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Rose Garvin-Jackson

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An Archaeological Analysis of Spatial Patterning in College Dormitory Rooms

Cover Page Footnote

This paper is drawn from my M.A. thesis, "The Use of Space and Territoriality in Dormitory Rooms: An Archaeological Approach" (1989) on file in the Department of Anthropology, New York University. I would like to thank Bruce Jackson and Ellen Snyder-Grenier for reading earlier drafts of this paper.

AN ARCHAEOLOGICAL ANALYSIS OF SPATIAL PATTERNING IN COLLEGE DORMITORY ROOMS

Rose Garvin-Jackson

Bert Salwen's (1973) pilot study of dormitory residents' behavior is used to demonstrate that patterning in a modern, above-ground site can be investigated with archaeological techniques. The spatial patterning in 89 dormitory rooms is analyzed to identify the various types of territories maintained by the residents. Several sociocultural variables are then selected to see if specific spatial behavior can be linked with given attributes.

L'étude pilote (1973) de Bert Salwen concernant le comportement de résidents de maisons d'étudiants est utilisée pour démontrer que les méthodes archéologiques peuvent servir à faire des investigations sur l'organisation dans un site contemporain situé au-dessus du sol. L'article examine l'organisation spatiale de 89 chambres de maisons d'étudiants pour cerner les divers types de territoires maintenus par les résidents. Il choisit ensuite un certain nombre de variables socioculturelles pour voir s'il est possible de rattacher un comportement spatial particulier à certains attributs.

Introduction

In "Archeology in Megalopolis" Bert Salwen (1973) argued that modern, above-ground sites are suitable for archaeological inquiry if they exhibit patterns of sociocultural behavior. The contemporary city—"a giant product of human behavior" (Salwen 1973: 162)—held a particular fascination for Salwen. On one level, modern urban communities provide laboratories for researchers to test and refine archaeological techniques, methodologies, and hypotheses about human-material behavior (how people interact with material culture). On another level, the contemporary city provides a closer analogy to past urban communities than prehistoric ones. Salwen also contended that archaeological study of the urban experience, past or present, should be interdisciplinary because

researchers in other fields (environmental and social psychologists, sociologists, behavioral geographers, planners, designers, architects, historians, and anthropologists) already focus on the phenomenon of the city.

To illustrate his arguments, Salwen described a pilot project to study urban housing patterns conducted by a New York University graduate anthropology class ("Archaeology and Environment") he taught in the spring semester of 1972. The project involved space utilization in college dormitory rooms, specifically Brittany Residence Hall, an NYU highrise dormitory in Manhattan. Salwen designed the project to teach his students archaeological data-collecting skills, but he also intended that his students gain a better understanding of the role material culture plays in human

behavior. A dormitory was chosen because it provided a more readily available laboratory than apartment complexes, and Brittany was selected over other residences for its similarities with highrise urban apartment buildings.¹ Highrise residences, whether they contain student dormitory rooms or family apartments, provide a unique opportunity to study and compare the different uses of identical spaces, particularly if the inhabitants represent a variety of cultural and economic backgrounds.

Using archaeological data-collecting techniques, the students compiled a series of room diagrams, or maps, and questionnaires completed by the dormitory residents. The underlying assumption of the project was that "furniture layout and use of space in particular rooms [were] related in patterned ways to sociocultural attributes (statuses and personality types) of the occupants of these rooms" (Salwen 1973: 157). While data collection was thorough, the graduate students were faced with the time restrictions of the academic semester and thus performed little analysis of the data (Flinn 1972; Berman 1972).

In this article I use the previously unanalyzed data (diagrams and questionnaires) generated from the dormitory project to explore some of the issues raised by Salwen (1973). My analysis demonstrates that human-material patterning in a modern site can be investigated with traditional archaeological techniques and can also provide insight into archaeological questions. In addition, I follow up on Salwen's (1973:

158, 162) early suggestion that the work of environmental psychologists on territorial behavior could be useful to archaeologists exploring human-material relationships within an urban context. Combining archaeological techniques and methods within an environmental psychological model, my analysis of the dormitory project works from the hypothesis that the dormitory residents were maintaining territories and that patterning in territorial behavior could be linked to various sociocultural attributes and roommate relationships.

A Model for Human-Material Behavior

In discussing human-material behavior, it is necessary to establish what is meant by "material culture" and "material patterning." Material culture is defined here as objects made, modified, or used by humans (Deetz 1977: 24; Hodder 1986: 6). But material culture is also the patterns and contexts in which the objects occur (Miller 1982: 17, 19; Hodder 1985: 5; Hodder 1987: 444-447). In looking at human-material behavior, "space" is a central concept. Simply put, space means the "intervals, distances, and relationships between people and people, people and things, and things and things" (Rapoport 1982: 179). But why do people choose certain "things" and organize them in specific ways?

Like archaeologists, environmental psychologists investigate these questions. Environmental psychology is the scientific study of the dynamic relationship between human behavior and the physical environment, with an emphasis on psychological variables. Environmental psychologists see territoriality—the process of claiming and marking a particular space for a given

¹Brittany Residence Hall was the only NYU undergraduate dormitory that was both co-educational and contained movable furniture. Built in 1929 as an "apartment hotel," Brittany also shared many architectural features with apartment buildings.

amount of time—as a basic human behavior (Hall 1959; Altman 1975; Proshansky, Ittelson, and Rivlin 1976). These researchers argue that territoriality allows individuals and groups to maintain social relations with others because the behavior ensures privacy and serves as a means for expressing identity. One particular aspect that environmental psychologists have focused on is how people use and are influenced by material culture (architecture, objects, furniture, etc.) in defining territories. Researchers have found that there are cultural and sub-cultural variations as well as sex, age, economic, and even individual differences in the use of space and material culture (for example, Ardener 1981; Aiello and Thompson 1980; Rapoport 1980; Gauvain, Altman, and Fahim 1983).

The specific model used to examine the dormitory project is one developed by Irwin Altman (1975). Altman sees the physical environment and social behavior as mutually defining. In other words, the environment is defined as both “a determinant of behavior and as a form or extension of behavior” (Altman 1975: 5). While people use their material surroundings during social interaction, they also rely on the physical setting for “cues” on how to behave.

Altman argues that social behavior is guided by people’s attempt to achieve desired levels of privacy. Privacy is the ability to control social interaction between oneself and others, and this control is accomplished by erecting as well as taking down boundaries. The boundaries can be physical, social, or both.

According to Altman, personal space and territoriality are “privacy-regulation mechanisms” through which an individual or group attains privacy.

Crowding and social isolation occur when privacy mechanisms fail, resulting in too much or too little social interaction. As behavioral systems, personal space and territoriality are “privacy-regulation mechanisms” because they enable people to maintain boundaries.

Like a protective bubble, personal space is the “area with invisible boundaries surrounding a person’s body into which intruders may not come” (Sommer 1969: 26). The need for personal space is dynamic and influenced by sociocultural factors, personal preferences, and immediate circumstances.

Territoriality is the ownership, control, or use of a location or thing (Maxwell 1983: 207–208). While the earliest research on territorial behavior focused on hostile control and defense of spaces, more recent studies have begun to focus on how territoriality allows individuals and groups to express identity and selfhood (Altman 1975; Rapoport 1982: 93; Maxwell 1983). Personal and group identity can be observed in how individuals and groups decorate their rooms, homes, offices, clubs, buildings, etc.

Altman’s (1975) model of territorial behavior is particularly suitable for analyzing the spatial behavior of dormitory residents as privacy (or lack thereof) is a key issue in dormitory life. As early as the 1930s, an American college residence administrator wrote: “Two persons are forced at every turn to consider each other’s preferences and idiosyncrasies, as well as actual needs. Each is at the mercy of the other in countless ways” (Hayes 1932: 84). In later studies of dormitories, researchers found that the lack of privacy was one of the most frequently cited complaints by students about their residences (Van de Ryn and

Silverstein 1972: 371; Heilweil 1973: 379-380).

The Site

In 1972 Brittany Residence Hall was a co-educational dormitory, housing approximately 400 students. The building contained 15 floors though only 13 were used for housing. There were 17 rooms per floor. The rooms were rectangular in shape with a door on the short wall and a large window on the opposite wall. The longer walls were devoid of major architectural features. Each occupant was assigned a single bed, bureau, bookcase, desk, desk chair, and "comfortable" chair (Salwen 1973: 157). Additional furniture and decorations could be brought in by the students. Each room housed one, two, or three students, though only "doubles" were used in the analysis.

Archaeological Data

Using room plans made from the building floor plans, the 1972 graduate students drew the locations of furniture and other objects including wall, floor, and ceiling decorations (Salwen 1973). In the following analysis I have treated the diagrams (maps of artifact patterning) as the "archaeological record" of the dormitory residents' behavior.

The diagrams of 89 doubles were analyzed by plotting the relative placement of the roommates' sets of furniture and other objects. Six room types were discerned (FIG. 1). This typology suggested that each student was using his or her own area in the room, presumably to maintain a sense of privacy. It was hypothesized that variations in the need for privacy were reflected in

the different room types and were shaped both by the relationships between the roommates and by the students' sociocultural attributes (age, sex, major, study habits, etc.).

In 59 rooms (66% of the doubles) the occupants completely divided the space into two "use zones" (Salwen 1973: 158) or territories. In other words, the furniture of one roommate was placed on one side of the room while the furniture of the other roommate was placed on the other side, as if an invisible line split the room in half. Rooms exhibiting this "split arrangement" (Salwen 1973: 158) were further separated into three types (I, II, and III) based on the specific way in which the space was divided.

Occupants of Type I rooms organized their space in a manner that gave each roommate approximately half the door, window, and wall space. This pattern occurred most frequently and accounted for 39 of the doubles (44%).

In contrast, the residents of Type II rooms divided the space along the other axis creating a "window zone" and a "corridor zone" (Salwen 1973: 158). Although occurring less frequently than Type I, the percentage of rooms exhibiting the Type II pattern (19%) seems particularly significant given the rather unequal distribution of space. The individual occupying the corridor zone not only lost access to the window but also had to allow the roommate to pass through his or her own territory when entering and exiting the room.

Type III, the third split arrangement, occurred only once (1%). In this case, the room was divided along a diagonal axis. The pattern is similar to Type II, consisting of a corridor zone and a window zone, but wall space was allotted differently.

Figure 1. Room types.

The remaining types diverge from the split arrangement in varying degrees and form a gradual transition to the full division of space into activity areas. To differentiate them from the first three types, these types are referred to as "less split."

The occupants of Type IV rooms created three areas or zones. Two of the areas each contained a bed and desk while the third area included the lounge chairs with other categories of material such as couches, stereos, and television sets. Type IV rooms occurred with the same frequency as Type II rooms (19%).

Type V rooms occurred in two variations. In the first, the beds were placed together while the desks were separated; there may have been a "social" or "communal" area. In the second variant, desks were placed together but the beds were apart. Again, there may or may not have been a social area. Pattern V comprised nine of the doubles (10%).

In the final pattern, Type VI, space was divided according to furniture type creating "activity areas." The beds were placed in one area, desks (and bulletin boards, maps, lamps, etc.) in another, and the lounge chairs (along with couches, stereos, televisions, etc.) in a third. Only two rooms (2%) exhibited this type of spatial organization.

In summary, the room types ranged from a complete division of the room into two halves (Types I, II, and III) to the separation of the room into shared activity areas (Type VI). A number of roommates also maintained both individual territories and communal areas (Types IV and V).

Historical Data

Salwen's graduate students designed a two-page, standardized ques-

tionnaire to elicit information about the residents' sociocultural attributes, family background, roommate relationships, and attitudes towards their room and dormitory. The questionnaires were administered on an interview basis, with the researchers recording the residents' answers to the questions. Although not traditional sources of historical data, I have used the questionnaires as the archival record of the dormitory residents' behavior.

Eighty-four questionnaires were available from the residents of 65 double rooms. I entered the responses into a computerized database and then sorted them to identify patterns in the occupants' answers and to gain a better understanding of both the student population and environment of Brittany.

Findings

In looking at the data from the diagrams and the questionnaires, I observed that there were differences between how the students perceived their own territorial behavior and how this behavior was interpreted from the diagrams. The students' responses to the question "Do you consider part of the room to be yours as opposed to your roommate's?" were 42% positive and 54% negative (4% did not answer). In contrast, the room types identified from the diagram analysis indicated that the vast majority of residents (98%) were forming individual territories in at least part of the room (Types I, II, III, IV, and V).

It is not clear from the evidence whether the residents were unaware of their territoriality or simply did not want to admit to the behavior. The presence of an interviewer, and possibly the roommate, may have influenced the residents' responses to the

questions. In synthesizing the information from the diagrams and the questionnaires, however, I found that residents' perceptions of their rooms did correlate, in part, with their use of space (TAB. 1). The majority of residents who perceived the room as part "theirs" (as opposed to their roommates') chose one of the split arrangements (69%). Students who did not see the room as part "theirs" were almost evenly divided between the split and less split arrangements (46% vs. 52%).

In order to better understand the residents' behavior, several sociocultural variables—roommate relationships, sex, and academic class level—were selected to see if specific spatial behavior could be linked with given attributes. Other factors such as ethnicity and economic class could not be examined because this information was not made available through the questionnaires.²

Roommates

Roommate relationships were a key variable in understanding the spatial behavior of the student residents. Presumably, roommates would have to work out a living arrangement, physically and socially, that would allow two people to cohabit one room for approximately nine months.

Socializing behavior between roommates was examined first. According to the analysis of the questionnaires, half the respondents (50%) frequently spent time with their roommates outside the room, while 27% did

not. The remaining 22% "occasionally" spent time together. When this behavior was correlated with territoriality, a significant relationship was demonstrated (TAB. 2). Residents who socialized with their roommates were less likely to feel territorial about the space in their rooms (76%). Conversely, residents who did not spend much time with their roommates tended to feel more territorial about their living space (62% for "occasionally" and 65% for "no"). Further, roommates who socialized together outside the room were less likely to use one of the split arrangements (43%) than roommates who did not spend time together (69%).

The amount of time spent living with a roommate also seemed to be a good indicator of roommate relationships. In comparing the data from diagrams and questionnaires, there was a significant relationship between the number of semesters spent living together and room types (TAB. 3). Roommates who lived together for one or two semesters were closely divided between split and less split arrangements. Roommates who lived together for more than one year were more likely to chose one of the split arrangements.

Sex

While there appeared to be a limited connection between sex and territorial feelings about the rooms, the relationship did not prove statistically significant (TAB. 4). Other researchers have observed that women tend to feel more territorial about their residences than men, however (Van der Ryn and Silverstein 1972: 375; Aiello and Thompson 1980; Goves and Hughes 1983).

In comparing sex and room types, men and women showed similar patterning among the split types but very

²At the request of the Brittany Student Council, the 1972 researchers did not ask questions about ethnicity, religion, or economic background. Such questions were thought to be invasions of privacy (Bertram Salwen, personal communication, 1988).

Table 1. Territoriality and room type.*

Is room part yours?	N	I (%)	II (%)	III (%)	IV (%)	V (%)	VI (%)
Yes	35	46 (16)	23 (08)	0 (0)	23 (08)	9 (03)	0 (0)
No	45	22 (10)	24 (11)	2 (1)	29 (13)	16 (07)	7 (3)
Total N†	80						

* In Room Types I, II, and III the occupants completely divided the room into two sides. In Room Types IV and V both individual and communal areas were maintained by the room occupants. In Room Type IV the occupants organized the room into activity areas, each area used jointly by both roommates.

† Four respondents did not answer the question.

Note: Figures in parentheses are base Ns for the adjacent percentage. The chi-square test is not appropriate.

Table 2. Time spent with roommate outside room and territoriality.

Time spent with roommate	N	Is part of the room yours?			
		Yes	(%)	No	(%)
Yes	41	24	(10)	76	(31)
Occasionally	16	62	(10)	38	(6)
No	23	65	(15)	35	(8)
Total N*	80				

* Four respondents did not answer the question.

Note: Figures in parentheses are base Ns for the adjacent percentage. The observed value of chi-square is $X^2=12.85$, exceeding $p(0.05)=5.99$ for 2 degrees of freedom.

Table 3. Length of time spent with roommate and room type.

Length of time	N	Split (I, II, III)	(%)	Less Split (VI, V, VI)	(%)
≤ 1 Year	55	47	(26)	53	(29)
> 1 Year	27	70	(19)	30	(8)
Total N*	82				

* One respondent did not answer the question and the other lived with his/her roommate for only five weeks.

Note: Figures in parentheses are base Ns for the adjacent percentage. The observed value of chi-square is $X^2=3.89$, exceeding $p(0.05)=3.84$ for 1 degree of freedom.

different ones among the less split types (TAB. 5). Among the residents who used the less split types (Types IV, V, and VI), male students were more likely to maintain a common or social area while placing their beds and desks in individual territories (Type IV). In contrast, female residents who used the less split types were more

likely to place their beds near their roommates' (Types V and VI).

Academic Class Level

I had not initially thought that the academic class level—freshmen, sophomore, junior, senior—would be an important variable in the residents'

Table 4. Sex and territoriality.

Sex	N	Is part of the room yours?	
		Yes (%)	No (%)
Male	45	42 (19)	57 (26)
Female	35	46 (16)	54 (19)
Total N*	80		

* Four respondents did not answer.

Note: Figures in parentheses are base Ns for the adjacent percentage. The chi-square test demonstrates that the relationship between the variables is not significant. $X^2=0.13$ is less than $p(0.05)=3.84$ for 1 degree of freedom.

Table 5. Sex and room type.

Sex	N	I (%)	II (%)	III (%)	IV (%)	V (%)	VI (%)
Male	48	31 (15)	23 (11)	2 (1)	38 (18)	6 (3)	0 (0)
Female	36	31 (11)	25 (9)	0 (0)	14 (5)	22 (8)	8 (3)
Total N	84						

Note: Figures in parentheses are the base Ns for the adjacent percentage. The chi-square test is not appropriate.

Table 6. Class level and territoriality.

Class level	N	Is Part of the Room Yours?	
		Yes (%)	No (%)
Freshman	11	36 (04)	64 (07)
Sophomore	12	33 (04)	67 (08)
Junior	26	54 (14)	46 (12)
Senior	30	40 (12)	60 (18)
Total N*	79		

* Four respondents did not answer and one was a graduate student.

Note: Figures in parentheses are the base Ns for the adjacent percentage. The chi-square test demonstrated that the relationship between the variables is not significant. $X^2=1.37$ is less than $p(0.05)=7.81$ for 3 degrees of freedom.

territorial behavior because the age range of the respondents (17 to 24) was relatively small.³ Academic level, however, proved to be the most revealing of the students' attributes in understanding their spatial behavior.

While it appeared that juniors were more likely to feel territorial about their living space than freshmen,

sophomores, or seniors, this pattern did not prove to be statistically significant (TAB. 6). But in synthesizing data from the diagrams and questionnaires, a relationship between academic level and territoriality was found (TAB. 7). Sophomores (69%) and juniors (64%) were far more likely to use one of the split arrangements than freshmen (36%). Seniors were almost evenly divided between the split (49%) and less split (52%) arrangements. In general, it appears that younger incoming students

³The average age for freshmen was 18.9, sophomores 19.6, juniors 20.0, and seniors 21.5.

Table 7. Class level and room type.

Class level	N	I (%)	II (%)	III (%)	IV (%)	V (%)	VI (%)
Freshman	11	27 (03)	9 (01)	0 (0)	46 (05)	18 (2)	0 (0)
Sophomore	13	46 (06)	23 (03)	0 (0)	0 (00)	31 (4)	0 (0)
Junior	28	36 (10)	25 (07)	4 (1)	29 (08)	7 (2)	0 (0)
Senior	31	23 (07)	26 (08)	0 (0)	32 (10)	10 (3)	10 (3)
Total N	83						

Note: Figures in parentheses are the base Ns for the adjacent percentage. The chi-square test is not appropriate.

were less likely to be territorial in their dormitory rooms. At the same time, seniors also seemed less territorial.

Discussion

There are several explanations for the spatial behavior patterns of the dormitory residents. The work of various researchers (Gauvain, Altman, and Fahim 1983; Potash 1985) suggests that the freshmen may have been copying the spatial arrangement in their parents' homes and adapting it to their own rooms. The most common arrangement among freshmen was Type IV, in which roommates maintained personal territories for sleeping and studying but also had a third communal area. Freshmen were more likely to use this arrangement than upper level students. The Type IV arrangement is most similar to the American standard of spatial divisions within the home: personal territories in the bedrooms and bathrooms and communal or family territories in the living rooms, dens, and kitchens (Wallace 1980: 278).

Another possibility is that incoming freshmen felt hesitant about being territorial, fearing such behavior would be perceived as hostile and unfriendly. Similarly, roommates who socialized together outside the room—thus probably "friends"—also may not have wanted to appear overly territorial about their living space. Indeed,

Hall (1959: 188–189) notes that Americans tended to be embarrassed by their territorial feelings: "we treat space somewhat as we treat sex. It is there but we don't talk about it."

In contrast, sophomores and juniors, presumably with more experience living in dormitories and with roommates, seemed to have a greater need or desire for privacy. This pattern was also observed in analyzing roommate relationships; roommates who lived together for more than one year tended to be more territorial. Perhaps these older, mid-level students had learned the importance of creating personal territories to secure privacy and maintain good roommate relationships (Altman 1975).

The patterning among seniors, who exhibited a lack of territoriality similar to that displayed by the freshmen, is more difficult to interpret. It should be noted that only female seniors used Type VI in which the room was divided into activity areas, each used jointly by both roommates. Perhaps the need for personal areas within the room was simply no longer important to these students who were soon to graduate and leave the dormitory environment for good.

Conclusion

This study accomplished two goals. First, I demonstrated that modern material culture sites, as argued by Salwen

(1973), are suitable for archaeological study. Second, I showed that an interdisciplinary approach to investigate a modern archaeological site could be productive. These goals were applied to Salwen's (1973) pilot project to study space utilization by college dormitory roommates. My analysis of the dormitory project data provided insight into dormitory resident behavior in particular and human-material behavior in general. It would be interesting to extend the approach used in this paper to historical and possibly prehistoric living sites and their spatial patterns.

Acknowledgments

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Ruth Garvin-Jackson

The Arthur M. Sackler Foundation
461 East 57th Street
New York, NY 10022