassed within the concept of territoriality and the way that it functions as a mechanism to create space between animals. Altman's definition best summarizes most of the current assumptions about human territorial behaviors.

Territorial behavior is a self-other boundary regulation mechanism which involved personalization/marketing of a geographical area and/or object, and communication that such an area is "owned" by a person or group. The personalization and ownership process is aimed at regulating interaction with others in order to satisfy a variety of social and physical motives. And "defense" responses-symbolic or actual-may occur when territorial boundaries are violated. (Altman, 1974:8).

Personal space is only the territory immediately surrounding an individual (Sommer, 1967). Crowding happens when the population density is too great and a person's territory is impinged upon (Greenbie, 1974). Jurisdiction implies a socially recognized control over access and use of a space or property (Moos, 1968). Privacy however, is an individual's psychological regard for control over access to himself mentally or physically (Pastalan, 1970). John Archea has even suggested that control over social access is the prime purpose of territoriality in humans (Archea, 1973).

Territorial behavior has relevance to the special housing needs of the elderly because of the decrease in social and material resources associated with aging (Pastalan, 1970). Territorial possession and control may be means to compensate for the increased problems with control over social interaction and as an aid in adapting to new environments. As Greenbie (1974) observed, the poor and cultural minority groups need secure boundaries to compensate for their lack of material and psychological resources. The elderly also possess less of these resources and share the problems of adapting to a new environment with other minority groups.

Persons who must be provided with housing by others have lost the usual means of control over the spaces in which they live. Their social and spatial behaviors may therefore be more influenced by the arrangement of their living spaces. Several studies have demonstrated the impact of architectural design on control over socialability. First, Ittelson, Proshansky and Rivlin (1970) found that elderly psychiatric patients treated wards of from one to six beds as single rooms. In the daytime, if the room was occupied by one of the patients, no one else entered. The result was that wardmates isolated themselves from one another. Second, in a college dormitory, students whose rooms opened directly onto a hallway reacted more negatively and competitively on a number of measures than students who shared a suite of rooms. In the suite arrangement, there was a controlling space between students' private

bedrooms and the public hall (Baum and Valins, 1973). Finally, elderly persons in mental hospital wards were often in conflict over particular space and chair ownership in the hallways. Persons who had single rooms did not take part in the conflicts (DeLong, 1970).

Oscar Newman investigated the relationship between building design and possibility of territorial behavior for the purpose of decreasing crime against the elderly residents. His objective was to design spaces that the residents would see as controllable, encouraging them to exercise control over the use of those spaces and to defend them against intruders. Different designs, then, would influence the amount of territorial behavior of the residents.

Goffman (1961) wrote that having exclusive control over a private place is important for the integrity of a person's identity. The lack of separate private space may inhibit social behavior. The increased aggression in both man and animals in densely populated surroundings is well documented (Calhoun, 1962; Leyhausen, 1971; Baum and Valins, 1973). Extra stress caused by conflicts between residents is likely to be reflected in extreme territorial behaviors in an effort to control interaction when other conventions fail (Altman and Haythorn, 1967). As Marshall (1970) found, persons who had high demands for privacy rarely felt that they had a sufficient amount regardless of the actual density of persons in the residence. Also, in experiments on isolated pairs of men, opposite personality types showed delayed but excessive claim on furniture and areas in the rooms which resulted in some of the subjects prematurely ending their participation in the experiment (Altman and Haythorn, 1967).

Research studies such as these point to the need for a measure to quantify elderly persons' reports of their own actions in a situation common to many elderly — living in high-rise apartment buildings. For instance, differences in territorial behaviors between persons who live in efficiency apartments and those who live in one-bedroom apartments need to be studied. The effect of the

number of units in a building and the size and arrangement of public and private spaces on social behaviors needs to be investigated.

The exhibition of territorial behavior and its relationship to satisfaction in housing for any selected population group is a field of research where little has been done.

Methods

For the purpose of developing a scale to measure territorial behavior in elderly persons, Altman's broad definition was separated into three basic sub-concepts. One sub-scale measures Demarcation and was derived from his idea of "personalization/markings of a geographical area and/or object." Demarcation involves using structures to communicate ownership of a space or place to other persons. The sub-scale measuring Control was derived from "communication that an area is 'owned' by a person or group" and implies a 2-way regulating process. Control differs from Demarcation by suggesting verbal means to maintain claim on an area. Finally, the source of the Defense Scale is the statement, "And defense responses — symbolic or actual — may occur when territorial boundaries are violated". Defense is viewed as a response to overt threats and invasion of a territory.

Scale items were constructed by translating territorial behavior concepts into statements based on personal experience and observation of elderly persons in apartment buildings. Items exemplified behaviors in a series of places progressing from the public neighborhood, building property, main entrance area, lobby, lounge, recreation room, laundry, hallways, to apartment doors and interiors.

The items were pre-tested on residents of two public housing high-rise buildings. A preliminary 20 item 'motivation for territorial behavior' scale was eliminated because it did not sufficiently discriminate between the high and the low scoring respondents.

The criteria applied to select the items for a comprehensive scale were as follows: 1) Positive

discrimination between high and low scoring groups. *Items had to distinguish consistently persons who reported high frequencies of behaviors from persons who reported low frequencies of the behaviors.* Scores reflected a person's frequency of the stated behaviors relative to that of other subjects. 2) Items had to contribute to the highest reliability estimate in conjunction with a) the smallest standard error of measurement and b) the greatest sensitivity in gauging individual differences as estimated by the coefficient of variability.

Data consisted of the self-reported frequencies of various behaviors by choosing from among the responses: 'almost never', 'rarely', 'sometimes', 'often' and 'almost always.'

The sample for the final test of the Territorial Behavior Scale was composed of 47 randomly selected male and female residents ages 62 and over, living in a 100-unit public housing high-rise building for the elderly in Prince Georges County, Maryland. The sample was predominantly females living alone. Only 6 subjects were male and only 2 females lived with a spouse. One lived with a son who was over 55 years old and who qualified for public housing assistance. Most subjects had lived in the building for about 2 years.

Territorial Behavior Scale

Analysis:

The fifteen items retained on the Control, Demarcation and Defense sub-scales proved to have the most internal consistency, the least error of measurement and to be the best indicators of individual differences in territorial behavior.

The following group of items compose the Territorial Behavior Scale. Statements are rank-ordered by combining the discrimination index and distance from an ideal response pattern.

Demarcation Sub-Scale

I put a piece of furniture between my sleeping and sitting areas. (Efficiencies only)

I use more than one washer for my laundry when I do it.
 When someone asks, I give my opinion of color and furniture for the lounge.
 When asked, I give my opinion of paint color and decoration for the recreation room.
 When someone asks, I give my opinion of paint color and carpeting for the lobby.
 When I go for a little walk, I go to the next hill up or down the street.
 I sit so I can see out of the window of my apartment.
 When someone asks, I give my opinion of paint color for another floor of the building.
 I put many pictures on my walls and other things around my apartment.
 I put my name on my door myself, each time I need to.
 I keep flowers or other plants in front of my window.
 I fold my clothes at the same place each time I do wash.
 When someone asks, I give my opinion of paint color for the laundry.
 I sit in the lounge.
 I rearrange some of my furniture.

Control Sub-Scale

I walk up the street to the store whenever I want to.
 I say something to a stranger who does not look like a visitor.
 When I see someone behaving improperly in the lobby, I speak to that person before I complain to anyone else.
 When someone comes to interview me, I sit at a table with them.
 I talk to my neighbor directly across the hall.
 I go back to my apartment when there is not a free washer for my laundry.
 I do not go into the recreation room alone at night.
 I tell someone who is standing in the middle of the hall that they are blocking the way for others.
 I tell someone who interrupts me in my apartment to wait.
 I go to the mailboxes the same time many other

residents do.
 I walk in the opposite direction when I see someone I don't get along with.
 I sit facing the door of my apartment.
 I volunteer to sit at the front desk near the main entrance.
 I call my friends on the phone instead of dropping in on them.
 I tell others that people should not stand or sit near the main entrance.

Defense Sub-Scale

I ask to be consulted before any changes are made in my apartment.
 I close the door of my bedroom when I have a visitor. (Residents of one-bedrooms)
 I keep a piece of furniture between my sleeping and sitting areas. (Efficiencies)
 I am disturbed when I hear anyone criticize this building.
 When a friend stays too long, I let them know when I want them to leave.
 When I see someone drop paper on the recreation room floor, I tell them to pick it up.
 I go to the manager when I think a neighbor is causing an insect problem.
 I tell the manager if I see someone spill soap on the floor and not clean up.
 When I hear a noise outside my apartment door, I look to see what the cause is.
 When a neighbor is not home, I tell someone knocking at the door that no one is home and ask what they want.
 I agree when anyone complains about the appearance of the lobby.
 I move someone's laundry when it is in my way in the laundry.
 I keep my chain lock fastened in the daytime.
 I ask strangers what they want and who they are before I open my door.
 When a neighbor makes too much noise in her apartment, I ask her what she is doing.
 I tell the manager if I see people regularly walking across our property.

The reliability was estimated by an adaptation of the Kuder-Richardson-20 equation. The reliability

bility estimates shown in TABLE 1 indicate measurement of a unified group of items aimed at claiming, controlling and defending space behaviors (KR-20 = .88).

Table 1. Statistics Relevant to the Reliability of the Scale (n=45)

Number of Items	Reliability	Variability	Standard Error of Measurement
45	.88	.36	9.02

As TABLES 2 and 3 show, the individual sub-scales contain a collection of acceptably homogeneous variables, which is indicated by the reliability estimates. On the other hand, the moderate association among them indicates that three aspects of one behavior system have been isolated.

Table 2. Sub-Scale Performance

Sub-Scale	Number of Items	Reliability	Variability
Control	15	.72	.41
Demarcation	15	.82	.47
Defense	15	.77	.43

Table 3. Sub-Scale Correlations (n=45)

Scale	1	2	3
Control		.53	.50
Demarcation			.48
Defense			

Applications

The Territorial Behavior Scale can be used to compare territorial behaviors in buildings offering efficiency units versus buildings made up of one-

bedroom units. It could also be used to compare behaviors when units are of varying sizes or layouts.

The Territorial Behavior Scale could also be used to demonstrate the effect of different population mixes on territorial behavior in buildings of the same design (Fish, 1976). Lawton's questions about whether the physical or the social environment is the most important influence on use and social behavior in public spaces of urban apartment buildings for the elderly could be explored.

Basic behavior studies, along with knowledge of residents' and sponsors' expectations for living spaces, have implications for the architecture and interior design of housing for the elderly. As Lipman (1967) suggests, design decisions must consider the social psychological aspects of aging and attitudes about elderly people's role in society in order to take advantage of the influence design has on human activity with the best effect.

Ultimately, behavior measures such as the Territorial Behavior Scale may contribute to the understanding of the effect of specific factors in environment on the well-being of elderly people.

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