Seating Patterns in the College Classroom: The Relationship Between Spatial Location and Selected Role, Personality, and Status Variables

Dolores Burchell Jones

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SEATING PATTERNS IN THE COLLEGE CLASSROOM: 
THE RELATIONSHIP BETWEEN SPATIAL LOCATION AND 
SELECTED ROLE, PERSONALITY, AND STATUS VARIABLES

by

Dolores Burchell Jones

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Master of Arts

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Dolores Burchell Jones
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CHAPTER I

PURPOSE AND THEORY

The Problem

Studies dealing with the use of space have been concerned primarily with territoriality, the way man perceives space through his senses, and with the manner by which culture affects the location of persons in space. This study, like others, falls under the rubric of spatial ecology in that it deals with the occupation of space. This study focuses on the college classroom in an attempt to determine if the occupation of space is systematically patterned, that is, whether particular areas of the classroom are occupied by students with specifiable characteristics. In this context, the particular positioning within space will be viewed as being related to three broad categories of variables—role performance variables, personality variables, and status variables.

A number of studies have examined the effect of one or the other of these dimensions on seating, but none of them has used all three simultaneously. Role performance variables—especially participation—have been related to seating more frequently than variables falling within the other two categories. Steinzor (1950), Hearn (1957), Sommer (1969), and Biddle and Adams (1967) have dealt with the effect of verbal behavior on seating. Kenneth Moxey (1966), in his doctoral dissertation, examined the effect of personality

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variables or individual characteristics, such as self concept and ability. He also included the social psychological variable of attitude toward the course. In a general sense, this study can be conceived of as an extension of the above studies in that it will try to determine the extent to which all three classes of variables are related to seating position.

The usage of classroom space is an important aspect of study because if the college classroom is thought of as a social system in which the participants go through a sorting out process, then certain similarities can be seen between the classroom and society. Park, Burgess and McKenzie (1925) were the first to document the occurrence of this process on a societal level. The idea that cities tend to become organized in a particular way over time has also received support from Haggerty (1971) and Guest (1971).

Generally, they found that status variables including age, occupation, ethnic and racial background and socio-economic status were influential in the sorting out process of urban areas. A question then becomes one of determining whether similar variables are important in the sorting out that goes on within smaller groups. In other words, can findings at the macro level be successfully applied to the process of sorting out in small groups?

Territory

Although "very little work has been done in territoriality" (Watson, 1970:34), that which has been done seems to indicate that its establishment can occur almost anywhere. Indeed, Lyman and
Scott conceive of territoriality, which may be defined as the consistent and mutually exclusive use of an area, as a fundamental human activity (1967:236). Territorial establishment has been found to occur during war, under experimental conditions, and among schizophrenics. For example, Hall reports that during World War II, Germans imprisoned together in a small building constructed partitions as soon as materials became available, so that each man could have his own space. At times, these spaces "were no larger than a foxhole" (1966:126). The territory patterns of two men isolated in a 12' x 12' room with bunks, table and chairs were described by Altman and Haythorn. "Isolated groups showed an early preference for particular beds, with relatively little intrusion by teammates into each other's sleeping space." Territorial rights for chairs and locations around the table developed more slowly. Definite preferences for locations at the table emerged by days 4-6 of the experiment. A similar pattern held for chairs, although it took slightly longer for the isolates to extend territorial claims over them (1967:172-173). In Horowitz's study of interaction painting with schizophrenics, the patient would initially divide the painting territory between himself and the therapist, permitting no intrusion until he learned that it did not mean domination. After rapport had been established territory became common, but would always be redivided by the patient if rapport was disturbed (1963:236).

The studies cited above are concerned with the individual's establishment of a home territory. Beginning in the 1920s with the ecological school of sociologists, various studies have dealt with
territory at the aggregate level. These studies bear on the problem under investigation in that they lend support to the idea of aggregate territorial establishment in the college classroom.

Park, Burgess and McKenzie conceive of territory as a "natural area," referring to a well defined spatial unit having its own peculiar characteristics (1925:188). With this as a framework, Burgess could view the city as a series of five concentric zones or natural areas, whose inhabitants could be described by such variables as age, occupation, ethnic and racial background. In recent investigations of the zonal hypothesis, Haggerty found that socio-economic-status "varies directly with distance from the center of the city" given an extended time period (1971:1090). Guest found a slight tendency for the proportion of white collar workers "to increase with linear distance from the central business district in twelve of the seventeen metropolitan areas" studied, concluding that the Burgess hypothesis seems to be a reasonably accurate description of the spatial patterns of the majority of cities in his sample (1971:1107).

Territories can be arranged on a continuum according to their degree of accessibility by the general public. Open ranges are those areas where the general cultural definition permits many people of many diverse categories to be present for varying periods of time and often for varying reasons. Examples of open ranges include streets, parks, beaches, and stores. Unlike a home, open ranges are not cut off from the surrounding social landscape. Because open ranges are areas where it is permissible for most
individuals to be present at any time, without fear of sanctions, it is not possible for an individual to select those with whom he must share its facilities. In addition, he must accept the environment as it is. He may not alter it to suit his personal preferences. Also, his range of behavior is restricted to only that which is proper in public. For these reasons, open ranges are areas over which the individual has little sense of familiarity or control.

Home territories are regions over which the regular inhabitants have a sense of control, are relatively free to behave as they wish, and from which they may implicitly or explicitly exclude others. One's house is a prime example of a home territory. It is a clearly demarcated area which can be completely isolated from the social terrain surrounding it. Under normal conditions, only a select few have access to this territory, and severe action can be taken against those who intrude. Thus, one characteristic of a home territory is that permission is needed to enter and that sanctions can be brought to bear against those who enter without it. Because the privacy of a house is recognized and normally respected, its inhabitants are generally not intruded upon. Thus, the range of behaviors that may be engaged in within it is expanded. Propriety can be dispensed with, and, if desired, illicit activities may be performed. Finally, home territories are areas over which the individual exercises control. He is free to modify the setting rather than simply adapt to a fixed environment.

Between open ranges and home territories are those regions that possess some of the characteristics of both. These are territories
of restricted public access, examples of which can include taverns and universities. This type of territory is characterized by a narrowing in the range of individuals who are allowed access, and by a restriction in the activities permitted.

When an outsider enters a home territory which is recognized as such by both the outsider and the indigenous population, his presence is usually taken care of in an unequivocal fashion. However, where an area is not recognized as a home territory by outsiders, but is regarded as such by the indigenous population, and where intrusion is relatively frequent, the indigenous population usually develops specific practices which are used to inform an outsider that he has trespassed. Since the indigenous population has usually converted an open range into an area which it defines as a home territory, the outsider is legally entitled to be present, and the insiders must cope with the intrusion by means which are inside the law—silence, ridicule, unfriendliness, poor service, or rejection. Thus, like home territories, there are sanctions which may be applied to uninvited persons, but, as in the case in open ranges, intruders are not legally forbidden, and, therefore, the sanctions applied must be informal. Like those in open ranges, an individual has little control over his potential interactants. But, by the devices mentioned above, the group can weed out unwanted persons and thus influence just who their interactants will be.

This process is illustrated by Cavan who describes the techniques used by homosexuals to protect and maintain their home territory in what is ostensibly a public bar. The entry of an
outsider may be proclaimed loudly
by the patrons at the end of the bar and the waiter may
usher him from the door to the center area of the room
in such a way that the entire proceedings are disrupted
and the outsider becomes the focus of attention . . . .
He may remain as an object of attention for the duration
of his stay, by being handled in a noisy and obtrusive
manner (1963:26).

This pattern of interaction between the outsiders and the homosexual
patrons serves to maintain their definition of the bar as a home
territory to the extent that they succeed "in making the outsider
appear out of place and uncomfortable being where he is" (Cavan,
1963:31).

Likewise, Gottlieb, in a study of neighborhood taverns notes
that the patrons who are commonly "of a similar religious, ethnic,
and social class" have managed to keep the tavern's homogeneity
(1957:560). The following remarks made by the proprietor of a
tavern catering to Polish-Americans reveals the indigenous popula-
tion's hostility toward outsiders.

No, the tavern across the street is not like this one
. . . . all hillbillies over there . . . . never come in
here--don't want them in here . . . . We never have
any trouble, and we don't want any . . . . They stay
in their places . . . . No, they just learn fast when
they move in here that this is not a place for them
(1957:561).

Although behavior is censured in territories of restricted
public access, improprieties and illegalities may be engaged in with
group consent. Even though certain standards must probably be
maintained, there is not quite the concern with proper behavior as
there would be in open ranges. In addition, the indigenous popula-
tion has somewhat greater opportunity for environmental modification
than do the temporary inhabitants of open ranges, yet much less than do the owners of home territory. The ability to control the entrance of outsiders together with the ability to manipulate somewhat one's surroundings, facilitates the development of a weak sense of familiarity and control over this type of region among the indigenous population.

Ecology of the Classroom

Like open ranges, the college classroom is accessible to a wide diversity of individuals for varying periods of time and for varying reasons. Its open nature can also be seen in the prohibition of certain types of behavior. Because students are surrounded by others who carry the same norms concerning public behavior, they feel obliged to keep up the guise of civility, whereas in the privacy of their homes it can be dispensed with if desired. In addition, the classroom is unowned by the students who use it. It is a territory occupied by and with many other individuals only for a short period of time per week. This, coupled with the fact that students cannot choose their classmates, makes it difficult for them to develop a strong feeling of intimacy and control over the area. The room itself is not allowed to become the object of extensive renovation by the students, and they have no assurance changes they make will be there the next time they return.

In summary, the classroom as a territory of restricted public access can be seen as a region where general freedom of entrance and action is restricted by admission policies and by the images
and expectations of appropriate behavior of the individuals who use this area. Thus, not only is illegal and impermissible behavior forbidden, but also individuals do not have absolute access to this region. It is, in addition, an area in which it is difficult for anything except a faint sense of intimacy and control to emerge.

Focus of Current Research

The focus of this research is upon the ecology of the college classroom. It is an attempt to determine whether the occupation of space within the classroom is patterned—that is, whether certain areas of the classroom are inhabited by students with particular, specifiable characteristics. The emphasis is upon the result of the sorting out process rather than the process itself. The "sorting out process" is a phrase which is meant to encompass the mechanisms which influence the students' choice of a seat. These mechanisms, whether they include such things as conditioning, the perceptions of the compatibility of other students, or unconscious attempts to convey role distance or role involvement, will not be considered. The concern here involves neither the enumeration and description of these mechanisms nor an analysis of how they operate. All that this study attempts to do is examine what appears to have happened. The "whens" and "how" are beyond its scope. Since classroom ecology has not been studied extensively at the college level, it is necessary to find out the nature of the spatial arrangement of individuals before we can look at how it gets that way. This study is, however, more than just descriptive. Although
it does not claim to explain the sorting out process, the end result of this process cannot be described without bringing into it some explanatory ideas.

Role performance indicators, personality variables and status variables may be related to seating position. Other writers have either studied the effect of these variables directly on spatial location or their correlation with other types of behavior. The success with which they were previously used prompted their inclusion in this study. The choice of each specific variable was governed by the consideration of how they were related to the occupation of space, or alternatively, how they may be related to certain other variables which in turn may affect spatial location. A general discussion of role performance indicators will be presented first, followed by a consideration of personality and status variables.

Within the classroom, the student's use of space may be affected by his role performance. This idea comes from Goffman's discussion of role distance and role involvement. Role distance consists of "actions which effectively convey some disdaining detachment of the performer from a role he is performing" (1961:110), while role involvement consists of actions which convey his attachment to the role in which he is currently engaged. In order to explore this idea, we may begin by looking at the role of student.

Role is most commonly defined as the "set of prescriptions defining what the behavior of a position member should be" (Biddle and Thomas, 1966:29). The expected behavior of a student includes such activities as regular attendance, class participation, attention
to the lecture, and the attainment of good grades. These expectations are held by instructors, other students, school administrators, parents, and the general public.

Grades, attention to the lecture, attendance, and participation will be seen as indicators of role involvement, and students who fulfill these expectations will be seen as role involved. Those who do not will be viewed as expressing role distance. One could expect degree of role performance to be reflected in seating position. For example, the individual seeking to express detachment from the role of student may do so by occupying a seat which will isolate him "as much as possible from the contamination of the situation" (Goffman, 1961:110). Thus, spatial refusal to accept the identity of a good student provides the individual with a rationale for failing to fulfill the expectations of his role. His seating position indicates his rejection of the claim to be a good student, thus, poor performance is to be expected. By the same token, involvement in the student role can be expressed spatially by sitting in areas which place the student in the center of classroom activity. Such a position advertises the fact that the individual claims the identity of a good student and intends to live up to role expectations.

There are a number of possible role performance indicators, including attendance, participation, estimated grade, grade point average, degree desired, and reasons for attending college. Steady attendance expresses a commitment toward learning in that schoolwork is chosen over a variety of other, perhaps more enjoyable, activities.
Participation also reflects role involvement because it cannot be meaningfully engaged in without preparation beforehand. This in turn implies a reduction in other extra-curricular activities. Estimated grade is a measure of the time the student will probably spend on the course. Grade point average is a reflection not only of a student's long range orientation toward learning, but also of his self confidence in his academic capabilities and is a symbol of the importance he assigns to education. Degree desired is usually associated with involvement in the student role—the advanced degrees revealing a more positive orientation than those such as the B.A., B.S., or the non degree. Although a postgraduate education generally commands a prestigious job and a higher salary, it involves several years of study during which gratification must be postponed. Reasons for attending college can also be a function of a student's involvement in his role. Students who give such reasons as to get a good job, or to avoid the draft, are expressing an instrumental orientation and cannot be expected to be as involved in the student role as those attending college for more academic motives. Attendance, participation, attention to the lecture, estimated grade, and grade point average were selected as possible indicators of student role performance. We will not be concerned with degree desired, or with reasons for attending college.

Relationships between role performance variables and seating position have been reported by Sommer (1969), and Biddle and Adams (1967) in their studies of the classroom. In a test of the expressive contact hypothesis that college students in the center of the
classroom are psychologically closer to the instructor than are students at the sides, Robert Sommer divided each room into a center zone and two side zones. The results showed that participation is greatest in the front row as well as within the center section of each row. In another study of participation in a straight line arrangement, he discovered that students in the first row participated more than students in either the second or third rows. In a replication of this study, again with college students, the front row was completely vacant. However, there was still a linear relationship between participation and proximity to the instructor.

"Students in the second row averaged 3.7 statements per session compared to 2.6 from those in the third row, 1.5 from those in the fourth row and 0.5 from those in the fifth row" (1969:116). Sommer also reported that in a study of participation under voluntary and alphabetical seating arrangements using college freshmen, there was a definite connection between row and participation when students were free to sit where they wished, with the majority of class related verbalizations coming from the first row. In the other group there was not much difference in the rates of participation between the first two rows, but the third row students participated very infrequently (1969:116). In a study of elementary school children, Biddle and Adams concluded that "the majority of classroom communicators are located down the center of the classroom, rather than across the front or randomly distributed in the classroom" (1967:290).

Personality variables have been found to be associated with
academic achievement, interpersonal manipulation and various other behaviors. They may also influence seating position. Those that will be considered are birth order, Machiavellianism, defined as the manipulation of others, and orientation toward self, interaction and task.

The rationale for including birth order is rather tenuous. Basically, it is the idea that first born children differ in certain respects from their later born siblings, and that these differences may be reflected in seating location. Birth order is thought by some researchers to be highly influential in determining whether an individual will be intellectually oriented or whether he will be oriented toward his peers. McArthur, for example, has demonstrated that the first born is more likely to be adult oriented, and the second child to be peer oriented (1956:54). Rosen claims that in light of the interaction of the first born with his parents he comes to be very sensitive to their expectations and sanctions (1964). Oberlander and Jenkins postulate that with the arrival of a sibling the first born develops new techniques to retain parental affection based on "linguistic development, intellectual exploration, and school achievement" (1967:104). Indeed, the results of their study indicate that first borns are superior to later borns in I. Q. scores, reading achievement scores and school achievement as measured by grade point average (1967:105). In a study by Chittenden et al., the performance of first borns was contrasted directly against that of their own siblings. Again, first borns were found to have superior grades and scores on the Iowa test (1968:1225-1226).
Machiavellianism was included because previous research has found it to be associated with front row seating (Singer, 1964). In seeking to explain the relationship between attractiveness and grade point average for first born females, Singer hypothesized that females use manipulative strategies which capitalize on their good looks. He found that first born girls more often make themselves known to instructors and provide their professors with greater opportunity to see them and to learn their names. They tend to sit in the front of the room, to come up after class, and to see the instructor during his office hours.

Self, interaction and task orientation, as measured by the Bernard Bass Orientation Inventory, has been found to predict performance in a wide variety of situations. For example, orientation scores have been found to correlate significantly with personality and attitude evaluations. In addition, it has been shown that during experiments the subjects will react differently to the stimulus condition depending on their orientation. Interpersonal behavior has also been found to be dependent on orientation. Finally, the orientation of an individual has been related to the effectiveness of various reinforcement techniques (Bass, 1967).

Since orientation appears to affect such diverse behaviors, it is possible that it also affects seating choice.

Status variables seem the most closely related to those found by the Chicago school to be associated with urban differentiation. It might be expected that these variables will also be the most influential in affecting the distribution of students within the
classroom. Those that will be discussed are sex, age, and year in college. Since sex has been found to be related to differences in associational membership, organizational participation, occupational achievement, years of schooling, suicide rates, and involvement in crime, it too may have an effect on seating position.

Age and year in college are generally related, with those who are older falling in the upper class levels. These students may be differentiated from the younger freshmen and sophomores by their interests and by their greater maturity. Freshmen have been described as conformists to the standards of an authority figure, lacking in rebelliousness, relying on extrinsic motivation to stimulate their learning as students, emphasizing understanding of the material presented in class, and good appliers but poor innovators (Mann et al., 1970:147-152). In addition, freshmen and sophomores frequently take advantage of the fact that they are no longer directly under their parent's supervision and exercise their new freedom at the expense of their academic responsibilities.

The more advanced students were characterized as independents, creative, detached from the instructor yet appreciative of what he has to offer them, supportive, and having little desire to rebel (Mann et al., 1970:166-170). Also, perhaps for them the novelty of freedom has worn off and they are inclined to orient themselves more toward schoolwork.

Hypotheses

From the previous discussion of the variables selected for

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study, hypotheses were formulated which seemed to embody the possible relationship between these variables and seating position. In some cases these hypotheses stemmed directly from the findings of previous research; in others they were inferred. The hypotheses dealing with role, status, and personality variables will be presented in sets. Each set will be introduced by a general assumption which states the tentative relationship of the variables in that set to seating position.

Degree of role performance may be reflected in seating position. Grades, attention to the lecture, attendance, and participation will be used as indicators of the individual's involvement in the role of student.

General Assumption 1: Role performance variables will be related to seating position.

Research Hypothesis 1a: Students who attend class most frequently will sit more towards the front than students who attend less often.

Research Hypothesis 1b: Students who participate most frequently will sit more towards the front than students who participate less frequently.

Research Hypothesis 1c: Students who are the most attentive will sit more towards the front than students who are less so.

Research Hypothesis 1d: Students who expect the highest grades will sit more towards the front than those who do not expect such good grades.

Research Hypothesis 1e: Students with the highest grade point average will sit more towards the front than those with lower grade point averages.

Personality variables may also influence seating position. Birth order, Machiavellianism, self, interaction, and task orientations were selected as measures of personality.
General Assumption 2: Personality variables will be related to seating position.

Research Hypothesis 2a: Students who are first born will sit more towards the front than those later born.

Research Hypothesis 2b: Students who are more Machiavellian will sit more towards the front than those who are less Machiavellian.

Research Hypothesis 2c: Individuals who are self oriented will sit more towards the sides of the classroom than those who are not.

Research Hypothesis 2d: Individuals who are interaction oriented will sit more towards the middle of each row than those who are not.

Research Hypothesis 2e: Individuals who are task oriented will sit more towards the front of the classroom than those who are not.

Because there is no theory relating status variables to seating position, any prediction about their possible relationship would be highly uncertain. Therefore, the null hypothesis will be used to test the findings. The variables chosen to get at the status dimension are age, sex, and year in school.

General Assumption 3: Status variables will not be related to seating position.

Research Hypothesis 3a: Sex will not be related to seating position.

Research Hypothesis 3b: Age will not be related to seating position.

Research Hypothesis 3c: Year in college will not be related to seating position.

Class size and type of presentation are the measures of structure. In a large lecture hall it is much easier to withdraw from both peers and instructor since greater distances separate the front from the back as well as the center from the sides. Also, the
greater number of chairs enables more students to sit where they like. Fewer students can be accommodated in small classrooms. Therefore, discussions can replace the formal lecture. Since there are fewer seats relative to the number of students, choice may be less of a factor, thus blunting the sharpness of seating patterns.

General Assumption 4: The degree of classroom structure will be related to seating position.

Research Hypothesis 4: Differences in seating patterns will be greater in highly structured classes than in classes that are more loosely structured.
CHAPTER II

METHODS

In this chapter, the "sample" will be described and the question of its representativeness will be considered. Then the data collection process will be discussed, as well as the manner in which information regarding seating position and the independent variables were obtained on the questionnaire. Finally, the method of data analysis will be described.

Sampling

The data for this research were obtained from a questionnaire which was administered to 148 students at Western Michigan University during the winter semester of the 1971-1972 academic year. The respondents used in this study were not chosen to be representative of any clearly defined population. Although we shall call them a "sample," we do not mean to imply that any strict probability sampling is involved. Our sample is instead primarily chosen for exploratory convenience. As Blalock observes, "in exploratory studies, the main goal of which is to obtain valuable insights which may ultimately lead to testable hypotheses, probability sampling may be too expensive or lead to fewer such insights" (1960: 410).

We use the term "sample" rather than "population" because we do conceive of the study broadly as an exploration of seating patterns
in a particular university. Appendix B gives information which indicates how closely selected characteristics of our sample correspond to those of the undergraduate population of Western Michigan University. In general, we may sum up the matter of the representativeness of our sample as follows: freshmen are over-represented in the sample, while sophomores, juniors and seniors are underrepresented. The sex ratio is approximately 1:1, with slightly fewer females than males. This is also the case throughout the university as a whole. The sample distribution of males and females for each year in college does not come close to representing the population. However, the distribution of males in the sample for each year in college represents the distribution of males in the population more closely than the females in the sample represent the distribution of their counterparts in the population. Even though the sample percentages are so different from the population figures, they still follow the pattern in the population of more men than women in the junior and senior classes.

Among the characteristics of the sample were the following: Fifty-three percent of the students were males and 47 percent were females. Their ages ranged from 18 to over 25. A little over four-fifths of the sample were between the ages of 18 and 20. Sixteen percent were 21 or older. The freshmen and sophomores made up 80 percent of the sample, while juniors and seniors comprised the remaining 20 percent. Thirty-six percent of the students were enrolled in the business and education curricula. The applied sciences and the arts and humanities followed, each with 15 percent.
Next came the social sciences (10 percent), the natural sciences (7 percent), and the unclassifiable fields of study (8 percent). Those who did not indicate their major field of study consisted of 7 percent of the sample. The students' grade point averages were concentrated around the C's and B's. The grade point average of 8 percent of the students was 2.0 or below, while three-fifths had a grade point average of 2.1 to 3.0, and 27 percent had a grade point average of 3.1 to 4.0. This information was not available for 1 percent of the sample.

One of the problems to be investigated was whether seating patterns would be more pronounced in structured classes than in unstructured ones as measured by type of instruction. Thus, it was necessary to obtain data from both lecture and discussion groups. There were very few classes which met in two different rooms and were exposed to two different types of instruction. Among the classes which met this criterion and also had a relatively wide cross section of students were "Aims and Achievements of Science" and "Western Civilization." Each class met three times a week for lectures and twice a week for discussions.

Data Collection

Once the courses were selected, it was necessary to obtain permission from the chairmen of science and humanities areas within the College of General Studies. Then, instructors were contacted, the nature of the research explained, and permission was obtained to administer the questionnaire during their regularly scheduled
class periods. If it was discovered that the instructor assigned seats, or had his students sit in a non-linear arrangement, then his class was not studied.

Before the actual collection of the data, a pre-test was run in two sociology classes to uncover problems respondents might have in answering the questionnaire. As a result of the pre-test, it was decided to include a general statement describing the purpose of the research and requesting cooperation. During this period, a simple personality questionnaire was discarded in favor of the Bernard Bass Orientation Inventory. This was done because it was designed specifically to get at self, interaction, and task orientations, variables which the earlier personality questionnaire measured rather poorly.

The original plan was to administer the questionnaire once to each discussion group and once again at the lectures. However, this plan had to be modified for two reasons. First, it seemed neither practical nor wise to have students fill out the ten-page questionnaires just to get two measures of their seating position. Secondly, the students in Western Civilization met for television rather than "live" lectures. Since television sets were equally distributed throughout the room it had the effect of putting the majority of students either in or near the front row. In addition, it was thought that television sets could not elicit the same seating patterns as those elicited by the presence of a professor. Therefore, questionnaires were given out only to the discussion groups in the history sections. Questionnaires were distributed to
science students in their discussion groups. A diagram of the
lecture hall was attached to the questionnaire and students were
asked to indicate their approximate seating position, thus alleviat-
ing the need for two questionnaires.

All questionnaires were administered by the writer. Each class
was given a general statement of the research problem, and the
student's cooperation was requested. Finally, instructions were
given for filling out the questionnaire and assurances were made
concerning the confidentiality of response.

The questionnaires were distributed first to three sections of
Aims and Achievements of Science and then about one week later to
three sections of Western Civilization.

Two problems hampered the research effort. First, in one
instance the students did not have enough time and some of them
failed to complete the questionnaire. Second, other classes were
usually held right after the one in which the data were being
gathered. Consequently, when the new students arrived and found a
questionnaire on their desk they frequently put it on another desk
before its position in the room could be coded.

Although these problems were annoying, they did not seriously
interfere with the analysis of the data. There were only a few
individuals who were unable to complete their questionnaires and
it was possible to compensate partially for the misplaced question-
naires. Since the students arriving for class would usually put
any questionnaire they found on the desk next to theirs, it was
possible to code it for row location, thus obtaining one measure of
seating position. Fortunately, this situation only occurred a very few times.

Measurement of Variables

The dependent variable—seating position—was obtained after the respondents had filled out the questionnaire and had left the classroom. As the questionnaires were collected from each desk, they were assigned a code indicating the row and column in which they were located. The row number indicates degree of frontness; column number degree of sideness. The rows were numbered in increasing order beginning with the lowest number in front. Sideness was measured by starting in the middle of the row with the smallest numbers and giving the desks on the left half of the room odd numbers and those on the right even. This process is explained in more detail in Appendix C.

Bernard Bass' Orientation Inventory was used to measure self, interaction, and task orientations as they are influenced in a group context. The inventory consists of 27 triads of questions about personal preferences, values, and projections. Bass' labeling procedure in which individuals are categorized as either self, interaction, or task oriented if they are in the top quartile of a particular distribution and below the median of the other two was not used. Instead individuals received a score for each orientation. It should be noted that these orientations are not independent variables. They depend on each other by the very way they are measured.
Bass has suggested that when individuals form a group which is involved in a common task there will be some for which this task may be the focus of attention while "the group may be the center of attention for others, and personal concerns may be the focus for still others" (1967:260). Although the classes studied were not true groups, Bass' inventory was used anyway because it was expected that these orientations could also apply to the classroom setting.

Richard Christie's original Machiavellianism Scale has been simplified for use in a national sample. This highly abbreviated version was included in the questionnaire even though in its shorter form it cannot make an accurate assessment of personality. The responses to this scale were five in all, and ranged from extreme disagreement to extreme agreement (1970:83).

Questions dealing with grade point average, degree desired, expected grade, attention to the lecture, class participation, and attendance were forced choice. Respondents were asked to indicate their sex, age, whether they were first born, their year in college, and their major.

Data Analysis

The intent of this research was to examine the effects of certain variables on seating choice. The students in the sample were first divided into two groups according to class format (i.e., discussion or lecture), and separate analyses were made for each group. This division permitted comparisons between groups regarding the type of seating pattern found in relatively more structured or unstructured classes.
Any correlation between seating position (measured by "row" or "column") reaching the .01 level of significance was considered a significant pattern. The writer's rationale for setting such a high significance level for an exploratory study comes from Blalock's rule of thumb that "the researcher should lean over backwards to prove himself wrong or to obtain results that he actually does not want to obtain" (1960:125).

The data were analyzed using a computer program for stepwise regression (Western Michigan University Library Program 1.3.2, May 20, 1971). Two stepwise regressions were run for each group—one using row position as the dependent variable, and the other using column position. This program produces output which includes means, standard deviations, correlation matrices, and the amount that each variable contributes to the increase in the coefficient of determination (the proportion of variance of the dependent variable accounted for by the independent variables included in the regression equation). Missing data or no responses were deleted from the analysis.

In order to be statistically correct, stepwise regression assumes interval data. However, a combination of interval and ordinal measures were used. Dummy variables, where an attribute is either present or absent, may be justified even though finer measurement is ideally assumed by the statistical requirements. Blalock has observed that "it may prove advantageous to think in terms of continuous variables, even when measurement is much more crude. The advantage over attribute thinking is that we may then always treat
attributes as a special case of variables with only two values" (1961:35).

The use of interval statistics in the case where a variable has more than two values is less defensible. It is realized that using ordinal data in a stepwise regression is a violation of the assumptions upon which the statistic is based. The only justification that can be made for this action is that it facilitated the identification of variables which play a significant role in seating position. Because a sensitive statistic is being used on insensitive data, the interpretation of the results must be made more carefully.
CHAPTER III

THE RESULTS

In this chapter, the results will be presented. The hypotheses under consideration will be examined as sets. The first set deals with role performance variables. Set two is concerned with personality variables, and set three with status variables.

Role Performance Variables

In this section, the relationship between seating location and role performance variables will be examined. These variables include attendance, class participation, attentiveness to the lecture, grade point average, and expected grade.

TABLE 1

CORRELATIONS BETWEEN ROLE PERFORMANCE VARIABLES AND ROW AND COLUMN LOCATIONS

<table>
<thead>
<tr>
<th></th>
<th>Discussion</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Row (N=126)</td>
<td>Column (N=118)</td>
</tr>
<tr>
<td>Attendance</td>
<td>-.00</td>
<td>-.06</td>
</tr>
<tr>
<td>Participation(^a)</td>
<td>-.10</td>
<td>-.15</td>
</tr>
<tr>
<td>Attention to the Lecture(^a)</td>
<td>.04</td>
<td>-.06</td>
</tr>
<tr>
<td>Expected Grade(^a)</td>
<td>-.10</td>
<td>-.06</td>
</tr>
<tr>
<td>Grade Point Average(^a)</td>
<td>-.00</td>
<td>.03</td>
</tr>
</tbody>
</table>

\(^a\)A negative correlation is indicative of a positive relationship.
In Chapter 2 it was decided to consider as a pattern any correlation reaching the .01 level of significance. It is clear from the figures presented in Table 1 that none of the associations between role performance indicators and seating position are significant. Thus, the hypotheses which posit a relationship between attendance, class participation, attention to the lecture, expected grade, grade point average and seating location must be rejected.

It should be noted that of these role performance indicators, attendance was so skewed that it was hardly surprising to find scant evidence of a relationship between this variable and seating position. Its lack of variability may explain the low correlations with spatial location. Because this variable was so skewed, its association with seating position has not actually been tested. Thus, one cannot unequivocally state that attendance has no relationship to seating location. Because most of the other role performance indicators are well distributed, the fact that they are not significantly associated with spatial location indicates that these variables probably have little effect on seating position.

Expected grade is also skewed, the majority of students falling within two categories—those expecting B's and those expecting C's. In addition, it is poorly measured. However, taking its association with column seating position in the lecture situation as suggestive, it might be noted that there is a slight tendency for students expecting the highest grades to sit more toward the center of each row. The mean column seating position for those expecting a B is 2.9, and for those expecting a C it is 3.8.
Personality Variables

The personality variables that are of concern to this study are Machiavellianism, birth order, and certain orientation variables. Machiavellianism refers to the ability to manipulate the behavior of other people. Birth order, while not directly referring to a particular trait, has been associated in other studies with a variety of personality characteristics. Orientation variables are divided into 1) self orientation, 2) interaction orientation, and 3) task orientation.

TABLE 2
CORRELATIONS BETWEEN PERSONALITY VARIABLES AND ROW AND COLUMN LOCATIONS

<table>
<thead>
<tr>
<th></th>
<th>Discussion</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Row (N=126)</td>
<td>Column (N=118)</td>
</tr>
<tr>
<td>Machiavellianism a</td>
<td>.03</td>
<td>.00</td>
</tr>
<tr>
<td>Birth Order</td>
<td>.04</td>
<td>.04</td>
</tr>
<tr>
<td>Self Orientation a</td>
<td>.04</td>
<td>.00</td>
</tr>
<tr>
<td>Interaction Orientation a</td>
<td>-.21*</td>
<td>-.08</td>
</tr>
<tr>
<td>Task Orientation a</td>
<td>.08</td>
<td>.09</td>
</tr>
</tbody>
</table>

*aA negative correlation is indicative of a positive relationship.
P<.05

As can be seen from Table 2, neither the personality variables of Machiavellianism nor birth order are significantly associated with seating position. There is a slight tendency, however, for the
relationship between Machiavellianism and spatial location to increase in the lecture situation, indicating that those scoring highest in Machiavellianism are more inclined to sit toward the front and center of each row in lecture halls than are students with lower scores. The correlations between birth order and seating position remain fairly constant despite differences in type of room.

Orientation categories refer to groups of students who can be labeled as either self, interaction, or task oriented. The failure of the results to reach significance indicates that self orientation is not related to column seating position, and that task orientation is not associated with row location in either the smaller classrooms or in the lecture halls. Interaction orientation is, however, correlated with row in the discussion section at the .05 level of significance. However, the hypothesis that interaction orientation will be correlated with column location must be rejected. Generally, though, an individual's orientation as measured by Bass' inventory apparently does not affect seating placement in the college classroom.

Status Variables

Sex of respondent, age, and year in college were selected to provide information on the status of the student. The results in the following table show the relationship between seating location and position in the social structure.
TABLE 3
CORRELATIONS BETWEEN STATUS VARIABLES
AND ROW AND COLUMN LOCATIONS

<table>
<thead>
<tr>
<th></th>
<th>Discussion</th>
<th></th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Row (N=126)</td>
<td>Column (N=118)</td>
<td>Row (N=71)</td>
</tr>
<tr>
<td>Sex of Respondent</td>
<td>-.24**</td>
<td>-.08</td>
<td>-.36**</td>
</tr>
<tr>
<td>Age of Respondent(^a)</td>
<td>.03</td>
<td>-.16</td>
<td>-.01</td>
</tr>
<tr>
<td>Year in College(^a)</td>
<td>-.00</td>
<td>-.08</td>
<td>.02</td>
</tr>
</tbody>
</table>

\(^a\)A negative correlation is indicative of a positive relationship.

\(^{**}p<.01\)

Every correlation presented in Table 3 except that between sex and row seating location in both discussion and lecture situations fails to reach significance. Therefore, the hypotheses which state that the status variables of age and year in college will not be related to seating position are supported. However, it should be noted that because the respondents were mostly freshmen and sophomores, year in college is skewed, the majority of students falling within these two categories. Therefore, its association with seating position has not really been examined. Thus, year in college and spatial location cannot be viewed as being definitely unrelated.

The hypothesis that there will be no relationship between sex and seating position must be rejected. What the correlation between row and sex of respondent shows is that there is a significant tendency for females more than males to sit toward the front of the room in both types of classrooms, while males sit toward the back.
Table 4 is set up to approximate the results of a stepwise regression. At each step the variance explained is added to that preceding it to produce a new total. The first variable listed is that which explains most of the variance regarding seating position. The following variables are listed in descending order according to the amount of variance they explain. Only those variables having an F value of 2 or more were included in the table. However, the total variance explained contains the variance explained by those variables left out of the table as well as those included.

**TABLE 4**

**VARIANCE EXPLAINED CUMULATIVELY BY SELECTED VARIABLES**

<table>
<thead>
<tr>
<th></th>
<th>Discussion</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Row (N=126)</td>
<td>Column (N=118)</td>
</tr>
<tr>
<td>Sex</td>
<td>.05</td>
<td>Age</td>
</tr>
<tr>
<td>Interaction</td>
<td>Orientation</td>
<td>.08</td>
</tr>
<tr>
<td>Particip.</td>
<td>.04</td>
<td>.17</td>
</tr>
<tr>
<td>Expected Grade</td>
<td>.10</td>
<td>Sex</td>
</tr>
<tr>
<td>Attention</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>Total Explained Variance</td>
<td>.20</td>
<td>Total Expl. Var.</td>
</tr>
</tbody>
</table>

The first observation regarding Table 4 is that cumulatively, the fifteen variables used in the stepwise regression account for very little of the variance in seating position. However, most of
the variance that is explained is accounted for by seven variables; sex of respondent, expected grade, participation, attention to the lecture, age and degree desired. Second, there is a difference, although slight, in the ability of the variables cumulatively to account for the total explained variance in row and column seating position. Ten to seventeen percent more of the variance in row seating position is accounted for than in column seating position. Third, except for interaction orientation, personality variables account for very little of the variation in spatial location. In contrast, the status variable of sex accounts for some variation in three of the four possible situations. Role performance variables account for some of the variation in row and column seating position in both lecture and discussion situations. Finally, the variables which were measured but left out of Table 4 are responsible for very little of the explained variance.
In Chapter I the problem for investigation was presented— that of determining whether the occupation of space within the college classroom was patterned. Three sets of possible patterning variables were gleaned from the literature and an attempt was made to study their effect on spatial location. It was found that some correlations between sex of respondent and seating position were significant at the .01 level, and that interaction orientation and seating position were correlated significantly at the .05 level. However, it appeared that differences in room size and type of instruction seemed to affect the degree of association between these variables. While the associations between sex of respondent and seating position were significant both in discussion and lecture sections, that between interaction orientation and spatial location was significant only in the smaller classrooms.

However, except for the correlations between sex of respondent, interaction orientation and seating position, there is no evidence that the variables studied systematically correlated with seating location. Consequently, the problem now becomes one of considering why nearly all of our findings showed only a random distribution so far as variables related to seating patterns are concerned. The comments made in this chapter can be viewed as having implications for future research.
Possible Methodological Sources of Random Results

Several factors may have been operating singly or in combination to produce a random distribution of variables in the classroom. These factors might include the confounding effects of classroom size and type of instruction, an inadequate research instrument, an unjustified extension of other research findings to the area of proximics, and an unsuitable method of data analysis.

It is difficult to compare the seating patterns in large and small classrooms because of the dissimilarity in the ongoing activities in each room. Lectures are taking place in the large classrooms and discussions in the smaller rooms. Therefore, information may have been obscured because type of instruction was not held constant. For example, individuals might sit in one place in a small room and in another in a lecture hall. But there is no way of finding out, since type of instruction varied with classroom size. Thus, it is not possible to isolate the effects of room size, type of instruction, or their combined effects on the obtained results.

It may be that the research instrument is inadequate, that the items do not measure what was intended. This may be a factor accounting for the low correlations between the dependent variable and self, interaction, and task orientations. Bass uses his inventory to measure these orientations as they are manifested in a group situation. Although the classroom contains an aggregate of students, they do not constitute by most definitions, a true group. Therefore, these orientations may not have been present in sufficient strength
to be of any moment. The inadequacy of the research tool may also provide a partial explanation for the weak associations between seating position and the other independent variables.

Yet, one must ask why this study produced such little evidence indicating the formation of home territories. It cannot be that space is not used to express psychological and social factors, for the literature on proximics has accumulated considerable evidence on such relationships. There are, for example, the studies by Gottlieb and Cavan which deal with the group conversion of public areas into home territory.

One difficulty might be in assuming that the findings from previous research can be extended to the realm of classroom space. For example, birth order has been shown to be related to academic achievement. Academic achievement in turn was assumed to be related to seating position, as were participation, grade point average, age, and Machiavellianism. These as well as the other assumptions discussed in Chapter I may be unjustified. It may be that the classroom is a particular kind of space in which these assumptions are not valid and the variables therefore, fail to predict. Why this might be so will be discussed later.

Finally, these weak correlations may be an artifact of the data analysis. The information obtained from the three Western Civilization classes and the three Aims and Achievements of Science classes were analyzed as two large groups--lectures and discussions--rather than as six separate entities. The analysis was done in this manner because the writer felt that if there were seating patterns
they would have to be somewhat the same from classroom to classroom and thus, individuals with certain characteristics would be distributed similarly within discussion groups and lecture sections as a whole. This may not have been the case. Two classes with distinct but opposite patterns may have cancelled each other when combined, thus producing the low associations. However, this does not appear to have happened since the results of a separate analysis for each class yielded the same low correlations among the variables.

Educational Standardization

The failure to find much evidence of territorial formation may be the consequence of the student's experience in elementary and senior high school. For twelve years the student is exposed to a "stable and highly stylized environment in which the physical objects, social relations and major activities remain much the same" (Jackson, 1968:9). During this period the student must learn to deal with impersonality and standardization. It is the student's response to such an environment that may partially explain the lack of territorial establishment in the college classroom.

From elementary school on, the student undergoes an experience the most remarkable aspect of which is its sameness. In the classroom the student is exposed to a relatively stable physical environment and a fairly constant social milieu. In addition, classroom activities take on a ritualistic and cyclic quality. The student must follow a specific daily schedule of study and activity, predictable from one day to the next.
Not only do schools try to impart content but they also prepare the student for life in society. This is done by socializing the child to defer immediate gratification. Obedience and patience are inculcated. In its rigid adherence to schedules "school is a place where things happen not so much because students want them to, but because it is time for them to occur" (Jackson, 1968:13). In the classroom the student is further restricted by its rules of behavior. He must not interrupt others or cheat on exams. If he has something to say, he must raise his hand and remain silent until recognized. Finally, it is demanded of each student that he ignore those who are around him even though he is in the company of thirty or more individuals, many of whom are friends. Thus, many features of classroom life call for patience at best and resignation at worst. As he learns to live in school, the student learns to subjugate his own desires to the will of the teacher. He learns to be passive and to acquiesce to the networks of rules, regulations and routines in which he is embedded. He learns to tolerate petty frustrations and accept the plans and policies of higher authorities, even when their rationale is unexplained and their meaning unclear (Jackson, 1968:36).

It is this standardization and disregard for the individuality of each student which may foster a passivity which may be carried on to college. The classroom from grade school through senior high school offers no opportunity for territorial establishment, thus eliminating territorial formation as a response in an educational setting. The college classroom, especially in its similarity to the classroom one has experienced for twelve years, may elicit a conditioned response resembling that of earlier days, so that now the failure to establish a territory may just be automatic.
A partial explanation for the lack of strong spatial patterning in the college classroom may be found in the element of constraint that is often a part of college education. An individual may choose to go to college, he is usually not forced into this decision. Once enrolled, the student may choose most of his classes, the order and the time during which they will be taken, and frequently he may even select the professor. The decision to go to college, however, may not be made simply because of its intrinsic benefits. It may be that the alternatives to college, such as being drafted or working, may be viewed as more distasteful. Even when an individual goes to college with the intention of preparing for a future occupation, his emphasis is on getting through and on graduating rather than on education per se. The student's freedom is also limited in terms of course selection. Some are required. Some are only offered during certain semesters, and some may not be offered at all in the subjects which especially interest the student. His choice is determined by what appears in the class schedule. The same is true regarding the time a class is offered. The student may pick the time most convenient for him, but often the class if full and he must either sign up for a less satisfactory hour or take something else. Sometimes it is only offered once and the student must either take it then or go without.

This situation is in marked contrast to that found in clubs, interest groups and other voluntary organizations. Barring parental pressure, individuals join because they want to. In this case there
are no constraints. If an individual does not wish to attend a club meeting, he is not penalized for his absence. This differs from school where attendance is "enforced" by conscience, parental pressure, and a concern with grades. The lack of constraints in joining an organization makes this action an expression of self. If self expression is stifled in the classroom because the students are forced to attend college, or are constrained to attend a particular class, then perhaps a damper is put on territorial activities. If attention is just focused on getting out of class, there is scarcely any motivation for establishing a territory. Furthermore, if self, interaction and task orientations, as operationalized in Bass' Orientation Inventory, can only be measured relevantly in a group situation, then it is not surprising to find scant evidence of spatial patterning in the college classroom. It is merely a meeting place for an aggregate of individuals. On the other hand, individuals in voluntary organizations constitute a group with a group purpose or task. A club possesses a sense of identity which is lacking in the classroom. This type of environment is more conducive to the expression of self, and especially interaction and task orientations. Perhaps a sense of group identity is necessary for the establishment of territory.

An article by Batchelor and Goethals is related to this issue (1972). The authors found that when collective decision making is emphasized, there is more of a difference in the importance of seating than when decision making is individually oriented. Thus, when the necessity of completing a collective task creates a sense of
group identity among individuals, seating arrangements assume a greater significance. A college classroom is typically individual oriented unless the professor specifically assigns a group or sub-group task. Usually, however, the classroom situation does not provide a basis for group formation. In light of Batchelor and Goethals' study it might be tentatively concluded that under the conditions of individualism and constraint, seating in the college classroom would appear random.

Territorial Ambiguity

In Chapter I it was suggested that the classroom could be viewed as a territory of restricted public access, neither public nor private, but possessing some of the qualities of both. It may be that this territorial ambiguity combines with the educational setting in such a way so as to neutralize the classroom to all but the most superficial of territorial claims. This ambiguity may prevent the formation of norms which facilitates the carving out of space into subdivisions of groups.

The classroom simultaneously has the characteristics of both home territories and open ranges. This alone is not enough to inhibit territorial formation. However, the classroom setting itself acts as a catalyst to bring these characteristics into conflict with each other.

In "normal" areas of restricted public access--such as taverns--it is possible for the inhabitants to control the entrance of outsiders even though legally anyone who has attained the age of
majority is permitted to enter. Even though the insiders do not own this area, they can change it within reason, assured that any alterations they make will remain. Because these areas are open for business several hours a day, it is possible for the inhabitants to regulate to some extent their entrance and exit from this locale. Thus, in "normal" areas of restricted public access, the potentially conflicting characteristics of open ranges and home territories have adjusted to each other and the individuals who frequent them can successfully carve out a territory.

This accommodation can be seen in taverns. Except for minors and drunks, taverns are obliged by law to serve their customers. However, the atmosphere generated by the regular patrons can determine whether a newcomer's stay will be extended or brief and whether he feels welcome to return again. The amount of change tavern owners permit their customers is much less than that allowed in offices and shops, but proprietors often permit their regulars to hang trophies or emblems on the wall. Some-managements provide their faithful patrons with a special place to keep their private pool cues. Other owners encourage self expression by providing grafitti boards for the lavatories. The extended period during which taverns are open for business allows the patron to determine the time he will spend there. He can regulate his comings and goings almost as if the tavern were his own home.

In classrooms no such accommodation can be reached. Something about the classroom itself prevents this from occurring. Unlike patrons of bars, students can exert little control over who enters a
classroom. They register for courses at diverse times. When class
meets for the first time, it is also the first time most of the
students have ever seen each other. Furthermore, there is no
mechanism within the class which fosters acquaintance. In
fourteen to fifteen weeks most of the students will never see one
another again so there is little motivation to learn the names of
thirty or more individuals. There is also scant opportunity to do
so even if the motivation existed. Thus, not only is there no basis
for the concerted action to develop that would be necessary to
pressure unwanted individuals into dropping the class, but also, no
one knows at the moment who the undesirables are. In addition, the
classroom cannot be manipulated by its inhabitants. University
regulations forbid students to alter their environment. What little
renovation is permitted is not protected, and students can never be
assured that any changes they make will be there when they return.
Furthermore, classrooms are used by many different individuals
throughout the day. This is due to the manner in which the univer-
sity, of necessity, must handle the logistics of satisfying the
demands of thousands of students for an education. Classrooms are
scheduled for specific classes at particular times. Students must
rush off after class to make room for the new arrivals and to avoid
being late for the next one. The time spent in a classroom then, is
not of one's own choosing. It must be regulated to conform with the
university's schedule of classes.

Because students cannot determine who their classmates will be,
or change their environment, or decide when they will enter or leave
the room—activities which are engaged in in other areas of restricted public access—the classroom becomes a place in which it is exceedingly difficult to establish territory. In short, the classroom may be an area in which it is impossible to elicit the type of spatial patterning (territorial establishment) characteristic of other social settings.

Summary

It was found that some correlations between sex of respondent and seating position were significant at the .01 level. One other variable—interaction orientation—was associated with seating location under certain conditions at the .05 level of significance.

In accounting for the relative absence of spatial patterning, two interpretations were advanced. The first dealt with the mechanics of the research. It was possible that little turned up because of the confounding effects of room size and type of instruction, because the research instrument did not measure what it was supposed to measure, because it may not be possible to extend the results of other studies to the area of classroom space, or because the analysis of the data did not fit the problem.

The second interpretation is concerned with explanations as to why territoriality should play so small a part in the classroom. The idea was put forth that the low correlations might have been the consequence of experiences in grade school and senior high where students are conditioned to be passive and obedient. Thus, in other educational settings, such as in the college classroom, students
react just as they did in their pre-college days and fail to establish a territory. Another idea suggested was that territories are not formed in the classroom because it is not a locale that is freely chosen. Thus, there is little expression of self in going to class, nor identification with a group. This in turn is reflected in the relative absence of territoriality. Finally, it was proposed that the educational setting is such that it does not permit a peaceful co-existence between the conflicting characteristics of home territories and open ranges and that in such an environment establishing a territory becomes very difficult.

This paper has dealt with the spatial ecology of the classroom. Its exploratory nature, necessitated by the relative absence of explicit theory, permitted a fairly wide ranging investigation. However, as it turned out, little evidence was found supporting the idea of spatial patterning in the college classroom in terms of the variables investigated. Therefore, most of the present chapter was devoted to *ex post facto* theorizing as to why this should be. Although several explanations were offered, the data are such that it is impossible to assess their adequacy. They are purely speculative comments which may suggest directions for others to pursue should they be interested in this topic.
APPENDICES
APPENDIX A

QUESTIONNAIRE ON SEATING POSITION IN THE COLLEGE CLASSROOM

I am doing my thesis on the utilization of space in the college classroom and would appreciate your cooperation in answering this questionnaire. The purpose of this research is to identify some of the variables that influence spatial behavior. Not much work has been done in this area. So, your participation will be extremely helpful in exploring this topic.

It is important that all questions be answered as honestly as possible. Therefore, if you do not wish to participate in this study, or if you do not feel that you can be completely truthful, please leave the questionnaire blank.

All questionnaires will remain anonymous. Please do not indicate your identity in any way.

Thank you,
Dolores Burchell Jones
Department of Sociology
QUESTIONNAIRE

Please answer the following questions by circling the number of the most appropriate answer.

1. Are you
   1. Male
   2. Female

2. Age (at last birthday)?
   1. 17
   2. 18
   3. 19
   4. 20
   5. 21
   6. 22-25
   7. Over 25

3. Are you a first born or only child?
   1. Yes
   2. No

4. What is your year in school?
   1. Freshman
   2. Sophomore
   3. Junior
   4. Senior
   5. Other

5. What is your major (first choice if undecided)?

6. What is your over-all grade point average?
   1. 1.5 or less
   2. 1.6-2.0
   3. 2.1-2.5
   4. 2.6-3.0
   5. 3.1-3.5
   6. 3.6 or higher

7. What degree do you plan to obtain?
   1. No degree
   2. Undergraduate degree
   3. Master's degree
   4. Doctor's degree
8. What is your major reason for going to college?

9. What grade do you expect to get in this class?
   1. Below a C
   2. C
   3. B
   4. A

10. How much of the lecture do you pay attention to?
    1. 0%-25%
    2. 26%-50%
    3. 51%-75%
    4. 76%-100%

11. How often do you participate in this class?
    1. Not at all
    2. Very seldom
    3. Average
    4. Above average
    5. Very frequently

12. Approximately how much of the time are you absent during a semester?
    1. 0%-25%
    2. 26%-50%
    3. 51%-75%
    4. 76%-100%

13. Do you have any of these problems in this class? Circle as many as apply.
    1. Seeing the blackboard
    2. Hearing the instructor
    3. Arriving late
    4. Leaving early
    5. Fatigue
    6. Nervous or anxious
    7. Claustrophobia
    8. Boredom

14. Why do you sit where you do in this classroom?

15. Is your present seat approximately where you sat at the beginning of the semester?
    1. Yes
    2. No
16. Is where you sit similar to where you usually sit in classes?
   1. Yes
   2. No

17. If your answer to question 16 was no, do you usually
   1. sit more towards the front
   2. sit more towards the back
   3. sit more towards the middle
   4. sit more towards the right side of the room
   5. sit more towards the left side of the room

Indicate your agreement or disagreement with the following statements by circling the number which most accurately describes your view.

CODE

1. I disagree a lot
2. I disagree a little
3. I am neutral
4. I agree a little
5. I agree a lot

18. 1 2 3 4 5 The best way to handle people is to tell them what they want to hear.

19. 1 2 3 4 5 When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which might carry more weight.

20. 1 2 3 4 5 Anyone who completely trusts anyone else is asking for trouble.

21. 1 2 3 4 5 It is hard to get ahead without cutting corners here and there.

22. 1 2 3 4 5 It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.

23. 1 2 3 4 5 One should take action only when sure it is morally right.

24. 1 2 3 4 5 Most people are basically good and kind.

25. 1 2 3 4 5 There is no excuse for lying to someone else.

26. 1 2 3 4 5 Most men forget more easily the death of their father than the loss of their property.
27. Generally speaking, men won't work hard unless they are forced to do so.

28. Below is a diagram of room 170 Wood Hall. Please put an X in the square which most closely approximates your usual seat.

Rear

Front

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The following questions refer to where you sit in room 170.

29. Why do you sit where you do in this classroom?

30. Is your present seat approximately where you sat at the beginning of the semester?
   1. Yes
   2. No

31. Is where you sit similar to where you usually sit in classrooms of this type?
   1. Yes
   2. No

32. If your answer to question 30 was no, do you usually
   1. sit more towards the front
   2. sit more towards the back
   3. sit more towards the middle
   4. sit more towards the right side of the room
   5. sit more towards the left side of the room
The following test consists of 27 statements of opinions and attitudes. For each statement please indicate in the answer blocks which of the three alternatives, A, B, or C, is most true, or most preferred, or most important to you by writing A, B, or C in the appropriate odd-numbered row.

Then choose the least true or least preferred of the three alternatives and write its letter in the appropriate even-numbered row.

For every statement be sure you mark one alternative in each of the appropriate odd and even rows. If A is entered as the most, then either B or C should be entered as the least, and so on.

Do not debate too long over any one statement; your first reaction is desired.

1. choose most
2. choose least

One of the greatest satisfactions in life is:

A. Recognition for your efforts.
B. The feeling of a job well done.
C. The fun of being with friends.

3. choose most
4. choose least

If I played football, I would like to be:

A. The coach whose planning pays off in victory.
B. The star quarterback.
C. Elected captain of the team.

5. choose most
6. choose least

The best instructors are those who:

A. Give you individual help and seem interested in you.
B. Make a field of study interesting, so you will want to know all about it.
C. Make the class a friendly group where you feel free to express an opinion.
7. choose most
8. choose least

Students downgrade instructors who:
   A. Are sarcastic and seem to take a dislike to certain people.
   B. Make everyone compete with each other.
   C. Simply can't get an idea across and don't seem interested in their subject.

9. choose most
10. choose least

I like my friends to:
   A. Want to help others whenever possible.
   B. Be loyal at all times.
   C. Be intelligent and interested in a number of things.

11. choose most
12. choose least

My best friends:
   A. Are easy to get along with.
   B. Know more than I do.
   C. Are loyal to me.

13. choose most
14. choose least

I would like to be known as:
   A. A successful person.
   B. An efficient person.
   C. A friendly person.

15. choose most
16. choose least

If I had my choice, I would like to be:
   A. A research scientist.
   B. A good salesman.
   C. A test pilot.

17. choose most
18. choose least

As a youngster I enjoyed:
   A. Just being with the gang.
   B. The feeling of accomplishment I had after I did something well.
   C. Being praised for some achievement.
19. choose most
20. choose least

Schools could do a better job if they:
   A. Taught children to follow through on a job.
   B. Encouraged independence and ability in children.
   C. Put less emphasis on competition and more on getting along with others.

21. choose most
22. choose least

The trouble with organizations like the Army or Navy is:
   A. The rank system is undemocratic.
   B. The individual gets lost in the organization.
   C. You can never get anything done with all the red tape.

23. choose most
24. choose least

If I had more time, I would like to:
   A. Make more friends.
   B. Work at my hobby or learning something new and interesting.
   C. Just take it easy, without any pressure.

25. choose most
26. choose least

I think I do my best when:
   A. I work with a group of people who are congenial.
   B. I have a job that is in my line.
   C. My efforts are rewarded.

27. choose most
28. choose least

I like:
   A. Being appreciated by others.
   B. Being satisfied personally with my performance.
   C. Being with friends with whom I can have a good time.

29. choose most
30. choose least

I would like to see a story about myself in the newspaper:
   A. Describing a project I had completed.
   B. Citing the value of my actions.
   C. Announcing my election to a fraternal organization.
31. choose most
32. choose least
I learn best when my instructor:
   A. Provides me with individual attention.
   B. Stimulates me into working harder by arousing my curiosity.
   C. Makes it easy to discuss matters with him and others.

33. choose most
34. choose least
Nothing is worse than:
   A. Having your self-esteem damaged.
   B. Failure on an important task.
   C. Losing your friends.

35. choose most
36. choose least
I like:
   A. Personal praise
   B. Cooperative effort.
   C. Wisdom.

37. choose most
38. choose least
I am considerably disturbed by:
   A. Hostile arguments.
   B. Rigidity and refusal to see the value of new ways.
   C. Persons who degrade themselves.

39. choose most
40. choose least
I would like to:
   A. Be accepted as a friend by others
   B. Help others complete a mutual task.
   C. Be admired by others.

41. choose most
42. choose least
I like a leader who:
   A. Gets the job done.
   B. Makes himself respected by his followers.
   C. Makes himself easy to talk to.
43. choose most
44. choose least

I would like to:

A. Have a committee meeting to decide what the problem is.
B. Work out by myself the correct solution to the problems.
C. Be valued by my boss.

45. choose most
46. choose least

Which type of book would you like to read?

A. A book on getting along with people.
B. An historical romance.
C. A how-to-do-it book.

47. choose most
48. choose least

Which would you prefer?

A. Teach pupils how to play the violin.
B. Play violin solos in concerts.
C. Write violin concertos.

49. choose most
50. choose least

Which leisure time activity is satisfying to you?

A. Watching westerns on TV.
B. Chatting with acquaintances.
C. Keeping busy with interesting hobbies.

51. choose most
52. choose least

Which would you prefer, assuming the same amount of money was involved?

A. Plan a successful contest.
B. Win a contest.
C. Advertise the contest and get others to participate.

53. choose most
54. choose least

Which is important to you?

A. To know what you want to do.
B. To know how to do what you want.
C. To know how to help others to do what they want.
APPENDIX B

THE SAMPLE

The sample does not represent the distribution of students by sex for year in school found in the University. This is to be expected, however, since the classes from which the sample was drawn are taken primarily during one's freshman and sophomore years. Thus, the sample is dominated by this group of students. Over two-thirds of the males in the sample are in this category, while this figure rises to 94 percent for the females. The distribution of males and females in the sample for each year in school follows a pattern similar to that found in the University population. Both groups have a higher percentage of freshman and sophomore females while the upperclassmen are more frequently males. From the sophomore to the senior year, the percentage of males in the sample is more nearly representative of the distribution of males in the population than are the percentages for the females.

The sample is heavily biased in favor of the freshmen, nearly comparable to the population in the percentage of sophomores, and completely unrepresentative in terms of juniors and seniors. Again, this is to be expected since the classes from which the sample was obtained are required freshman and sophomore courses. Finally, the sample reflects quite closely the sex ratio of the entire undergraduate population at Western Michigan University.
APPENDIX C

MEASUREMENT OF THE DEPENDENT VARIABLE

The dependent variable—seating position—was obtained after the respondents had filled out the questionnaire and had left the classroom. As the questionnaires were collected from each desk, they were assigned a code indicating the row and column in which they were located. The row number indicates degree of frontness; column number degree of sideness. The rows were numbered in increasing order beginning with the lowest number in front. For example, if there were six rows, the first row would be numbered one, and the last number six. In determining degree of sideness, a row which had no seats missing was taken to be the reference point for the rest of the room. The middle chair of this row was numbered zero if there was an odd number of chairs. The seats to the left of it were given odd numbers beginning with one, while the seats to the right were given even numbers beginning with two. If the row contained an even number of seats, zero was eliminated. Starting in the middle of the row with the smallest numbers, the chairs on the left half of the room were given odd numbers and those on the right even. The other chairs in the room were numbered according to their position relative to the referenced row.
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