

LEADERSHIP, SATISFACTION AND PERFORMANCE
IN THE ACADEMIC CLASSROOM: An Exploratory Study

by 5095

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CHAPTER I

INTRODUCTION: THE PROBLEM, REVIEW OF LITERATURE AND HYPOTHESIS

Statement of the Problem

This study explores the relationships among the variables of satisfaction, performance and leadership within the context of a particular type of classroom setting—large sections of introductory sociology classes. In particular the influence of different leadership styles on member behavior is examined. The questions raised are: (1) Do different types of classroom leadership influence student's performance and satisfaction? and, (2) To what extent is student performance and satisfaction related under different types of classroom leadership?

Conceptual Framework

Independent Variable

Descriptions and analyses of leadership have followed two approaches: (1) that of assuming leadership to be a function of personality traits, e.g., aggressiveness, high intelligence, decisiveness, etc; and (2) viewing leadership as a situational phenomenon; that is, leaders arise to meet the demands of particular situations. The first approach has not been shown to be fruitful while the second appears to be a more useful way of approaching leadership phenomena. Classroom leadership in this study was, by design, situational in nature.

The variable satisfaction, performance and leadership appear to cluster in some common relationship. One of the objectives of this study

is to identify in what sorts of contexts the three variables are closely associated and in which they tend to appear independent of each other in the classroom.

While research does not indicate a consistent or necessary relationship between satisfaction and performance, the literature provides ample support for the proposition that leadership affects satisfaction and performance in the group context. For example, in their study of the effect of differing leadership role types on group behavior of children, Lippitt and White identified three leadership role types which produced significantly different behavior.¹ The three leadership role types were: (1) "authoritarian," characterized by extreme directiveness and role rigidity, as well as aloofness from group members; (2) "democratic," described as being objective, helpful to group members and quick to praise good work; (3) the "laissez-faire" role type, in which the leader is passive, not given to praise, criticize or provide helpful suggestions.

The results of the study indicated that leadership style produced distinguishable patterns of group behavior; (1) Under "democratic" leadership, the children displayed warm, friendly relations with each other, were able to work in a cooperative atmosphere and progressed at a steady rate toward the accomplishment of group goals; (2) children under "laissez-faire" leadership had more difficulty in achieving group goals and displayed a lack of group goal-orientation in their activities; (3) under "authoritarian" leadership, two patterns emerged, aggressiveness and apathy. The children were leader orientated and quite dependent of the directions

¹Ronald Lippitt and Ralph White, "An Experimental Study of Leadership and Group Life," in Swanson, Newcomb and Hartley (eds.), *Readings in Social Psychology* (New York: Henry Holt & Co., 1952).

of the leader, although the aggressive reaction indicated a rebellion against the leader, while the apathetic children seemed to cognize their submissiveness in forms of "felt frustration." Other research has further pointed to the influence of leadership style on satisfaction and performance.

In a study by Katz, Maccoby and Morse, high productivity was found to be closely associated with quasi-democratic supervision.² Supervisors of high producing work units apparently delegated authority and did not closely supervise their subordinates. Supervisors of low producing units frequently checked up on employees and were more rigid in giving specific work instructions. Also indicated in this study was the tendency for high satisfaction to be related to a preference for "general supervision."³ And the supervisors of high sections were more likely to rate high on the "democratic characteristics" scale than were the supervisors of low sections, while low supervisors were rated high on the "authoritarian characteristics scale" and high supervisors ranked low.

Generally, then, both studies reported above suggest a "causal" chain in which democratic leadership produces high satisfaction which in turn results in high productivity or performance. Similar findings can be reported in a variety of contexts.⁴

²Daniel Katz, Nathan Maccoby and Nancy Morse, *Productivity, Supervision and Morale in an Office Situation: Part I*, Ann Arbor: Institute of Social Research, University of Michigan, 1950.

³*Ibid.*, pp. 32-33.

⁴See: D. Katz and R. Kahn, "Leadership Practices in Relation to Productivity and Morale," in Cartwright and Zander (eds.) *Group Dynamics* (New York: Harper & Row, 1960), pp. 554-570; F. J. Roethlisberger and W. J. Dickson, *Management and the Worker* (Cambridge, Mass: Harvard Univ. Press), 1939; and, D. Katz, N. Maccoby, G. Gurin and G. Lucretia, *Productivity, Supervision and Morale Among Railroad Workers* (Ann Arbor: Survey Research Center, Michigan Univ., 1951).

However, there are conditions under which this relationship does not hold. Indeed there are findings showing a negative relationship between satisfaction and productivity and leadership style. For example, Berkowitz explored the relationships between satisfaction and performance and the "sharing of leadership."⁵ Data indicated that group members were somewhat dissatisfied with the leader's "permissiveness." The data also indicated that the implementation of democratic, authority-sharing leadership styles was detrimental to group cohesion, satisfaction, and productivity. Berkowitz proposed that preconceived notions of leadership—as a value—functions much the same as a value in any normative systems; individuals who violate the groups behavioral expectations and normative prescriptions are rejected. It is apparent that decision-making groups demand strong, direct, aggressive leadership from the designated leader, resulting from the collective sense of urgency in the making of decisions or solving problems within the group context. Consequently, group members rejected those members who displayed leadership but were not considered to be "the designated leader."⁶

Leadership style, then, has been shown to produce discerable patterns of behavior, although the same type does not necessarily produce the same behaviors in all contexts. The importance of leadership style, vis-a-vis the classroom, lies in the differential attitudes and behavior which may be

⁵Leonard Berkowitz, "Sharing Leadership in Small, Decision-Making Groups," *The Journal of Abnormal and Social Psychology*, Vol. 48:2, (April, 1953), pp. 231-238.

⁶Bass further suggests that satisfaction and performance may be affected by interweaving variables, such as differential participation in instrumental activities, supervision and differences in experience and age among group member, B. Bass, *Organizational Psychology* (Boston: Allyn & Bacon, Inc., 1965), pp. 38-40.

a function of leadership. Although the leadership styles will be discussed more explicitly in Chapter II, it should be noted here that the writer proposes that in the classroom, laissez-faire and democratic leadership types may produce differing behavior and attitudes which are manifest in expressed satisfaction and performance.

Dependent Variables

The variable satisfaction has been used in conjunction with and often times synonymously with "morale." In elaborating on the dimensions of worker morale, Miller and Form point out that, "The concepts of 'satisfaction,' 'motivation,' and 'esprit de corps' float around within the scope of employee morale."⁷ Miller and Form further provide three working definitions of morale:

1. Morale is the sum of satisfactions which the individual (or group members) experience because of his membership and involvement in an organization.
2. Morale is the state of motivational drives through which the individual (or group members) experience confidence in his ability to achieve goals and to cope with future challenges.
3. Morale is the consensus of "esprit de corps" exhibited by a group in the pursuit of group goals.⁸

Morale, then, is a group property expressed through the satisfaction of individual members, and aggregate measures of satisfaction are used as indicators of morale. In this study, expressed satisfaction is viewed as a manifestation of morale. Thus, for example, dissatisfaction expressed by class members is an indicator, a reflection of low morale, and high satisfaction and indicator of high morale.

⁷Delbert C. Miller & William H. Form, *Industrial Sociology: The Sociology of Work Organizations* (New York: Harper & Row, Inc., 1964), p. 706.

⁸*Ibid.*

A task of this study is to explore the association between satisfaction and performance under different leadership styles. The importance of satisfaction and performance for understanding the behavior of men in organizational research. Several outstanding researches appear in the literature which treat satisfaction and performance as key variables.

Mayo, Roethlisberger and Dickson, in the now well known "Western Electric" or "Hawthorne Plant" studies, were concerned with identifying factors leading to increased worker productivity. In the various Hawthorne experiments, the researchers concluded that worker morale is a function of informal interaction among workers. Consequential research at the Hawthorne Plant revealed that worker morale and productivity were closely associated; where morale was found to be low, productivity was low and where morale was high productivity was high.⁹

However, the Hawthorne studies have drawn some criticism. Whyte, for example, has suggested that because the workers, as research subjects, were aware of the experiment they may have responded more to their "special treatment" than to changes in work situation.¹⁰ This bias in the research process has become known as the "Hawthorne Effect." Carey maintains that due to flaws in experimental design and the Hawthorne effect, the

⁹See: F. J. Roethlisberger & W. J. Dickson, *Management and the Worker* (Cambridge: Harvard Univ. Press, 1931); Roethlisberger and Dickson, *Counseling in an Organization* (Boston: Harvard Grad. School of Bus. Admin., 1966); Elton Mayo, *The Social Problems of an Industrial Civilization* (Boston: Grad. School of Bus. Admin., Harvard Univ., 1945); Also see: Reinhard Bendix and Lloyd Fisher, "The Perspectives of Elton Mayo," in Amatai Etzioni (ed.), *Complex Organizations: A Sociological Reader* (New York: Holt, Rinehart, and Winston, 1961), pp. 113-126; and Reinhard Bendix, "The Contributions of Elton Mayo to Managerial Ideology," in Bendix, *Work and Authority in Industry* (New York: Harper and Row, Inc., 1963), pp. 318-319.

¹⁰William Foote Whyte, *Organizational Behavior: Theory and Application* (Homewood, Ill: Richard Irwin, Inc., and Dorsey Press, 1969), pp. 32-33.

Roethlisberger and Dickson data do not support the conclusion that friendly supervision and a cooperative atmosphere leads to high worker morale and increased productivity.¹¹ The Mayo, Roethlisberger and Dickson studies gave rise to a plethora of researches investigating the relationship between satisfaction and performance.

Katz, Maccoby and Morse, through the Survey Center of the University of Michigan, explored, "(1) employee attitudes related to productivity, (2) supervisory beliefs and practices related to productivity, (3) the interrelationships of the various dimensions of morale and their determinants."¹² Workers from two departments of an insurance company, whose work was parallel in amount and type, constituted the sample. By referring to the companies productivity records, the research team discerned "high" and "low" productivity groups. Free answer interviews were used for both supervisory and nonsupervisory employees. Items for the supervisory interview schedule included descriptions of supervisory behavior in relation to subordinates and superiors, attitudes towards ones own job, superiors, subordinates, the company, and company policies. For non-supervisory employees items included measures of, "(1) own work group, (2) own job, (3) company and company policies, (4) job status and salary and (5) supervision."¹³

Significant differences found between "high" and "low" productivity groups appeared to be a function of style of supervision. Morale was

¹¹Alex Carey, "The Hawthorne Studies: A Radical Criticism," *American Sociological Review*, Vol. 32 (July, 1967), pp. 403-416.

¹²Katz, Maccoby, and Morse, *op. cit.*, p. 1.

¹³*Ibid.*, p. 12.

conceptualized by the research team as (1) pride in work group, (2) intrinsic job satisfaction, (3) financial and status satisfaction and (4) satisfaction with the company. Only on the "pride in work group" dimension of morale were significant differences observed, with the higher producing groups displaying a greater degree of pride in the work group. Measures of the other three dimensions of morale yielded no differences between high and low producing groups.¹⁴

Moore and Burns compiled data for a morale index from 500,000 employees in industry.¹⁵ A survey checklist was utilized which consisted of 14 categories relevant to morale. Workers were categorized as (1) production workers, (2) first line supervisors and (3) office workers. The production workers were lowest in morale; office workers were somewhat indifferent; and management personnel (first line supervisors) indicated the highest morale. Among the production workers, lowest satisfaction or morale scores were indicated on "Job Demands," "Friendliness, Cooperation of Employees," and "Supervisory-Employee Relations" items.¹⁶ It appears evident that satisfaction among production workers was influenced by work load, relationships with fellow employees and relationships with supervisory staff.

Shills and Janowitz investigated morale as influenced by primary and secondary group ties in the German Army during World War II.¹⁷ Units in the

¹⁴*Ibid.*, pp. 62-63; also refer to Chapter IV, pp. 48-61, for tabulations.

¹⁵David Moore and Robert Burns, "How Good is Good Morale?" *Factory Management and Maintenance*, Vol 114 (January, 1956), pp. 130-136.

¹⁶*Ibid.*, pp. 135-136.

¹⁷E. Shills and Morris Janowitz, "Cohesion and Disintegration in the Wehrmacht in World War II," *Public Opinion Quarterly*, (Summer, 1948), pp. 280-315.

Wehrmacht remained relatively cohesive and morale continued to be high during the last year of the war. American propaganda attempts to break morale had limited success although Germany's defeat was imminent. Shils and Janowitz pointed out that American propagandists oriented their propaganda toward breaking down beliefs in Nazi political convictions and ideologies. Careful analysis of German Army information, documents prisoners-of-war, etc., however, verified Shils and Janowitz's proposition that the military effectiveness of the Wehrmacht was attributable to high morale which was a function of strong primary group ties within military units rather than a pervasive acceptance of Nazi ideology. Few German prisoners expressed strong political convictions when interviewed. When conditions allowed military primary groups to form and become cohesive units, morale was enhanced and maintained and the group functioned as a relatively effective military unit regardless of the political convictions of the soldiers. However, military leadership at the squad level, composed of those who tended to be the hard core Nazi ideologues, did provide stability in the Wehrmacht units.

In a somewhat similar study of the Eighth Air Force during World War II, Stouffer et al., found that morale strongly influenced the efficiency of air combat.¹⁸ The air force enjoyed overall high morale, especially among flying personnel. Chief data analyst for this part of the study, Irvin Janis, found that, "combat flying personnel consistently tended to express relatively favorable attitudes as compared with men in other types

¹⁸Samual Stouffer, Irving L. Janis, et al., *The American Soldier: Combat and its Aftermath* (Princeton, N.J: Princeton Univ. Press, 1949), pp. 324-410.

of combat units."¹⁹ Several factors appeared to account for the high morale. First, the air corps maintained a high standard in recruiting men. Two-thirds, of the sample studied, had completed high school and a significant number of those had attended college. And, due to the skill demanded by their job and danger involved, flying personnel were accorded relatively high rank. Consequently, flying personnel also were accorded comparatively high status. Second, data revealed corresponding increase in stress with number of combat missions flown. As a result, flying personnel, more than other types of combat units, were frequently given leaves from duty and were returned to the States for "rest" and "recuperation." That policy aided flying personnel in avoiding high degrees of stress and anxiety which accrued to men who were subjected to heavy "work loads" or combat duty, and thus enhanced individual and unit morale. And third, it was found that favorable attitudes (high satisfaction) toward job assignment were closely associated with a positive evaluation of one's *type of aircraft*.

It should be noted that the morale factor is both a group and an individual property, the manifestation of which is the expression of various "attitudes" about job assignment, supervisors, other group members, etc. Most measures of group morale are aggregate data based upon expression of individual satisfaction. And as has been indicated in the research discussed above, morale, or the expression of satisfaction, has been closely linked with two other variables, performance (or productivity) and leadership (or supervision).

¹⁹*Ibid.*, p. 328.

Any clear indication as to the association between satisfaction and performance is lacking in the literature. Assumptions that productivity and satisfaction are closely associated in the instrumental, task-oriented group seem to be based on the data and conclusions of Mayo, Roethlisberger and Dickson that morale and productivity are closely associated, with morale being a function of informal worker interaction.²⁰ But it has since been pointed out that ". . . this assumption only holds true when the expected rewards depend on the performance of the workers."²¹

Performance and satisfaction each may be influenced by intervening variables which can enhance or inhibit relationships between the two:

First, productivity will depend upon many factors other than the attitudes of the producers. Thus, when two British firms differing in productivity were compared, the highly productive company maintained its superior output because it employed younger workers, fewer ex-miners (likely to be suspicious about management), better trained employees, workers who lived closer to their jobs and management which made few mistakes.²²

Second, a more productive worker may reveal more dissatisfaction with certain conflicting aspects of his work as a consequence of his interest and involvement. For example, in one of two large departments of office workers, those most critical of placement and rating systems were the highly productive employees. These, in turn, were the most interested and informed members of the staff.²³

Third, productivity of a group of workers may be strongly influenced by how the members, as a whole, feel about the group, whether or not

²⁰See discussion of page 6 of this chapter.

²¹Bernard M. Bass, *Organizational Psychology* (Boston: Allyn and Bacon, Inc., 1965), p. 38.

²²*Ibid.*, Research referred to by Bass is from: R. Marriott, "Sociopsychological Factors in Productivity," *Occupational Psychology*, Vol. 25 (1959), pp. 15-24.

²³*Ibid.*, pp. 38 and 40. Research referred to by Bass from: Daniel Katz, "Survey Research Center: An Overview of the Human Relations Program," in Guetzkow (ed.), *Groups, Leadership and Men* (Pittsburgh: Carnegie Press, 1951).

there is absence of conflict, feelings of happiness, good personal adjustment, ego involvement in one's job, "we feeling," cohesiveness, and personal acceptance of the goals of the work group.²⁴

It is one of the tasks of this study to explore the relationship between satisfaction and performance in the academic classroom. The assumption is made that the student *is* aware of the rewards which accrue to him as a result of his participation and performance. That is to say, the student presumes the more he studies, attends class, asks questions in class, etc., the more likely he is to receive a higher than average grade for the course. One might then propose that the student will indicate a degree of satisfaction which is commensurate with his standard or quality of performance. These factors suggest that a close association between performance and satisfaction exists in the classroom.

However, if Bass is correct in his contentions that the association between performance and satisfaction may be influenced by intervening factors, then we might expect that the leadership style of instructors, students' preconceived notions of the classroom, etc., may result, for example, in students expressing medium or low satisfaction even though performing at an above average level in class, or vice versa. The intervening variables discussed by Bass, then, suggest to the writer that a significant association between satisfaction and performance does not necessarily exist in the classroom.

The only general conclusion to be drawn is that, "In the years since the Hawthorne experiments, a long line of research has added to the evidence

²⁴*Ibid.*, p. 40. Research reference for this quote from Bass is: R. M. Fuion, "Industrial Morale: The Problem of Terminology," *Personnel Psychology*, Vol. II (1958), pp. 59-60.

that group solidarity and loyalty is sometimes associated with productivity and effectiveness."²⁵ And the same holds true for satisfaction or morale. However, it must be noted that one can only state that *sometimes* are satisfaction, productivity and leadership associated.

As shall be seen, the literature in classroom behavior and structure is as inconclusive as is the body of literature in industrial and military studies. Leadership does, however, appear to be consistently related to satisfaction and performance, and there is no substantial evidence which leads the writer to believe otherwise, as far as the academic classroom is concerned. The conceptual and empirical problem, then, is clearly discerning what type of group the academic classroom is. If it is held that the classroom group is a rational, instrumental group, such as the groups in the Berkowitz study, one would then propose that students would prefer strong, highly directive leadership from the instructor, leadership which approaches the authoritarian type.

But the classroom group cannot be said to be totally similar to the work group. Students do not work so much toward the achievement of a group goal as they do for individual goals. Pride in one's group and "esprit de corps" may not be so readily applicable to or achieved in the classroom group context. Consequently, morale and satisfaction may be more a function of individual "definitions of the situation," and not significantly dependent upon group influence. If that is the case, it would be expected that students would indicate a preference for democratic leadership, leadership which allows some latitude for the student to pursue the satisfaction of his individual, idiosyncratic "needs" and goals.

²⁵Daniel Katz and Robert L. Kahn, *The Social Psychology of Organizations* (New York: John Wiley and Sons, Inc., 1966), p. 325.

This interpretation or conceptualization of the classroom appears not to be inconsistent with numerous researches in the body of literature of industrial studies, classroom behavior and group processes. Members of the classroom group are, to some degree, dependent upon formal leadership, the instructor. Progression towards group goals and towards individual member "goal locomotion"²⁶ is to a large degree a factor of leadership style, as is indicated in the Lippitt and White study. Although it is a primary contention in this study that different styles of leadership result in differential degrees of student performance and satisfaction, the writer does not ignore the possibilities of individual member "biographies" being an influential force which may affect both variables.

The academic classroom is conceptualized in this study as a group whose members share *not* a *common* set of activities which result in a group product, that is, the achievement of a group goal or goals, but group members who share similar individual goals and who carry on their goal-oriented activities in the same context.²⁷ However, this is not to say that the classroom members may not develop and share a normative and role system and a set of common goals. Mills stresses understanding the learning group in terms of a group life cycle model, in which a group develops, achieves some degree of stability and progresses towards the

²⁶Although it may be highly tenuous to refer to "group goals" in the case of the academic classroom group, the writer maintains that a collectivity of students, all members of the same class, *sharing* the *individual* goals of increasing ones knowledge, exposure to "new" ideas, and perhaps most important, making a "good" grade, constitutes group goals.

²⁷The term "context," as used here, refers to the specific structural unit within which a particular type of interaction occurs. See: Barney Glaser and Anselm Strauss, "Awareness Contexts and Social Interaction," *American Sociological Review*, Vol. 29 (October, 1964), pp. 669-679.

achievement of goals, while passing through five phases or periods of group life.²⁸ Identified in the model as a basic problem in development of the group is the negotiation of an acceptable normative system which will enhance not only identification with the group qua group, but also group cohesion and stability. This writer conceptualizes the salient role of the leader in such a group to be two-fold: (1) primary negotiator of the evolving normative system and (2) the actor who manipulates evolving group patterns so as to integrate individual biographies (what Mills calls "preconceived notions") of members into the context of the accepted normative system, with the intention of moving *individuals*, in the group context, towards goal achievement. The instructor's ability to successfully play that role, whatever the leadership style, may, in part, have a salient effect upon student satisfaction and performance in the classroom.

In sum, literature bearing upon this study provides a mixed picture as to the association between satisfaction and performance. It appears that satisfaction and performance are associated most directly when intervening variables, such as leadership, enhance each. However, the studies cited by Bass, for example, indicate that intervening variables, such as participation, leadership and differential knowledge of work group relationships and company policies, inhibit any necessary association between satisfaction and performance. While on the other hand, leadership styles do tend to cluster, consistently, in close association with

²⁸Theodore M. Mills, "Toward a Conception of the Life Cycle of Groups," in Theodore Mills and Stan Rosenberg (eds.), *Reading in the Sociology of Small Groups* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970), pp. 238-247; reprinted from, Theodore Mills, *Group Transformation: An Analysis of a Learning Group* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964), pp. 65-80.

performance and satisfaction. The studies of classroom structure and behavior tend to reflect this clustering pattern of leadership, satisfaction and performance.

Review of Educational Literature

Work which bears more directly on the effects of differential classroom structures was done by Wilbert J. McKeachie, et al., at the University of Michigan.²⁹ McKeachie and his associates had become concerned about the dynamics of the introductory psychology course. They rejected the earlier conclusions of Wolfle³⁰ and Longstaff³¹ who argued that

the experimental evidence submitted to the present time tends to support the general conclusion that there is little difference in student achievement in large and small classes and, also, that it makes little difference as to what method of presentation of materials of the course is used.³²

The study done by McKeachie, et al., involved the formulation of three styles of teaching: (1) recitation, (2) discussion, and (3) group tutorial. Those "styles" were to parallel (in terms of group processes and leadership styles) authoritarian, democratic and laissez-faire group climates, identified by Lippitt and White. McKeachie reported that the "recitation-authoritarian" method resulted in not only superior performance,

²⁹Wilbert J. McKeachie, "Students, Groups, and Teaching Methods," *American Psychologist*, Vol. 13 (1958), pp. 580-584.

³⁰D. L. Wolfle, "The First Course in Psychology," *Psychology Bulletin*, Vol. 39 (1942), pp. 685-712.

³¹H. P. Longstaff, "Analysis of Some Factors Conditioning Learning in General Psychology. Part I," *Journal of Applied Psychology*, Vol 16-33 (1932), quoted in McKeachie, p. 580.

³²*Ibid.*, p. 580.

in relation to the other methods utilized in the study, but also engendered a greater interest in psychology, in general.³³

In an earlier study, McKeachie et al., divided introductory psychology sections into two types: (1) the student- (or group-) centered and (2) the instructor-centered.³⁴ A concerted effort was made by the instructor in the group-centered sections to allow the students as much participation in decision-making as possible. The students were encouraged to initiate dialogue among themselves instead of directing comments and questions to the instructor. The instructor-centered sections were designed as the obverse.

The results of the second experiment yielded no substantial differences between the two types of classes, at least in terms of final examination scores. Following a film about "rejection," the instructors recorded discussion in the two types of classes. The results were significant:

Both psychologists agreed that the group-centered class showed much more insight into the dynamics of the case and was less frightened and defensive than the instructor-centered class. The instructor-centered class tended to label the behavior of the heroine without apparent understanding of her difficulties.³⁵

³³McKeachie, pp. 580-581.

³⁴Wilbert J. McKeachie, "Student-Centered Versus Instructor-Centered Instruction," *Journal of Educational Psychology*, Vol 45 (1954), pp. 143-150.

³⁵McKeachie, "Students, Groups and Teaching Methods," p. 581.

Further support of McKeachie's findings was found in similar experiments by Gibb and Gibb,³⁶ and by Joseph Patton.³⁷

Charles Bane, utilizing a somewhat different research design, found significant differences between the "lecture" and "class-discussion" methods of teaching.³⁸ The participants in the experiment were 510 juniors and seniors at the State University of Iowa. Through a series of intelligence tests, Bane stratified each group so that no one group would have a disproportionate representation of students with either high or low "I.Q.s." He further controlled the experimental situation by holding constant, in all classes, five other variables: (1) amount of teaching time, (2) subject matter, (3) class assignments, (4) content of exams and (5) style and attitude of the instructor.

The results of Bane's experiment were threefold: (1) there was no significant difference in "immediate recall" of materials between students subjected to each of the two teaching methods; (2) the class-discussion method was more effective in "delayed recall" of materials; (3) "The lecture method is more suitable for the immediate recall of subject matter than for its retention at a later period, while the reverse is true of the class-discussion method."³⁹ Thus, Bane concluded

³⁶L. M. Gibb and J. R. Gibb, "The Effects of the Use of 'Participative Action' Groups in a Course in General Psychology," *American Psychologist*, Vol. 7 (1952), p. 247.

³⁷J. A. Patton, "A Study of the Effects of Student Acceptance of Responsibility and Motivation on Course Behavior," (Unpublished Doctoral Thesis, Univ. of Michigan, 1955).

³⁸Charles L. Bane, "The Lecture vs. the Class Discussion Methods of College Teaching," *School and Society* (March 7, 1952), Vol. 21:300-302.

³⁹*Ibid.*, p. 302.

that the lecture method enhances rote memorization—that is, high immediate recall and low retention—of subject material and content. While on the other hand, the class discussion method increases the probability that students will retain the subject matter to a greater degree than will students in lecture classroom situations.

A study similar in design to that of Bane's was conducted by Schneidemann at the State University of Iowa.⁴⁰ Schneidemann identified the two methods of teaching to be utilized in her study as the "lecture-conference" method and the "individualized" method. During the course of the semester, Schneidemann measured the performance (i.e., grades) of students in both types of classes, computing both raw scores, or grade points, and percentile ranking. The "individualized" students had slightly higher mean scores in grade points and percentile ranking. However, when mean grade points and percentile ranking were combined for students in each type of class, the difference in mean scores was but 1.73. Schneidemann concluded that the mean difference was hardly significant and that both the class-conference method and the individualized method of teaching are equally effective.⁴¹

Wischmeier studied the effects of two leadership types or styles upon (1) group member attitudes, (2) "feelings" and impressions of group members and (3) behavior of group members subjected to each leadership role type.⁴² The role of the leader in the "group-centered" situation was to "facilitate group development" and to elicit "the maximum

⁴⁰Norma V. Schneidemann, "A Comparison of Two Methods of College Instruction," *School and Society*, Vol. 25 (June 4, 1927), pp. 672-674.

⁴¹*Ibid.*, p. 674.

⁴²Richard R. Wischmeier, "Group-Centered and Leader-Centered Leadership: An Experimental Study," *Speech Monographs*, Vol. 22 (1955), pp. 43-48.

resources of every group member." On the other hand, the role of the leader in the "leader-centered" approach was that of explicit direction. He was to be the dominating role figure.

Wischmeier utilized eight groups of from four to eight members each. The groups met two sessions every four weeks. At these sessions, the groups were introduced to a "human relations problem" which the groups discussed under the direction of one of the two types of leaders described above. Half, or four, of the groups were subjected to the group-centered approach during the first session, while the other four sections discussed the problem under the direction of the "leader-centered" instructor. During the second session, these approaches were reversed. At each of the sessions, four observers were in attendance.

Several types of measures were used by Wischmeier in the experimental procedure: (1) three "equated forms" of an attitude scale⁴³ designed to tap group member attitudes toward discussion leadership; (2) to determine the "feelings" of group members about the leader, both as a leader and as a person, a sociometric questionnaire was used. The members were asked after each session to rank all group members, including the leader, as to the contributions each made to the discussion, and to rank who they would like to get to know better. The "feelings" were ranked on a five point scale; (3) a "Comparative Evaluation Questionnaire" was administered one week following the final session which asked members to choose between the two types of discussion situations. The members were to choose based on evaluative criteria incorporated into the questionnaire by Wischmeier; (4) the observers also recorded their evaluations on "The Observer Scale" and a "Leadership Check List."

⁴³The contents of the attitude scales were not described by Wischmeier.

The results reported by Wischmeier clearly indicate a preference for the group-centered approach. In the "Feelings Table," 67.5% of the members felt that the group-centered approach was preferable, while 23.5% favored the leader-centered approach and 9.0% had no opinion or saw no difference.⁴⁴ Response to item one in that same table indicated that 57.0% perceived the group-centered approach as being friendlier and warmer, while 23.5% chose the leader-centered approach. Although the above figures seem fairly conclusive, paradoxically enough on the "Felt the Leader Did the Better Job" item, only 29.5% chose the group-centered leader, while 56% chose the leader-centered leader.⁴⁵ Wischmeier claims that this inconsistency or apparent contradiction may be accounted for in two ways:

(1) The leadership exerted by the group-centered leader was more subtle than that of the leader-centered leader. Thus, the subjects may not have been able to discern and evaluate the contributions of the group-centered leader. (2) The structure of the leader-centered role was more conducive to making content suggestions, talking more frequently and providing more direction. The factors are more in line with the usual naive expectations of what constitutes valuable leader contributions.⁴⁶

In conclusion, Wischmeier states that his study points to the group-centered approach as enhancing friendliness of atmosphere, cooperation, involvement and group member self-confidence. Further Wischmeier concludes that if indeed those factors make for a "better" discussion group situation, then discussion leader training should be oriented towards the group-centered approach.

⁴⁴Wischmeier, p. 47.

⁴⁵*Ibid.*

⁴⁶*Ibid.*, pp. 47-48.

If there is a conclusion to be reached from the classroom studies, it is that a significant association between satisfaction and performance does not consistently appear. Performance appeared, in the studies, to be consistently related to leadership style and classroom context. But, students in the Wischmeier study expressed a higher degree of satisfaction with the "group-centered" leader. Thus, it may be that performance is more easily measured in relation to leadership style, while satisfaction is a multidimensional "attitude" which is more vulnerable to the influence of various intervening factors. As a result, the clustering of leadership, performance and satisfaction, into significant relationships may be hampered by the multidimensionality of satisfaction.

Hypotheses

Although the research design will be discussed more explicitly in Chapter II, some mention of the design must be made here. As was mentioned earlier in this chapter, the questions to be dealt with in this research involve instructor leadership style and student satisfaction and performance: What type of classroom leadership is most conducive to enhancing student satisfaction and performance; and, is there a significant association between performance and satisfaction?

The students were separated into control and democratic sections which were differentiated primarily by the leadership role type of the instructor: (1) the control sections were taught employing the "laissez-faire-authoritarian" role type and (2) the democratic sections instructor employed the "democratic" role type of leadership, as defined by Lippitt and White. All students were exposed to a common lecture twice each week.

Questionnaires which yielded two measures of satisfaction were given to the students three times during the semester. Final grades, computed from total scores of three examinations, and discussion section quizzes given to students in democratic sections, constituted the measure of performance.

The dependent variables were: (1) performance and (2) satisfaction. And the independent variable was the leadership role type in each of the types of section—"control" and "democratic."

Wischmeier's findings that there was a preference shown by students for the group-centered approach (the democratic sections in this study approximate Wischmeier's "group-centered" sections) suggest that:

1. Satisfaction will be greater in the democratic sections than in the control sections.

But, if the factors in the Berkowitz study are salient forces in the classroom it is proposed that:

- 1a. Satisfaction will be greater in the control sections than in the democratic sections.

McKeachie et al. found that differences in performance between student-centered and instructor-centered groups were negligible. And Bane concluded that no difference was indicated in "immediate recall" between the lecture and class-discussion groups. Immediate recall is crucial in the taking of examinations; and in this study final grades, based on examination scores, is the measure of performance. Thus it is hypothesized that:

2. There will be no significant variation in *performance* between the democratic and the control classes.

However, the findings of Katz, Maccoby and Morse suggest that:

- 2a. There will be significant differences in performance between democratic and control sections.

If the conclusions of Mayo, Roethlisberger and Dickson and Stouffer et al. are valid—that productivity and morale are closely related in task oriented groups—then one might expect to find the same in the classroom as in any task oriented group. It would follow that:

3. There will be a significant association indicated between performance and satisfaction.

Leadership styles, differential participation among group members, etc., may act as intervening variables which affect any necessary relationship between satisfaction and performance, as suggested by Bass. It is then predicted that:

- 3a. There will be *no* significant association indicated between performance and satisfaction.

A more detailed discussion of the research methodology and procedures employed in the present study is found in the following chapter.

CHAPTER II

RESEARCH DESIGN AND PROCEDURES

Introduction

The study was initiated during the Spring of 1970, as an exploratory attempt at examining the effects of two different teaching styles upon student performance and satisfaction. The subjects were 131 members of an Introductory Sociology class. The class utilized a lecture-discussion format in which students were enrolled to attend two lectures and one discussion section per week for three hours of academic credit. This format was presented in the line schedule used by the students in their enrollment procedures. Thus, all members of the class were aware of this format before enrolling. Computerized assignments to one of the ten discussion sections were made as a normal part of enrollment procedures.

The course employed a faculty member who was responsible for the two weekly lectures and three graduate teaching assistants, in the Department of Sociology, who were assigned to discussion sections.¹ All class members, then, were exposed to common lectures, but to different discussion section leaders and different styles of instructor behavior.

¹Three graduate teaching assistants taught the small discussion sections. However, due to lack of teaching experience and her late arrival, one teaching assistant was not a participant in the experimental procedure. Thus, the students in the two discussion sections taught by that teaching assistant were not included as research subjects. The two assistants who did participate in this study each taught four discussion sections.

Design and Procedure

Subjects

The subjects in this study were students in one class of Introductory Sociology at Kansas State University, during the Spring semester of 1970. Class enrollment numbered 177 students, however, the actual number of subjects was 131.²

Eight of the ten discussion sections were exposed to the experimental treatment. Four sections were designated as "treatment 1" sections and four as "treatment 2" sections. Discussion sections were randomly assigned to one of the two treatments. Students were assigned by computer to discussion sections which did not conflict with their schedules. This meant that the discussion sections varied somewhat in size.

The total number of "treatment 1" students was 69, while 63 students were enrolled in the "treatment 2" sections. Also, there was a differential number of students enrolled in the discussion sections taught by each teaching assistant. T.A.₁ had 62 students in all four classes, with 30 "treatment 1" students and 32 "treatment 2" students. In the four sections taught by T.A.₂, 69 students were enrolled, with 39 "treatment 1" students and 30 "treatment 2" students.

At the first lecture meeting in the semester, students were asked to fill out a student information questionnaire. That questionnaire was used to acquire a class profile based on demographic and academic

²*Ibid.*

background information.³ Not only does such an instrument provide lecturers with general data as to the sorts of backgrounds his students have, but it also affords a description of the research subjects as a group.

Treatments

The two treatments were differentiated by the type of leadership role played by the instructor. The "treatment 1" sections were taught by graduate teaching assistants employing a synthesis of the laissez-faire and authoritarian role types; the instructors in the "treatment 2" sections played the democratic, as described by Lippitt and White.⁴ What follows is a description of those two role types or styles.

The laissez-faire-authoritarian treatment appears to represent the "typical" classroom situation and was thus designated as "control." It is characterized by: (1) a formal seating arrangement; (2) a normative system for classroom behavior—what is permissible and what is not—determined and enforced by the instructor; (3) physical distance maintained by the instructor placing himself behind the desk or podium, and social distance maintained by students addressing the instructor as "Mr."; social distance was further enhanced by the aloof attitude of the instructor. The instructor would provide help to the students only when approached; he did

³Unfortunately, the questionnaires were distributed on the first day of class, while some students were still resolving registration difficulties and were absent on that day. Consequently, six of the 131 subjects did not fill out the questionnaire; thus, only 125 appear in the profile at the end of this chapter.

⁴Ronald Lippitt and Ralph White, "An Experimental Study of Leadership and Group Life," in Swanson, G., Newcomb, T.H., and Hartley, E. L. (eds), *Readings in Social Psychology* (New York: Holt & Co., 1952).

not initiate such behavior. Students were not totally excluded from the decision-making process; they could ask questions and propose suggestions for class procedure. However, final decisions were clearly the prerogative of the instructor. Class discussion was held to information relevant to lectures and text material.

Such leader behavior, at first glance, may appear to be a closer approximation of the authoritarian type. However, the writer maintains that a common characteristic of many college instructors is that of *autocratic* decision-making in the classroom. The instructor sets down the "ground rules" for the class and then proceeds in a *laissez-faire* manner until such time that rules are broken or class norms violated. Responses to such infractions tend to be authoritarian in nature. Leadership behavior displayed in "treatment 1" sections, then, was not inconsistent with the Lippitt and White descriptions of the *laissez-faire* and authoritarian role types.

"Treatment 2," or democratic, sections were taught by the graduate teaching assistant playing the democratic leadership role type. The democratic classroom was characterized by: (1) informal seating arrangement, (2) a normative system which was informally negotiated by both students and instructor, (3) lack of physical distance; the instructor often sat with or among the students, and (4) a breakdown of social distance, facilitated by the instructor encouraging (but not demanding) students to address him by his first name, and by the instructor displaying an active interest in the progress of the group, as well as the individual progress of students. The democratic sections were designed so as to allow students to participate in decision-making thus avoiding autocratic supervision. For example, students were given a voice in what would be discussed, where the class would meet,

and whether it would meet at the regularly scheduled time. Decisions were reached by consensus.

The Instrument

To measure student satisfaction, an attitude survey questionnaire was utilized. The questionnaire was administered to students during the lecture class three times during the semester, prior to each of the three examinations given in the course.

The questionnaire consisted of six parts: (1) a battery of 12 evaluation items, in which students were to evaluate the discussion section instructor and lecturer on a five point, fixed-alternative scale; (2) a direct satisfaction item in which the students circled the category (five point, fixed-alternative scale) which best represented their degree of satisfaction; (3) open-ended questions which asked students to give criticisms, compliments, etc., of the discussion section and lecture class; (4) an item requiring students to state on a five point scale how interesting the introductory sociology class had been, to that point, as compared with other introductory classes the student had taken; (5) an item asking students to indicate on a five point scale how informative the introductory sociology class had been as compared to other introductory courses the student had taken; (6) students were asked to indicate what grade they expected to receive for the course. The third evaluation included all items on the first two, but in addition included items measuring changes of attitudes over the semester.⁵

⁵See Appendix A for a description of the questionnaires.

The questionnaire yielded two measures of satisfaction: the satisfaction item and the 12 evaluation items. The former is referred to as satisfaction 1, and the latter as satisfaction 2. Satisfaction 2 was assumed to be a more specific measure of satisfaction. Simple product moment correlations were computed between satisfaction 1 and satisfaction 2 scores for both discussion sections and lecture. The two measures were consistently and strongly correlated: (1) $R = .783$ ($P = .99$), for discussion section satisfaction scores; (2) $R = .763$ ($P = .99$), for lecture satisfaction. As shall be discussed later, the measure of performance was derived from students' final grades.

Research Coordination

The nature of the research design called for each teaching assistant to "play" two different leadership role types, the laissez-faire-authoritarian and democratic types. Prior to the beginning of the semester, both teaching assistants participating in this study met numerous times with the intention of reaching mutual understandings as to what each of the leadership role types implied, in terms of leadership behavior. The G.T.A.s were directly involved in designing the study. The teaching assistants were expected to systematically exchange "notes" and to keep each other informed as to what each was doing in the discussion sections.

Further attempts to coordinate the experimental procedure occurred through regular weekly meetings with the lecturer. At these meetings, each teaching assistant presented a written class report which reviewed and summarized material covered, contingencies which arose, etc., in discussion sections the previous week. The intent of these meetings was to enhance

the standardization of classroom procedure for each of the two types of discussion sections.

The writer recognizes that a possible source of variance was the T.A.s themselves. The design did not permit the type of control of these variables that would have been desired. Basic class procedures for the control sections could be predetermined, with little variation between teaching assistants; decision-making in the control sections was clearly the prerogative of the instructor. These could easily be agreed upon by the instructors, then limiting the possibility of extreme variations. However, the decision-making process in experimental sections was quasi-democratic, not autocratic. The salient implication for democratic group processes for this study was that specific class procedures could not be standardized—students were allowed to decide what was to be discussed in class, where the meeting place was to be, and if class trips or projects as extra-class activities would occur. Both teaching assistants found it necessary, then, to consistently communicate to each other "what was happening" in their respective sections, particularly in the democratic sections.

The graduate teaching assistants were utilized in ways other than teaching the discussion sections. Each teaching assistant submitted up to 25 questions to be considered for use on the large lecture examinations. Those questions were composed from lectures and reading material. All questions constructed for possible use on the examinations were reviewed by the professor and teaching assistants at the regular Monday meetings to sort out the "good" and "bad" questions. This appears to be an important factor to mention, in that students in control sections were allowed to

talk about only material which directly related to the course, and heard lectures from the discussion section instructor which were supplementary to lectures and textbook materials. It was recognized that this factor may have been a source of variance, given the fact that examination questions were taken from lectures and textbook reading material.

Measures of Satisfaction and Performance

In order to test hypotheses I and Ia, satisfaction I was trichotomized as follows: the highly and somewhat satisfied responses were considered "High" satisfaction, the "undecided" response was treated as a separate category, and somewhat and highly dissatisfied responses were categorized as "Low" satisfaction. Chi-square was used as a test for significance of differences between control and democratic sections. The chi-square procedure was also used to test the significance of difference between like types of sections, but taught by different teaching assistants, for both lecture and discussion section satisfaction.

The use of chi-square could be questioned due to small cell frequencies which appear in some of the tables. However, the writer did not collapse categories because doing so was logically and theoretically invalid.⁶

⁶"Corrections for continuity cannot easily be made in the case of the general contingency table. If the number of cells is relatively large and if only one or two cells have expected frequencies of 5 or less, then it is generally advisable to go ahead with chi-square tests without worrying about such corrections. If there are a large number of small cells, however, the only practical alternative may be to combine categories in such a manner as to eliminate these cells. Of course, categories can only be combined if it makes sense to do so theoretically." Hubert M. Blalock, *Social Statistics* (New York: McGraw-Hill Book Company, Inc., 1960), p. 221.

In testing hypotheses 1 and 1a for satisfaction 2, the evaluation item responses were totaled on each questionnaire, producing a range of scores of 12-60. T statistics were then computed to test the significance of the difference between the two groups (control and democratic) based on pooled and separate variance estimates.

On each of the evaluation-questionnaires, satisfaction 2 (evaluation items) was tested for consistency using the point biserial correlation coefficient. Mean scores were obtained on each questionnaire, for both lecture and discussion section instructor satisfaction; with high satisfaction being any scores less than the mean and low satisfaction including all scores equal to or greater than the mean. This procedure enabled the writer to ascertain not only the overall consistency of the set of items, but also patterns of "weak" questions appearing in the three sets of questionnaire data.

In testing hypotheses 2 and 2a, performance was trichotomized as "Above Average," which included all A and B final grades, "Average," the C final grade, and "Below Average," including the D and F final grades. Chi-square was used as the statistical test of significance.

Performance was tested for association with both satisfaction 1 and satisfaction 2, in accordance with hypotheses 3 and 3a. Satisfaction 1, then, was categorized as: (1) "High," the highly satisfied response, (2) "Medium," the somewhat satisfied response, (3) "Undecided," the undecided response, and (4) "Low," the somewhat and highly dissatisfied response. The additional category was added so as to derive more discriminating data. The overall mean scores for satisfaction 2 was obtained and from that score cutting points were set for "high satisfaction"

—one standard deviation below \bar{X} —and "low satisfaction"—one standard deviation above \bar{X} .⁷ Chi-square was then employed to test the significance of differences between performance and satisfaction.

It has been stated that the satisfaction item, satisfaction 1, and the evaluation items, satisfaction 2, were assumed to be fairly comprehensive measures of the various dimensions of satisfaction, with satisfaction 2 perhaps being the more subtle and discriminating measure. If that is accurate, it would be expected that the scores on one measure be reflected in the scores on the other measure. As stated earlier, the simple product moment "r's" and probabilities supported that assumption.⁸

$\bar{X} = 28.5512$, where 1 S.D. below = 20.39, and 1 S.D. above = 36.70. High satisfaction included scores 12-20.39; medium, scores of 20.40-36.70; and low satisfaction included scores of 36.71-60.00

⁸A perfect linear correlation would be obtained, then, from a set of satisfaction scores of:

<u>Satisfaction 1</u>	<u>Satisfaction 2</u>
1	12
2	24
3	36
4	48
5	60

GENERAL INFORMATION PROFILE OF SUBJECTS
(N = 125)

1. College

Arts and Sciences	- 59 (47.2%)
Architecture	- 6 (4.8%)
Commerce	- 32 (25.6%)
Agriculture	- 8 (6.4%)
Home Economics	- 14 (11.2%)
Engineering	- 0 (0.0%)
Education	- 5 (4.0%)
Veterinary Medicine	- 0 (0.0%)
Not Determined	- 1 (0.8%)

2. Major or Intended Major

49 Majors represented in the sample

Most common majors:

a. Business Administration	- 21 (16.8%)
b. Elementary Education	- 12 (9.6%)
c. Psychology	- 7 (5.6%)
d. General Business	- 7 (5.6%)
e. All Social Science Majors	- 16 (12.8%)

3. Year In School

Freshman	- 82 (65.6%)
Sophomore	- 28 (22.4%)
Junior	- 11 (8.8%)

3. Year in School—*Continued*

Senior - 3 (2.4%)

Special Student - 1 (0.8%)

4. Cumulative Grade Point Average (4.0 Scale)

Range = 1.0 - 3.8

Mean = 2.156

Median = 2.4

Mode = 2.4 (appears 16 times - 12.8%)

5. Reason for Enrolling in the Course

a. "It is required." - 18 (14.4%)

b. "It is one of a required group." - 27 (21.6%)

c. "It is required but I would have taken it anyway." - 45 (36.0%)

d. "It is an elective." - 32 (25.6%)

e. Not determined - 3 (2.4%)

6. Other Social Science Courses Taken

a. One Social Science Course - 63 (50.4%)

b. Two Social Science Courses - 15 (12.0%)

c. Three Social Science Courses - 2 (1.6%)

d. Four Social Science Courses - 3 (2.4%)

e. Five Social Science Courses - 1 (0.8%)

Remaining 41 students had taken no other social science courses.

Most frequently taken courses were:

Introductory Psychology - 72 (57.6%)

6. Other Social Science Courses Taken—*Continued*

American History to 1877 - 9 (7.2%)

American History since 1877 - 6 (4.8%)

American Government - 7 (5.6%)

7. Hometown

Manhattan - 8 (6.4%)

Kansas, not Manhattan - 95 (76.0%)

Not Kansas - 20 (16.0%)

Not determined - 2 (1.6%)

8. Size of Hometown

999 or less - 19 (15.2%)

1,000 - 2,499 - 9 (7.2%)

2,500 - 9,999 - 29 (23.2%)

10,000 - 24,999 - 17 (13.6%)

50,000 - 99,999 - 12 (9.6%)

100,000 - 249,999 - 8 (6.4%)

250,000 - 499,999 - 5 (4.0%)

500,000 - 999,999 - 4 (3.2%)

1,000,000 or more - 1 (0.8%)

9. Size of High School

299 or less - 36 (28.8%)

300 - 699 - 27 (21.6%)

700 - 1,099 - 11 (8.8%)

1,100 - 1,499 - 17 (13.6%)

9. Size of High School—*Continued*

1,500 - 1,899 - 2 (1.6%)

1,900 - 2,299 - 18 (14.4%)

2,300 - 2,699 - 4 (3.2%)

2,700 - 3,099 - 6 (4.8%)

3,100 or more - 3 (2.4%)

Not determined - 1 (0.8%)

10. Size of Graduating High School Class

49 or less - 26 (20.8%)

50 - 99 - 20 (16.0%)

100 - 149 - 14 (12.8%)

150 - 199 - 3 (2.4%)

200 - 249 - 7 (5.6%)

250 - 299 - 7 (5.6%)

300 - 399 - 10 (8.0%)

400 - 499 - 3 (2.4%)

500 or more - 33 (26.4%)

11. Grade Expected

A - 26 (20.8%)

B - 90 (72.0%)

C - 9 (7.2%)

D - 0 (0.0%)

F - 0 (0.0%)

CHAPTER III

RESULTS AND ANALYSIS OF DATA

Introduction

This study explores the association between satisfaction and performance under two different leadership role types in the classroom, and the influence of instructor leadership role type (style) upon satisfaction and performance. In this section the data pertaining to each of the hypotheses will be presented and discussed.

It should be noted that the questionnaire was administered three times during the semester. Consequently, results are reported on all three questionnaires for both measures of satisfaction. Computations of the measures of satisfaction related to performance are taken from the third evaluation questionnaire only. Students were asked to sign their name only to the third evaluation so that the student's final grade could be coded on the questionnaire. To avoid unduly biasing responses, students were not asked to sign their names to the first two evaluations.¹

Findings are presented in the form of summary tables. Data tables are found in Appendix B.

¹Due to the nature of some of the items on the questionnaire, particularly the satisfaction 2 items, it was felt that requiring students to sign their names might bias responses. By the end of the semester the researchers believed that students trusted that responses on the questionnaires would in no way affect their final grade. This procedure, however, made it more difficult to obtain satisfaction scores for individual students from the first two questionnaires.

Results

Hypotheses 1 and 1A

Hypothesis 1 predicted that satisfaction would be higher in "democratic" sections than in "control" sections. Hypothesis 1a predicted the obverse. Satisfaction 1 and satisfaction 2 scores were used in testing these hypotheses.

The satisfaction 1 item asked, "On the whole, how satisfied are you with respect to the manner in which the class has been conducted?" Students responded on a five point scale for lecture and discussion sections, respectively. Points on the scale included highly and somewhat satisfied (responses 1 and 2), undecided (response 3), and somewhat and highly dissatisfied (responses 4 and 5). The "undecided" category was interpreted as one which reflects student ambiguity regarding the instructors, course material, etc. By that token, it cannot be included with highly and somewhat satisfied as an indication of "high satisfaction." Nor is "undecided" a clear reflection of dissatisfaction. As a result "satisfaction 1" was trichotomized, with the "undecided" response being a separate, middle category.

Table 1 summarizes observed differences between control and democratic sections for both satisfaction 1 and satisfaction 2 measures. No significant differences were found for satisfaction 1, in either discussion section or lecture satisfaction. Hypothesis 1 suggested that percentages (of scores) for democratic students would decrease moving from "high" to "low" satisfaction, with the obverse being the case for control students. If hypothesis 1a were borne out, percentages would have decreased from "high" to "low" satisfaction for students in the control sections, and the obverse for the students exposed to the democratic treatment.

TABLE 1: SUMMARY OF DIFFERENCES IN SATISFACTION
BETWEEN DISCUSSION SECTION TYPES
(HYPOTHESES 1 AND 1a)

Type of Section	Satisfaction 1 Discussion	Satisfaction 1 Lecture	Satisfaction 2 Discussion	Satisfaction 2 Lecture
All	df = 2	df = 2	df = 313	df = 313
Control	$\chi^2 = .756$	$\chi^2 = 3.135$	$t = 0.66$	$t = 2.06$
&	$p < .750 > .500$ (N.S.)	$p < .10 > .05$ (N.S.)	$p = 0.515$ (N.S.)	$p = 0.041$
Democratic	$N = 313^*$	$N = 313^*$	$N = 315^*$	$N = 315^*$
Sections			$\bar{x} = 30.130$ (con.)	$\bar{x} = 28.605$ (con.)
			S.D. = 8.854 (con.)	S.D. = 8.592 (con.)
			$\bar{x} = 29.536$ (demo.)	$\bar{x} = 26.732$ (demo.)
			S.D. = 7.005 (demo.)	S.D. = 7.460 (demo.)

*N's vary between satisfaction 1 and satisfaction 2 in that two students did not respond to the satisfaction item (satisfaction 1) on the questionnaire.

Although differences were not significant, students in democratic sections tended to express higher satisfaction with lecture than students in control sections.²

Students in control discussion sections appeared to be as satisfied under laissez-faire-authoritarian instructor leadership as were students under democratic instructor leadership. The fact that regardless of the type of discussion section context, all students were expected to attend lectures and take examinations may have been a factor which overshadowed what students experienced once a week in the discussion sections. That is to say, the "democratic" atmosphere may not have been perceived by students as being extraordinary, in that the basic course demands of class attendance, reading material assigned, and the taking of examinations were still required of them. The data for satisfaction I support neither hypothesis I nor hypothesis Ia.

No significant differences between discussion sections were observed for satisfaction measure I or 2. However, for lecture satisfaction, a significant difference did appear for satisfaction 2. Democratic students were significantly more satisfied with the lecture section than were control students. This finding lends some support to hypothesis I, however, only with regard to lecture satisfaction. As suggested in hypotheses I and Ia, the writer expected significant differences between the two group types to occur both in lecture and discussion section satisfaction. However, it appears that, overall, neither hypothesis received consistent support.

Two sources of variance not accounted for by the comparisons reported here are the personal teaching styles of the T.A.s and the extent

²See Appendix B for differential percentage distributions.

to which they assumed similar behavior appropriate for the leadership styles examined in this study. Table 2 summarizes a series of comparisons which were made in an attempt to determine the influence of these variables.

An effective test of hypotheses 1 and 1a required that the effects of personal teaching style be minimized in order to test the influence of leadership style, and that no differences in either personal teaching style or leadership style be observed between T.A.s. As Table 2 shows we were not able to accomplish these ends.

If students were responding to teaching style and not the personal characteristics of T.A.s, then no significant differences should have been observed between student satisfaction with T.A.₁ and T.A.₂. Satisfaction with the discussion sections instructors, irrespective of section type, did not significantly differ in the satisfaction 1 data. Data from satisfaction 2 indicates, however, that students under T.A.₁ were significantly more satisfied than were the students of T.A.₂. The satisfaction 2 items appeared to have tapped degrees of satisfaction which were a function of teaching assistant and not leadership style displayed. It should be noted also that mean scores for lecture satisfaction (for T.A.₁ and T.A.₂) are lower, i.e., higher satisfaction, than mean scores for discussion instructor satisfaction. This may simply point out that students may have assumed the lecturer, as a Ph.D., to be more competent and better equipped to teach, thus resulting in students' higher evaluation (or satisfaction) of him.

Moreover, it was expected that satisfaction scores would not vary between T.A.s when controlling for leadership style. This was not the case, as indicated in rows 3 and 4 of Table 2. Significant differences were observed between T.A.₁ and T.A.₂ in six of the eight comparisons made.

TABLE 2: SUMMARY OF DIFFERENCES IN SATISFACTION BETWEEN DISCUSSION
SECTION TYPES, BY TEACHING ASSISTANT
(HYPOTHESES 1 AND 1a)

Type of Section and T.A.	Satisfaction 1 Discussion	Satisfaction 1 Lecture	Satisfaction 2 Discussion	Satisfaction 2 Lecture
All Students	df = 2 $\chi^2 = 0.212$	df = 2 $\chi^2 = 1.671$	df = 313 t = 3.18	df = 313 t = 2.01
T.A.1 and T.A.2	p < .900 > .750 (N.S.) N = 309 ^a	p < .500 > .250 (N.S.) N = 307 ^a	p = 0.002 N = 315 ^b x = 28.396 (T.A.1) S.D. = 7.551 (T.A.1) x = 31.224 (T.A.2) S.D. = 8.198 (T.A.2)	p = 0.046 N = 315 ^b x = 26.750 (T.A.1) S.D. = 8.052 (T.A.1) x = 28.590 (T.A.2) S.D. = 8.077 (T.A.2)
T.A.1 Control and Democratic	df = 2 $\chi^2 = 11.584$ p < .005 N = 152	df = 2 $\chi^2 = 7.079$ p < .05 > .025 N = 152	df = 152 t = 1.34 p = 0.184 (N.S.) N = 154 ^c x = 29.208 (con.) S.D. = 9.088 (con.) x = 27.584 (demo.) S.D. = 5.554 (demo.)	df = 152 t = 3.83 p = 0.000 N = 154 ^c x = 29.143 (con.) S.D. = 9.249 (con.) x = 24.377 (demo.) S.D. = 5.786 (demo.)

^aN's are not equal in that two students failed to respond to the lecture satisfaction item.

^bSatisfaction 1 and satisfaction 2 N's are not equal in that some students did not respond to the discussion and lecture satisfaction items.

^cSame as the above (b).

TABLE 2—Continued

Type of Section and T.A.	Satisfaction 1 Discussion	Satisfaction 1 Lecture	Satisfaction 2 Discussion	Satisfaction 2 Lecture
T.A.2	df = 2	df = 2	df = 159	df = 159
Control	$\chi^2 = 4.880$	$\chi^2 = .365$	$t = -0.49$	$t = -0.78$
and	$p < .10 > .05$ (N.S.)	$p < .750 > .900$ (N.S.)	$p = 0.676$ (N.S.)	$p = 0.438$ (N.S.)
Democratic	N = 156	N = 157	N = 161 ^d	N = 161 ^d
			$\bar{x} = 30.965$ (con.)	$\bar{x} = 28.118$ (con.)
			S.D. = 8.604 (con.)	S.D. = 7.974 (con.)
			$\bar{x} = 31.513$ (demo.)	$\bar{x} = 29.118$ (demo.)
			S.D. = 7.766 (demo.)	S.D. = 8.211 (demo.)

^dSame as (b) and (c).

TABLE 2—Continued

Type of Section and T.A.	Satisfaction 1 Discussion	Satisfaction 1 Lecture	Satisfaction 2 Discussion	Satisfaction 2 Lecture
T.A.1 Control ^e and T.A.2 Control	df = 2 $\chi^2 = 9.170$ $p < .025 > .010$ $N = .57^a$	df = 2 $\chi^2 = 0.323$ $p < .900 > .750$ (N.S.) $N = 159^a$	df = 160 $t = 1.26$ $p = 0.210$ (N.S.) $N = 162^b$ $\bar{x} = 29.208$ (T.A.1) $S.D. = 9.088$ (T.A.1) $\bar{x} = 30.965$ (T.A.2) $S.D. = 8.604$ (T.A.2)	df = 160 $t = -0.76$ $p = 0.454$ (N.S.) $N = 162^b$ $\bar{x} = 29.143$ (T.A.1) $S.D. = 9.249$ (T.A.1) $\bar{x} = 28.118$ (T.A.2) $S.D. = 7.974$ (T.A.2)
T.A.1 Democratic ^e and T.A.2 Democratic	df = 2 $\chi^2 = 6.228$ $p < .050 > .025$ $N = 150^c$	df = 2 $\chi^2 = 1.758$ $p < .500 > .250$ (N.S.) $N = 146^c$	df = 151 $t = 3.60$ $p = 0.000$ $N = 153^d$ $\bar{x} = 27.584$ (T.A.1) $S.D. = 5.554$ (T.A.1) $\bar{x} = 31.513$ (T.A.2) $S.D. = 7.766$ (T.A.2)	df = 151 $t = 4.13$ $p = 0.000$ $N = 153^d$ $\bar{x} = 24.377$ (T.A.1) $S.D. = 5.786$ (T.A.1) $\bar{x} = 29.118$ (T.A.2) $S.D. = 8.211$ (T.A.2)

^aDifferent N's result from two students not responding to satisfaction item for discussion.

^bSome students did not respond to satisfaction items resulting in differing N's.

^cDifferent N's result from two students not responding satisfaction item for lecture.

^dSame as (b).

^eControl and democratic N's are not equal due to differential numbers of students enrolled in the discussion sections.

Students reported significantly higher satisfaction with T.A.₁ in all cases but satisfaction I lecture scores. These findings suggest that the T.A.s differed significantly in playing the two leadership roles.

Finally, hypotheses 1 and 1a were retested, holding the effect of T.A.s constant. Results reported in row 2 of Table 2, provide strong support for hypothesis 1. Students exposed to the democratic treatment under T.A.₁ were more highly satisfied with both lecture and discussion than were students exposed to the control treatment under the same T.A. Although by satisfaction 2 the difference between democratic control treatments in discussion sections was not statistically significant it was in the expected direction as indicated by mean scores. Such differences were not found in data from T.A.₂'s sections. Only satisfaction I for discussion (T.A.₂) approximated statistical significance: The distribution of respective cell percentages decrease for control students in relation to democratic students, in a linear fashion which supports hypothesis 1a.³ T values were negative for satisfaction 2 (T.A.₂) indicating a slight tendency for control students to be more highly satisfied. These data provide support for hypothesis 2 in sections taught by T.A.₁ and yield little support for either hypotheses in sections taught by T.A.₂.

These findings raise serious design questions with regard to the present study. That variations in satisfaction were accounted for by differences between T.A.s personal teaching styles and adequacy of playing assigned leadership style roles suggest that we were unable to manipulate our independent variable as desired. Conclusions reached about the hypotheses, thus, must be tentative. However, the findings also have a very

³See Appendix B for differential percentage distributions.

practical implication as well. That is, the selection, training, and use of teaching assistants is an important consideration too easily passed over lightly given the press of large numbers of students and multiple course offerings. The selection of graduate students as teaching assistants without due consideration of the students academic record and previous experience is thus tenuous and unadvisable. As will be discussed in Chapter IV, there is some evidence which suggests that not only is the student's satisfaction and performance greatly influenced by graduate teaching assistants, but that T.A.s exert a salient influence on the student's perception of the professor and the discipline. For these practical reasons alone, the selection, training, and use of T.A.s ought to be carefully considered by the teaching faculty of a department.

Hypotheses 2 and 2a

It was proposed in hypothesis 2 that there would be no significant differences in performance between the two types of discussion sections. Bane's study suggested that performance, based on the exam scores, is a function of immediate recall of specific materials, from the reading assignments and lecture, which does not vary in different classroom contexts.

Hypothesis 2a was derived from the Katz, Maccoby, and Morse study in which satisfaction, or morale, and productivity were found to be related closely to supervisory leadership styles. Where democratic, indirect supervision appeared productivity was high; and close, direct supervision resulted in low productivity. Those findings led the writer to propose that discernible differences in performance would be the result of differing classroom contexts and instructor leadership styles.

As shown in Table 3, no discernible differences in performance between the two groups were observed. The data indicate that the tendency for democratic students to exceed control students in performance is slight and not statistically significant. It would appear that the measure used for performance—i.e., final grades—may not have tapped the various dimensions of student performance. For example, no measures of class participation, such as attendance and discussion in class, were employed in this study. Bane found that while "immediate recall" did not vary between the "lecture" and "class-discussion" types of classes, the class-discussion method displayed more effective "delayed recall" of materials.⁴ Democratic students, in this study, took essay quizzes, but control students did not. The instructors observed that overall, democratic students displayed in their essays a basic understanding of concepts and behavioral processes. Bane's findings suggest to the writer that a comparison of essay scores—had control students taken essay quizzes—may have indicated a greater ability of the democratic students to understand abstract materials and to write about them in essay form. The data, then, lend support for hypothesis 2, but not for hypothesis 2a.

The influence of the personal teaching style upon performance was also examined. Table 4 summarizes findings on differences in performance by type of discussion section and teaching assistant. A significant difference in performance was observed between all students of T.A.₁ and all students of T.A.₂, irrespective of discussion section type. Students under T.A.₁ performed substantially higher than did students of T.A.₂.⁵ These data

⁴See a discussion of Bane's study, Chapter I, pages and .

⁵See this table in Appendix B.

TABLE 3: SUMMARY OF DIFFERENCES IN PERFORMANCE
BETWEEN DISCUSSION SECTION TYPES
(HYPOTHESES 2 AND 2a)

Type of Section	Above Average	Average	Below Average	Total
Control	26 (38.2)	31 (45.6)	11 (16.2)	68 (100%)
Democratic	28 (45.9)	24 (39.3)	9 (14.8)	61 (100%)
Total	54	55	20	129*

$$df = 2$$

$$\chi^2 = .787$$

$$p < .750 > .500 \text{ (N.S.)}$$

$$\bar{x} = 2.43 \text{ (control)}$$

$$2.47 \text{ (democratic)}$$

$$\sigma^2 = 1.31 \text{ (control)}$$

$$0.99 \text{ (democratic)}$$

$$S.D. = 1.14 \text{ (control)}$$

$$0.99 \text{ (democratic)}$$

*N does not equal 131 in that two students received "incomplete" grades.

TABLE 4: SUMMARY OF DIFFERENCES IN PERFORMANCE BETWEEN DISCUSSION
SECTION TYPES, BY TEACHING ASSISTANT
(HYPOTHESES 2 AND 2A)

Type of Section and T.A.	Degrees of Freedom	χ^2 Value	P	N
T.A. ₁ and T.A. ₂ (All Students)	2	13.982	< .005	129
T.A. ₁ Control and Democratic	2	1.916	< .500 > .250 (N.S.) \bar{x} = 2.23 (con.) 2.25 (demo.) σ^2 = 1.01 (con.) 0.90 (demo.) S.D. = 1.01 (con.) 0.95 (demo.)	61
T.A. ₂ Control and Democratic	2	1.389	.500 (N.S.) \bar{x} = 2.59 (con.) 2.93 (demo.) σ^2 = 1.53 (con.) 0.88 (demo.) S.D. = 1.24 (con.) 0.94 (demo.)	68
Control T.A. ₁ and T.A. ₂	2	4.239	< .250 > .100 (N.S.) \bar{x} = 2.23 (T.A. ₁) 2.59 (T.A. ₂) σ^2 = 1.01 (T.A. ₁) 1.53 (T.A. ₂) S.D. = 1.01 (T.A. ₁) 1.24 (T.A. ₂)	65
Democratic T.A. ₁ and T.A. ₂	2	11.143	< .005 χ^2 = 2.25 (T.A. ₁) 2.93 (T.A. ₂) σ^2 = 0.90 (T.A. ₁) 0.88 (T.A. ₂) S.D. = 0.95 (T.A. ₁) 0.94 (T.A. ₂)	64

appear consistent with those of satisfaction 2 (Table 2) and provide some evidence for the suggestion that, like satisfaction, performance may be more influenced by the instructor than by specific characteristics displayed in playing out a particular leadership role type. Further, evidence of the influence of instructor upon performance is suggested by the finding that democratic students under T.A.1 performed significantly "better" than T.A.2's democratic students. No significant differences between control sections of T.A.1 and T.A.2 were found, although T.A.1's students tended to perform "better" and T.A.2's students.⁶ As with satisfaction, differences were not expected. No significant differences in performance between control and democratic treatments for either T.A.1 or T.A.2 appeared in the data. The data tend to support hypothesis 2 but as with satisfaction the effects of "T.A." must be taken into account.

Hypotheses 3 and 3a

Hypothesis 3 predicted that a significant association between performance and satisfaction would be found. This proposition is consistent with findings reported by numerous investigators in a variety of contexts. However, the relationship between satisfaction and performance have been shown to be tenuous and not always consistent within the literature. Several researchers were cited in Chapter I in which the conclusions were that satisfaction and performance were closely associated. Other research discussed in Chapter I did not support that conclusion. Bass, for example, pointed out that such intervening variables as leadership styles and differential participation among group members often inhibit any close relationship between satisfaction and performance. The writer reasoned,

⁶See Appendix B for percentage distributions.

from Bass, that neither type of leadership style could command equal participation of group members and, as hypotheses 3a, that no significant association between satisfaction and performance would be indicated.

Table 5 presents a summary of the findings which bear on the association between performance and satisfaction 1 and 2, for both discussion sections and lecture. None of the values observed in Table 5 indicate a high probability of association between performance and satisfaction. A slight tendency for probabilities of association to be higher in the satisfaction 2 data, particularly for discussion instructor satisfaction, was observed.⁷ Hypothesis 3a received substantial support from these data while hypothesis 3 did not.

It appeared that overall, performance and the various measures of satisfaction were only randomly associated. Neither measure of satisfaction proved to be an adequate indicator of performance, although satisfaction 2 was slightly the more accurate of the two. This would seem to support contentions that other variables may inhibit any close association between performance and satisfaction as suggested by Bass.⁸ The design of the present study permitted an examination of the relationship between performance and satisfaction as influenced by leadership style and personal teaching style of T.A.s.

Table 6 presents a summary of probabilities of association for performance and satisfaction 1 and 2, by discussion section type. This table shows that the association between performance and satisfaction in

⁷Refer to Appendix B for cell percentage distributions.

⁸Refer to a discussion of Bass, Chapter 1, pages 11 and 12.

TABLE 5: SUMMARY OF ASSOCIATION BETWEEN
PERFORMANCE AND SATISFACTION
(HYPOTHESES 3 AND 3a)

Measures and Variables	Discussion Section	Lecture
All Students, Performance and Satisfaction 1	$df = 6$ $\chi^2 = 5.118$ $p = .529$ (N.S.) $N = 120$	$df = 6$ $\chi^2 = 7.292$ $p = .295$ (N.S.) $N = 120$
All Students, Performance and Satisfaction 2	$df = 4$ $\chi^2 = 6.396$ $p = .171$ (N.S.) $N = 120$	$df = 4$ $\chi^2 = 5.483$ $p = .241$ (N.S.) $N = 120$

TABLE 6: SUMMARY OF ASSOCIATION BETWEEN
PERFORMANCE AND SATISFACTION
(BY DISCUSSION TYPE)

Type of Section and Measure	Discussion Section	Lecture
Control Performance and Satisfaction 1	df = 6 $\chi^2 = 5.812$ p = .445 (N.S.) N = 60	df = 6 $\chi^2 = 10.509$ p = .105 (N.S.) N = 60
Control Performance and Satisfaction 2	df = 4 $\chi^2 = 3.463$ p = .149 (N.S.) N = 60	df = 4 $\chi^2 = 1.329$ p = .856 (N.S.) N = 60
Democratic Performance and Satisfaction 1	df = 6 $\chi^2 = 9.471$ p = .149 (N.S.) N = 60	df = 6 $\chi^2 = 7.752$ p = .257 (N.S.) N = 60
Democratic Performance and Satisfaction 2	df = 4 $\chi^2 = 9.521$ p = .049 N = 60	df = 4 $\chi^2 = 14.023$ p = .-07 N = 60

control sections was not significant. The same holds true for democratic sections by the satisfaction 1 measure. However, by the satisfaction 2 measure, the probabilities of close association were statistically significant: no significant associations occurred in the control data; the democratic data indicated associations which were significant or approximated statistical significance. Some evidence is provided then for the suggestion that the "laissez-faire-authoritarian" leadership type inhibited a significant relationship between performance and satisfaction, while the democratic leadership role type tends to enhance a close association between those two variables.

Table 7 presents a summary of probabilities of association between performance and satisfaction holding the influence of T.A. and leadership style constant. In only one of the 24 comparisons made was a significant association observed. Performance and satisfaction 2 were closely associated only for lecture satisfaction in T.A.'s democratic sections. As with satisfaction, the design of this study did not permit adequate control of the T.A. variation in like discussion section types. The teaching assistant has been shown to be an influential force in regard to student satisfaction and performance. It may not be unexpected then to find that the T.A. is equally influential with regard to the association between satisfaction and performance. If high satisfaction and performance are found to occur in the sections taught by one T.A. and not the other, are those variables closely associated in the sections taught by one of the T.A.s and not the other? And under which leadership types do close associations occur?

TABLE 7: SUMMARY OF ASSOCIATION BETWEEN PERFORMANCE AND SATISFACTION
BY DISCUSSION SECTION TYPE AND BY TEACHING ASSISTANT
(HYPOTHESES 3 and 3a)

Type of Section and T.A.	Discussion	Lecture
T.A. ₁ —All Students Performance and Satisfaction 1	df = 6 $\chi^2 = 10.707$ p = .098 (N.S.) N = 59	df = 6 $\chi^2 = 4.757$ p = .575 (N.S.) N = 59
T.A. ₂ —All Students Performance and Satisfaction 1	df = 6 $\chi^2 = .441$ p = .998 N = 61	df = 6 $\chi^2 = 6.864$ p = .334 (N.S.) N = 61
T.A. ₁ —All Students Performance and Satisfaction 2	df = 4 $\chi^2 = 5.877$ p = .208 (N.S.) N = 59	df = 4 $\chi^2 = 5.379$ p = .251 (N.S.) N = 59
T.A. ₂ —All Students Performance and Satisfaction 2	df = 4 $\chi^2 = 2.450$ p = .654 (N.S.) N = 61	df = 4 $\chi^2 = 7.393$ p = .117 (N.S.) N = 61
T.A. ₁ —Control Performance and Satisfaction 1	df = 6 $\chi^2 = 7.045$ p = .317 (N.S.) N = 27	df = 6 $\chi^2 = 7.635$ p = .266 (N.S.) N = 27
T.A. ₂ —Control Performance and Satisfaction 1	df = 6 $\chi^2 = 5.504$ p = .481 (N.S.) N = 33	df = 6 $\chi^2 = 11.052$ p = .087 (N.S.) N = 33

TABLE 7—*Continued*

Type of Section and T.A.	Discussion	Lecture
T.A. ₁ —Control Performance and Satisfaction 2	df = 4 $\chi^2 = 2.733$ p = .603 (N.S.) N = 27	df = 4 $\chi^2 = 5.331$ p = .255 (N.S.) N = 27
T.A. ₂ —Control Performance and Satisfaction 2	df = 4 $\chi^2 = 3.301$ p = .509 (N.S.) N = 33	df = 4 $\chi^2 = 4.794$ p = .309 (N.S.) N = 33
T.A. ₁ —Democratic Performance and Satisfaction 1	df = 4 $\chi^2 = 3.582$ p = .466 (N.S.) N = 32	df = 4 $\chi^2 = 2.019$ p = .732 (N.S.) N = 32
T.A. ₂ —Democratic Performance and Satisfaction 1	df = 6 $\chi^2 = 4.279$ p = .639 (N.S.) N = 28	df = 6 $\chi^2 = 5.149$ p = .525 (N.S.) N = 28
T.A. ₁ —Democratic Performance and Satisfaction 2	df = 2 $\chi^2 = 4.771$ p = .092 (N.S.) N = 32	df = 4 $\chi^2 = 15.543$ p = .004 N = 32
T.A. ₂ —Democratic Performance and Satisfaction 2	df = 4 $\chi^2 = 6.211$ p = .184 (N.S.) N = 28	df = 4 $\chi^2 = 6.299$ p = .178 (N.S.) N = 28

The data do not indicate that a close association is more likely to be found in the sections of one T.A. and not the other: of the 24 comparisons made only one was significant at the .05 level, while seven approximated statistical significance. Of these eight computations, four occurred in data for each T.A. A discernible pattern can be observed controlling for leadership type or discussion context: four calculations which approximated statistical significance occurred in the "democratic" data, while only one was observed in "control" data and the other three were observed in data from all students. Some evidence has been presented which suggests that the "laissez-faire-authoritarian" leadership type may have inhibited close association between satisfaction and performance, while the democratic leadership type seems to have enhanced a close association between those two variables. It appears, then, that the association between satisfaction and performance was "context specific."

Other patterns were observed consistently in the data. Satisfaction 2—the evaluation items—appeared to yield more significant differences in satisfaction, and was more closely associated with performance than was satisfaction 1, and in the last data discussed lecture satisfaction was more closely associated with performance than was discussion instructor satisfaction. There may be several possible factors which, in part, account for these patterns.

It seems reasonable to propose that students may have indicated a degree of satisfaction which was somewhat commensurate to their performance in *lecture*. This may be the case in that students took examinations in the lecture and more questions on the examinations were taken from lectures than from discussion-lecture in the discussion sections. By that token,

the student may have perceived his performance to be closely linked with the lecture session, more specifically, how the lecturer prepared him for examinations. However, that proposition should have held for both types of discussion sections, but it did not. Following Bass, one could further propose that student satisfaction is dependent upon expected rewards and that students are most assured of expected rewards equalling their performance in a "democratic" atmosphere. The writer would hold that to be tenable if it held true across all democratic sections, which it did in this study.

There is further evidence that supports the proposition that students perceive that expected rewards will equal their performance. Students in democratic sections were given essay quizzes during the semester in which they were given the opportunity to "write out" their ideas and interpretations of sociological concepts and notions. Students, by-and-large, indicated to the teaching assistants that the writing out of their ideas not only enhanced a better understanding of the materials, but also aided the students in preparing for the large lecture examination. This may have contributed to the democratic student's perception that effort expended in preparing for quizzes and lecture examinations would yield a higher probability for a better than average grade.

On the other hand, students in control sections were not given essay quizzes and thus may not have viewed the discussion section instructor as being any different, in orientation or style, than the lecturer.

Much of the data and interpretations presented in this chapter may indeed be ambiguous and do not fully explore alternative explanations for certain patterns identified in the data. In Chapter IV, the writer

will place interpretations of the data into the context of a discussion of their implications for classroom behavior, research methodology, and further research in this field.

CHAPTER IV

SUMMARY AND CONCLUSIONS

This study explored the relationships among satisfaction, performance and leadership type within the context of the academic classroom—more specifically, within the introductory sociology class. The essential questions were: (1) Do different types of classroom leadership influence student's performance and satisfaction; and (2) To what extent is student performance and satisfaction related under different types of classroom leadership? Identified as the key variables, then, were satisfaction and performance as the dependent variables and leadership role type as the independent variable.

Review of Findings and Reexamination of Hypotheses

1. Hypothesis I was developed to test the question of differential satisfaction in the two types of discussion sections:

Satisfaction will be greater in the democratic sections than in the control sections.

Alternatively, hypothesis Ia suggested that:

Satisfaction will be greater in the control sections than in the democratic sections.

No significant differences appeared between democratic and control sections using satisfaction I. However, significant differences were observed between the two sections when teaching assistants were included as variables. It was found that democratic students under T.A.₁ reported greater satisfaction with both the discussion section and lecture than did

students in control sections. Conversely, for T.A.₂, control students were somewhat more satisfied with the discussion section than were his democratic students; and there was no significant difference in lecture satisfaction. A tendency was observed, however, for *all* democratic students to express a higher degree of satisfaction with lecture.

Even stronger differences between teaching assistants were obtained from the satisfaction 2 measure. All students of T.A.₁, irrespective of type of discussion section, expressed higher satisfaction with both the discussion section instructor and lecture, than did all the students of T.A.₂. Also the democratic students of T.A.₁ expressed higher satisfaction with discussion section and lecture than did the democratic students of T.A.₂. The evidence mounted in this study supports neither hypotheses 1 nor 1a.

It appears that satisfaction was a function more of teaching assistant than of leadership role type employed by the teaching assistant. However, hypothesis 1 was supported only by the data reported for T.A.₁.

2. Two alternative hypotheses were formulated to test the influence of leadership style upon performance:

2. There will be no significant variation in performance between the democratic and control classes.
- 2a. There will be significant differences in performance in democratic and control type sections.

The measure of performance was the student's final grade based on total points derived from the three lecture examinations, plus essay quizzes given to democratic students.

The data indicated no significant differences in performance between all democratic and all control sections. Hypothesis 2a was not

supported by the data. Before accepting hypothesis 2, however, the influence of T.A. personal style upon performance was examined.

When the performance of all students of each teaching assistant, irrespective of discussion section type, was examined, the resulting data indicated unexpected differences: Students under T.A.₁ performed at a much higher level than students under T.A.₂. Such was the case, also, in the comparisons of T.A.₁s and T.A.₂s control sections, and T.A.₁s and T.A.₂s democratic sections. Although the difference was not statistically significant, cell percentage distributions indicate that students in T.A.₁s sections performed "better" than students of T.A.₂.¹ Democratic students of T.A.₁ performed "better" than democratic students of T.A.₂; that difference was significant below the .005 level. Theoretically, one would expect all frequencies between teaching assistants to be approximately the same. Hypotheses were derived around the notion that data, vis-à-vis satisfaction, performance, and the association between the two, would or would not be the same depending on the type of discussion section, not the teaching assistant.

Thus, for instance, if it were proposed that performance would be higher in democratic sections than in control sections, the author would expect that to hold true in all democratic sections and for both teaching assistants. Accordingly, if data in Table 4 (Chapter III), for example, were logically consistent with the writer's theoretical expectations they would be:

¹See Appendix B for cell percentages.

	<u>Above Average</u>	<u>Average</u>	<u>Below Average</u>	<u>Total</u>
T.A. ₁	20	10	2	32
Democratic	(65.5%)	(31.3%)	(6.2%)	(100%)
T.A. ₂	20	10	2	32
Democratic	(65.5%)	(31.3%)	(6.2%)	(100%)
Total	40	20	4	64

$$df = 2$$

$$\chi^2 = 0.000$$

$$p = 0.000$$

And logically, the same should hold true for respective cells in the control students performance data.

Differences in degrees of expressed satisfaction and performance, then, appeared in the data in an unexpected and unpredicted fashion. The patterns of performance and satisfaction identified in the data do not allow clear acceptance or rejection of the satisfaction and performance hypotheses.

3. Two alternative hypotheses were developed to test the significance of association between performance and satisfaction.

3. There will be a significant association indicated between performance and satisfaction.

3a. There will be no significant association indicated between performance and satisfaction.

It was not specified in which type of discussion section a close association between satisfaction and performance was expected. In the initial formulation of hypotheses, no salient clues were identified which indicated their close association in one type of discussion section and not the other. Performance was tested for association with both satisfaction 1 and satisfaction 2.

Data in Table 5, Chapter III, indicate that for all students satisfaction 1 and performance were not closely associated. By the satisfaction 2 measure, no significant association was found for either discussion section or lecture. These data do not lend support to hypothesis 3.

In Table 6 no significant associations in control section data were observed—a pattern of random association occurred. However, in democratic data performance and satisfaction 1 approximated close association, and by the satisfaction 2 measure the variables were significantly associated.

However, probabilities for significant associations did appear when the teaching assistant as an intervening variable, was introduced into the calculations. And here the patterns are much more complex and difficult to identify.

No significant association between satisfaction and performance was found in specific sections of T.A.2. However, it appeared that satisfaction 1 and performance occurred independent of each other for all sections of T.A.2 discussion. The tendency toward significant association was more likely to be found in democratic sections than in control sections. This was especially true in democratic sections taught by T.A.1. Paradoxically enough, however, performance and satisfaction 2 of students in all democratic sections (for both lecture and discussion section) tended to be closely associated, but such a significant relationship was not indicated in the data obtained from the democratic classes of T.A.2 alone. It appears evident, then, that the tendency for satisfaction and performance to cluster in significant associations, is as much a function

of teaching assistant as it is leadership type and classroom context. It must further be noted that the close association between satisfaction and performance only occurred using the satisfaction 2 measure.

To review this study and reach even tentative conclusions, it becomes necessary to closely examine and critique both the theoretical assumptions and research design.

Theoretical Framework and Assumptions

In Chapter I the writer identified the key variables with which this study deals. The initial problem, then, was clearly stating the dimensions of these variables, vis-à-vis the classroom. Literature in the area of "classroom studies" or educational research, however, is not so rich in theoretical discussions of these key variables. On the other hand, organizational research provides a plethora of literature which bears directly on the study at hand.

To provide a clarification of concepts and empirical precedents the writer has made extensive use of the work group in the organizational literature. The assumption was made that the work group in organizations is at least analogous to the classroom group as an instrumental, task-oriented group. The validity or soundness of that assumption should be closely examined here.

The writer proposed in Chapter I that we cannot view the work group as being identical, in type or group processes, to the classroom group.² First, as it was pointed out, group cohesion is a salient factor in the work group in so far as it affects the attainment of group goals.

²See Chapter I, pages 14-15.

To state that students work towards *group* goals, such as a high class grade average, seems to be a tenuous and unfounded proposition. Workers, who as a group, achieve and maintain a high rate of productivity may receive both material (e.g., increased wages by piece-rate) or nonmaterial (e.g., high status) rewards as a result of their performance. Rewards most typically accrue to the student based upon his *individual* performance.

Second, there appears to be some question as to the student's ability to readily learn the material and techniques which enable him to achieve goals. The learning process for the worker may be accurately viewed as one in which he enters into an initial phase of his job requiring him to quickly learn how to produce the item or services as the organization defines them. From that point, performance, particularly for production workers, seems to be a repetitious application of techniques learned during the initial phase of job activity. The student, although aware of certain techniques used in preparing for examinations, taking class notes, etc., is continually confronted with new material. Not only is the student in introductory sociology for instance, subjected to unknown materials or subject matter, but also to other courses taught by different instructors whose course requirements call upon the students to seek direction from him. One indication of differential course demands and learning techniques necessary is the statement frequently heard by instructors, "I can understand mathematics and do well on examinations, but in sociology (for example) there aren't any right and wrong answers; it is all mixed up and I can't make sense out of it."

Those factors may have more salient implications for the satisfaction variable than for the other two variables. The author suggested in Chapter I that satisfaction is a multi-dimensional attitude

which may be influenced to a greater degree by intervening factors than performance.³ If satisfaction is directly related to performance it would be reasonable to propose that students will only express high satisfaction if they are doing well gradewise, et vice versa. However, if one seriously considers the results of this study one would tentatively reject that proposition. Students did not consistently express a degree of satisfaction which paralleled their performance.

If satisfaction is not a function of performance, then can it be said, with some foundation, that satisfaction is a function of leadership style? The writer would answer no, based on the evidence presented in Chapter III. But that answer must be a qualified "no" in that leadership must now be redefined; for the problem which arises in conceptualizing and defining "social role" also appears in considering the dimensions of leadership. On the one hand, leadership role type may imply a set of expectations as to how a designated leader will behave. We expect an authoritarian type leader to be aggressive, rigid in performing his "duties," aloof from other group members, etc. Yet it might also imply the actual behaviors which the leader displays. Thus, satisfaction may have been a function of the students' perception of the instructor's utility to him. This is to say, the student may express a degree of satisfaction which is based upon the instructor's ability to aid the student in progressing towards his goal(s)—instrumental satisfaction—and/or the instructor's ability to meet the socio-emotional needs of the student.

³See Chapter I, page 22.

From arguments above it would not be logically consistent to argue that satisfaction is based solely on the instructor's ability to meet instrumental needs; as has been shown in this study, satisfaction and performance were not consistently related. However, there is evidence which may support the proposition that the meeting of socio-emotional needs is at least as crucial as the meeting of instrumental needs in determining satisfaction.⁴

A strong tendency appeared in the data for students under T.A.₁ to express a higher degree of satisfaction and perform better than the students of T.A.₂. Leadership style employed seemed to not influence either performance or satisfaction significantly. Further evidence is provided by the fact that satisfaction and performance were closely associated most frequently in sections taught by T.A.₁. Thus, students may express degrees of satisfaction based upon their perception of whether or not the instructor is meeting their instrumental and/or socio-emotional demands.

Performance also appeared not to be a function of leadership style. It was noted in Chapter III and earlier in this chapter that no substantial differences in performance occurred between democratic and control type sections. Gross differences did appear in data obtained from test association between teaching assistants—all students of T.A.₁, as a group, performed at a higher level, than did T.A.₂s students. Performance, then, seemed to be affected more by the instructor's style than by the leadership role type employed by the instructor.

⁴By "determining" the writer means to imply that the meeting of socio-emotional needs may be as strong a causal factor of high satisfaction, as is the meeting of instrumental needs.

One can infer that there are, or may be, differences between the types of behaviors intended or expected and the actual behaviors displayed, vis-à-vis particular leadership role types, as mentioned earlier. Those differences may have been magnified by the fact that the same role types were played by two teaching assistants—each teaching assistant played the democratic role type and each played the "laissez-faire-authoritarian" role type. Such a situation implied a third dimension of leadership behavior, the subjective interpretation of role expectations.

Although the research design and hypotheses formulated for this study did not allow the testing of these factors, it should be noted that the leader, or instructor, also has both instrumental and socio-emotional needs which seek to be met through participation in the classroom group.

Several factors may influence the style of leadership adopted by an individual in a group. His own personality and needs, as well as the particular circumstances in which he must operate, may predispose him toward the adoption of a particular style of leadership. . .⁵

The instructors who participated in this study may have been predisposed to particular styles of leadership which were more pervasive than the prescribed leadership role *types* which they were to play. The data suggests, for instance, that T.A.1 may have been so predisposed that the democratic role type was more congruent with his own "style" than was the laissez-faire-authoritarian role type; the data suggests the obverse for T.A.2.

The various factors mentioned and discussed above will be evaluated in the following section with regard to their implication for the research design.

⁵John W. McDavida and Herbert Harari, *Socioal Psychology: Individuals, Groups, Societies*, (New York: Harper and Row, 1968), p. 354.

A Reexamination of the Research Design and Procedures

This study should be viewed as exploratory in nature, in which clustering patterns of satisfaction, performance and leadership type have been identified. Unexpected patterns were found to occur which should lead to a reformulation of the research design and procedures.

The basic design, as employed in this study, appears to be sound. For this study, the discussion sections of a large Introductory Sociology class were discerned as two types based upon the leadership role type employed by the instructor: four were democratic and four control. All students attended the large lecture twice weekly. The writer sees no reason why that basic format or design should be changed at this point. It has been shown to be useful in terms of effecting sound research procedures.

However, the procedures developed and carried out within the design do need to be reexamined. Identified in Chapter III and in the first part of this chapter, were variables which appeared to be intervening factors, not controlled for by the design employed. The most salient intervening variable was the teaching assistant: The significant differences, vis-à-vis the dependent variables, occurred not between unlike types of discussion sections, but between (unlike) teaching assistants. One can then view, for instance, the last row in Tables 2 and 4 in two different ways: (1) the variables tested (democratic-democratic types) for significant difference are like types, in respect to the leadership role type characterizing each; (2) by viewing those variables, or discussion sections, as *unlike* types in that *different* teaching assistants taught those sections.

Several suggestions may be made at this point. It may be more fruitful in further research to assign teaching assistants to only one type of discussion section, instead of his being required to play two different leadership role types. This, it seems, would be the logical procedure to now employ in attempting to further explore the variation in performance and satisfaction under different leadership styles and teaching assistants. Procedures could then be utilized to measure the variation of the variables between like types of sections to ascertain the variability of influence of the teaching assistant himself.

Again, however, it is evident that a source of variation may be in the teaching assistants. Procedures measuring differences in performance and satisfaction between the two types of sections may not account for the teaching assistant as an intervening variable. Certainly empirical purity could be enhanced by a more stringent control of that intervening variable: Only one teaching assistant would be assigned to employ the two leadership role types. Even utilizing that procedure would call for the selection of a teaching assistant who was not predisposed to either of the two role types, and that in itself would require a good deal of coordination among researchers. Consequently, we should not expect leadership role types to be played in pure form, particularly within a research context that, by necessity, employs more than one instructor.

Another procedure warrants reevaluation. Requiring democratic students to take essay quizzes does not appear consistent with the characteristics of a democratic classroom context. In fact, that procedure is more in keeping with the control type context. Democratic students could be given the choice as to whether or not essay quizzes would be given

and quizzes could be required of control students. However, it might be useful in measuring differential performance, to require essay quizzes in both types of discussion sections.

The Instrument

The evaluation-questionnaire was utilized for acquiring satisfaction data. As was shown in Chapter II the satisfaction 2 measure appeared to tap more significant differences than the satisfaction 1 measure. This is consistent with the finding that the teaching assistant seemed to influence satisfaction and performance to a greater extent than leadership role type. It follows that more extensive use should be made of the satisfaction 2 type items. Those items should be tested for consistency and reliability, and additional items could be added.

Numerous items on the questionnaire were not treated in this study. A logical case could be made for the proposition that the student's perception of how interesting and informative a course is, bears directly on the degree of satisfaction with course he expresses. Thus, the "how interesting" and "how informative" items in the questionnaire could be tested for association with satisfaction; the same could be said of those variables associated with performance.⁶

On the questionnaire students were asked to circle the grade they expected to receive. It could be useful to explore the possibilities of the "self-fulfilling prophecy" process occurring in regard to the performance of students.⁷ If strong and consistent relationships were

⁶See Appendix A for a copy of the questionnaire.

⁷For a detailed explication see: Robert K. Merton, *Social Theory and Social Structure* (New York: The Free Press, 1968), pp. 475-490.

found between responses on this questionnaire item and students' final grade, then the case for the self-fulfilling prophecy could be further developed.

Items concerning changes in attitudes which are assumed to be satisfaction in type—were not treated in this study. Various statistical techniques could be employed in testing the association of these items with both measures of satisfaction, performance and leadership style and between those items and teaching assistant.

And finally, the writer would suggest that further research seek to explore the influence teaching assistants exert upon students' perception and evaluation of the lecturer. Although such influence is not clearly identified and defined in this study, the data did suggest that teaching assistants influenced students' satisfaction and performance in differing ways. Other research points to the teaching assistant as being a moderator or "middle-man" through whom the students develop their attitudes about the lecturer and the subject matter or discipline.⁸ The success or failure of a professor's attempts at exposing students to new concepts and ideas may depend to a great extent upon the performance of his teaching assistants in the discussion section context.

Although researchers have gone to great lengths to ascertain differential degrees of student satisfaction and performance, little attention has been given to the preferences of instructors re teaching style, classroom context, etc. It has been suggested that the student is more likely to be highly satisfied if what actually occurs in the

⁸Jennie Farley, "First-Year Students Size Up Sociology," *The American Sociologist*, Vol. 5 (November, 1970), pp. 363-364.

classroom is congruent with his preconceived notions of what classroom is or should be. Instructors, like students, embrace preconceived notions and preferences as to the classroom. Perhaps a fruitful approach to the assignment of instructors to classes and graduate students to teaching duties would entail ascertaining those preferences and preconceived notions of students and instructors, matching them so that, for example, students preferring the highly directive, autocratic instructor would be taught by an instructor of like preferences. Given the pervasive influence of the teaching assistant, graduate students assigned to teaching assistant positions would be included in this procedure if it were employed.

For very practical reasons, then, the assignment of graduate students as teaching assistants, their training and how they are utilized in the classroom cannot be taken lightly. Nor can one ignore the penalties which may accrue to students taught by a graduate assistant who does not wish to teach and receives little, if any, direction from the professor under whom he works. Such considerations are at least consistent with the humanistic rhetoric of the academic community.

Concluding Comments

With all his knowledge of social organization, group formation and processes, etc., the sociologist may be viewed by the student as the potential (at least) teacher *par excellence*. However, are sociologists able to apply academic sociological expertise to the classroom? And do sociologists realize that only a small percentage of any introductory sociology class will eventually major in sociology? In reference to this

last question Arthur Katona has pointed to perhaps a most crucial issue before the sociologist-educator.⁹ Katona maintains that through the rigors of doing professional sociology the sociologist is himself unaware that his "educational efforts suffer from a costly culture lag."¹⁰ As Katona explains, sociologists, very painstakingly, are trained in the techniques of research. While on the other hand, unlike even the teacher at the public school level, sociologists ignore for the most part the fundamental techniques of teaching. And Katona has pointed out there is an unanswered question in academic sociology:

Are we training sociology majors or education students? For, too often, courses and curriculums are laid out, consciously and unconsciously, with a view toward training specialists in sociology, and research specialists at that. Inadvertently we put a sociologist's monopoly on our knowledge. We must get away from this traditional practice if we would fulfill our responsibilities as educators. . . .¹¹

The high value assigned to mass education has resulted in significantly large increases in college enrollment and thus increases in class size. In addition, we now have before us a large number of students who are demanding (although not in these terms) that the "cui bono"¹² question be answered: Who is the prime beneficiary of higher education? The university serves many publics and carries on numerous functions, only one of which is teaching. However, to the student who spends much of his time in the classroom, as well as to the instructor the "cui bono" question is increasingly of utmost concern.

⁹Arthur Katona, "The Teaching of Sociology in a Democracy," *American Sociological Review*, Vol. (1943) pp. 8:439-444.

¹⁰*Ibid.*, p. 439.

¹¹*Ibid.*, p. 440.

¹²See: Peter Blau and W. R. Scott, *Formal Organizations* (San Francisco: Chandler Pub., 1962), pp. 42-45.

Hopefully, then, this study is "relevant" not only to a particular university community, but to the university community at large.

APPENDIX A
EVALUATION QUESTIONNAIRES

KANSAS STATE UNIVERSITY

Department of Sociology

Survey of Student Opinion of Teaching

DO NOT SIGN YOUR NAME

Discussion Leader's Name _____

Time and Day Discussion Section Meets _____

Course and Number _____ Cum Grade Point _____

.....

Listed below are several qualities which describe aspects of instructor behavior. Rate both the lecturer and your discussion leader on each of these items by drawing a circle around the number that best indicates his position in comparison with other teachers you have had. Rate each item as thoughtfully and carefully as possible. Do NOT omit items. Of course, it will be the very unusual case when the number you circle is the same for all items.

	Outstanding	Superior	Competent	Only Fair	Of Less Value
1. Interprets abstract ideas and theories clearly.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
2. Gets me interested in his subjects.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
3. Has increased my skills in thinking.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5

	Outstanding	Superior	Competent	Only Fair	Of Less Value
4. Has helped broaden my interests.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
5. Stresses important material.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
6. Makes good use of examples and illustrations.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
7. Has motivated me to do my best work.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
8. Inspires class confidence in his knowledge of subject.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
9. Has given me new viewpoints or appreciation.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
10. Is clear and understandable in his explanations.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
11. Is sensitive to the needs and wishes of his students.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5
12. Permits students to express their points of view.					
Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5

13. On the whole, how satisfied are you with respect to the manner in which the class has been conducted.

Lecture

1. Highly satisfied
2. Somewhat satisfied
3. Undecided
4. Somewhat dissatisfied
5. Highly dissatisfied

Discussion Section

1. Highly satisfied
2. Somewhat satisfied
3. Undecided
4. Somewhat dissatisfied
5. Highly dissatisfied

Your instructor would like to know if there is something you believe he has done especially well in his teaching of this course.

Your instructor would also like to know what specific things you believe might be done to improve his teaching of this course.

Compared to other introductory courses how interesting has Introductory Sociology been?

Much More	Somewhat More	About the Same	Somewhat Less	Much Less
1	2	3	4	5

Comparative to other introductory courses how informative has Introductory Sociology been?

Much More	Somewhat More	About the Same	Somewhat Less	Much Less
1	2	3	4	5

Circle the final grade you expect to receive in this course.

A B C D F

KANSAS STATE UNIVERSITY

Department of Sociology

Survey of Student Opinion of Teaching

DO NOT SIGN YOUR NAME

Discussion Leader's Name _____

Time and Day Discussion Section Meets _____

Course and Number _____ Cum Grade Point _____

.....

Listed below are several qualities which describe aspects of instructor behavior. Rate both Professor _____ and your discussion leader on each of these items by drawing a circle around the number that best indicates his position in comparison with other teachers you have had. Rate each item as thoughtfully and carefully as possible. Do NOT omit items. Of course, it will be the very unusual case when the number you circle is the same for all items.

Outstanding	Superior	Competent	Only Fair	Of Less Value
-------------	----------	-----------	-----------	---------------

1. Interprets abstract ideas and theories clearly.

Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5

2. Gets me interested in his subjects.

Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5

3. Has increased my skills in thinking.

Lecture	1	2	3	4	5
Discussion section	1	2	3	4	5

Outstanding	Superior	Competent	Only Fair	Of Less Value
-------------	----------	-----------	-----------	---------------

- | | | | | | |
|---|---|---|---|---|---|
| 4. Has helped broaden my interests. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |
| 5. Stresses important material. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |
| 6. Makes good use of examples and illustrations. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |
| 7. Has motivated me to do my best work. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |
| 8. Inspires class confidence in his knowledge of subject. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |
| 9. Has given me new viewpoints or appreciation. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |
| 10. Is clear and understandable in his explanations. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |
| 11. Is sensitive to the needs and wishes of his students. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |
| 12. Permits students to express their points of view. | | | | | |
| Lecture | 1 | 2 | 3 | 4 | 5 |
| Discussion section | 1 | 2 | 3 | 4 | 5 |

13. On the whole, how satisfied are you with respect to the manner in which the class has been conducted.

Lecture

1. Highly satisfied
2. Somewhat satisfied
3. Undecided
4. Somewhat dissatisfied
5. Highly dissatisfied

Discussion Section

1. Highly satisfied
2. Somewhat satisfied
3. Undecided
4. Somewhat dissatisfied
5. Highly dissatisfied

Your instructor would like to know if there is something you believe he has done especially well in his teaching of this course.

a. Lecture _____

b. Discussion _____

Your instructor would also like to know what specific things you believe might be done to improve his teaching in this course.

a. Lecture _____

b. Discussion _____

Compared to other introductory courses how interesting has Introductory Sociology been?

Much More	Somewhat More	About the Same	Somewhat Less	Much Less
1	2	3	4	5

Compared to other introductory courses how informative has Introductory Sociology been?

Much More	Somewhat More	About the Same	Somewhat Less	Much Less
1	2	3	4	5

Circle the final grade you expect to receive in this course.

A B C D F

Has your opinion about this Introductory Sociology course changed over the semester?

- a. Lecture
 - 1. Yes, it has changed greatly.
 - 2. Yes, it has changed somewhat.
 - 3. No, it has remained the same.
- b. Discussion
 - 1. Yes, it has changed greatly.
 - 2. Yes, it has changed somewhat.
 - 3. No, it has remained the same.

If your opinion has changed, how has it changed?

- a. Lecture
 - 1. It has become more positive.
 - 2. It has become more negative.
- b. Discussion
 - 1. It has become more positive.
 - 2. It has become more negative.

Comments: _____

If your opinion has not changed how would you describe your opinion?

- a. Lecture
 - 1. It is generally positive.
 - 2. It is generally negative.
- b. Discussion
 - 1. It is generally positive
 - 2. It is generally negative.

Comments: _____

APPENDIX B
SUPPLEMENTARY TABLES

TABLE A-1: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC
SATISFACTION SCORES, USING THE SATISFACTION I MEASURE
(DISCUSSION SECTION)

Section Types	High	Und.*	Low	Total
Control	124 (77.5)	13 (8.1)	23 (14.4)	160 (100%)
Democratic	122 (76.5)	17 (10.7)	20 (12.6)	159 (100%)
Total	246	30	43	319

df = 2

$\chi^2 = .756$

p < .70 > .50

*Und. on all tables is used as "undecided" throughout.

TABLE A-2: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC
SATISFACTION SCORES, USING THE SATISFACTION I MEASURE
(LECTURE)

Section Types	High	Und.	Low	Total
Control	118 (73.2)	17 (10.5)	26 (16.1)	161 (99.8%)*
Democratic	214 (81.6)	12 (7.9)	16 (10.5)	152 (100%)
Total	242	29	42	313

df = 2

$\chi^2 = 3.135$

p < .10 > .05

*N does not equal 100% due to rounding of cell percentages.

TABLE A-3: RELATIONSHIP BETWEEN SATISFACTION SCORES OF
ALL STUDENTS OF T.A.₁ AND T.A.₂, USING
THE SATISFACTION I MEASURE
(DISCUSSION SECTION)

Instructor	High	Und.	Low	Total
T.A. ₁	119 (78.3)	14 (9.2)	19 (12.5)	152 (100%)
T.A. ₂	125 (79.6)	15 (9.6)	17 (10.8)	157 (100%)
Total	244	29	36	309

$df = 2$
 $\chi^2 = 0.212$
 $p < .900 > .750$

TABLE A-4: RELATIONSHIP BETWEEN SATISFACTION SCORES OF
ALL STUDENTS OF T.A.₁ AND T.A.₂, USING
THE SATISFACTION I MEASURE
(LECTURE)

Instructor	High	Und.	Low	Total
T.A. ₁	121 (80.7)	12 (8.0)	17 (11.3)	150 (100%)
T.A. ₂	117 (74.5)	17 (10.8)	23 (14.7)	157 (100%)
Total	238	29	40	307

$df = 2$
 $\chi = 1.671$
 $p < .500 > .250$

TABLE A-5: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC
DISCUSSION SECTION SATISFACTION SCORES (T.A.1),
USING THE SATISFACTION I MEASURE

Section Types	High	Und.	Low	Total
Control	51 (68.0)	8 (10.7)	16 (21.3)	75 (100%)
Democratic	68 (88.3)	6 (7.8)	3 (3.9)	77 (100%)
Total	119	14	19	152

df = 2
 $\chi^2 = 11.584$
 $p < .005$

TABLE A-6: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC
LECTURE SATISFACTION SCORES (T.A.1), USING
THE SATISFACTION I MEASURE

Section Types	High	Und.	Low	Total
Control	57 (76.0)	7 (9.7)	11 (14.7)	75 (100%)
Democratic	67 (87.0)	8 (10.4)	2 (2.6)	77 (100%)
Total	124	15	13	152

df = 2
 $\chi^2 = 7.079$
 $p < .05 > .025$

TABLE A-7: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC
DISCUSSION SECTION SATISFACTION SCORES (T.A.2),
USING THE SATISFACTION I MEASURE

Section Types	High	Und.	Low	Total
Control	72 (86.7)	6 (7.2)	5 (6.1)	83 (100%)
Democratic	53 (72.6)	11 (15.1)	9 (12.3)	73 (100%)
Total	125	17	14	156

df = 2
 $\chi^2 = 4.880$
 $p < .10 > .05$

TABLE A-8: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC
LECTURE SATISFACTION SCORES (T.A.2), USING
THE SATISFACTION I MEASURE

Section Types	High	Und.	Low	Total
Control	61 (72.6)	10 (11.9)	13 (15.5)	84 (100%)
Democratic	56 (76.7)	7 (9.6)	10 (13.7)	73 (100%)
Total	117	17	23	157

df = 2
 $\chi^2 = .365$
 $p < .900 > .750$

TABLE A-9: RELATIONSHIP BETWEEN CONTROL DISCUSSION SECTION
SATISFACTION SCORES OF T.A.₁ AND T.A.₂'S SECTIONS,
USING THE SATISFACTION I MEASURE

Instructor	High	Und.	Low	Total
T.A. ₁	51	8	16	75
Control (dis)	(68.0)	(10.7)	(21.3)	(100%)
T.A. ₂	72	4	6	82
Control (dis)	(87.8)	(4.9)	(7.3)	(100%)
Total	123	12	22	157

df = 2

$\chi^2 = 9.170$

p < .025 > .010

TABLE A-10: RELATIONSHIP BETWEEN CONTROL LECTURE SATISFACTION
SCORES OF T.A.₁ AND T.A.₂'S SECTIONS, USING
THE SATISFACTION I MEASURE

Instructor	High	Und.	Low	Total
T.A. ₁	57	7	11	75
Control (lect)	(76.0)	(9.3)	(14.7)	(100%)
T.A. ₂	61	10	13	84
Control (lect)	(72.6)	(11.9)	(15.5)	(100%)
Total	118	17	24	159

df = 2

$\chi^2 = 0.323$

p < .900 > .750

TABLE A-11: RELATIONSHIP BETWEEN DEMOCRATIC DISCUSSION
SECTION SATISFACTION SCORES OF T.A.₁ AND T.A.₂'S
SECTIONS, USING THE SATISFACTION I MEASURE

Instructor	High	Und.	Low	Total
T.A. ₁ Democratic (disc)	68 (88.3)	6 (7.8)	3 (3.9)	77 (100%)
T.A. ₂ Democratic (disc)	53 (72.6)	11 (15.1)	9 (12.3)	73 (100%)
Total	121	17	12	150

df = 2

$\chi^2 = 6.228$

$p < .050 > .025$

TABLE A-12: RELATIONSHIP BETWEEN DEMOCRATIC LECTURE
SATISFACTION SCORES OF T.A.₁ AND T.A.₂'S SECTIONS,
USING THE SATISFACTION I MEASURE

Instructor	High	Und.	Low	Total
T.A. ₁ Democratic (lect)	64 (85.3)	7 (9.3)	4 (5.3)	75 (99.9%)*
T.A. ₂ Democratic (lect)	56 (78.9)	7 (9.9)	8 (11.2)	71 (100%)
Total	120	14	12	146

df = 2

$\chi^2 = 1.758$

$p < .500 > .250$

*N does not equal 100% due to rounding of cell percentages.

TABLE A-13: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC DISCUSSION SECTION SATISFACTION SCORES, USING THE SATISFACTION 2 MEASURE

Section Type	N	\bar{X}	S.D.	S.E.	F VALUE	Pooled Variance Estimate			Separate Variance Estimate		
						T VALUE	P VALUE	D.F.	T VALUE	P VALUE	D.F.
Control	162	30.130	8.854	0.696	1.60	0.66	0.004	313	0.66	0.515	303.79
Democratic	153	29.536	7.005	0.566							0.512

TABLE A-14: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC LECTURE SATISFACTION SCORES, USING THE SATISFACTION 2 MEASURE

Section Type	N	\bar{X}	S.D.	S.E.	F VALUE	Pooled Variance Estimate			Separate Variance Estimate		
						T VALUE	P VALUE	D.F.	T VALUE	P VALUE	D.F.
Control	162	28.6049	8.592	0.675	1.33	2.06	0.080	313	2.07	0.041	310.84
Democratic	153	26.7320	7.460	0.603							0.040

TABLE A-15: RELATIONSHIP BETWEEN DISCUSSION SECTION SATISFACTION SCORES OF ALL STUDENTS OF T.A.1 AND T.A.2, USING THE SATISFACTION 2 MEASURE

Instructor	N	\bar{X}	S.D.	S.E.	Pooled Variance Estimate			Separate Variance Estimate		
					F VALUE	P VALUE	T VALUE	D.F.	P VALUE	T VALUE
T.A.2	161	31.2236	8.198	0.646	1.18	0.308	3.18	313	0.002	3.19
T.A.1	154	28.3961	7.551	0.608						

TABLE A-16: RELATIONSHIP BETWEEN LECTURE SATISFACTION SCORES OF ALL STUDENTS OF T.A.1 AND T.A.2, USING THE SATISFACTION 2 MEASURE

Instructor	N	\bar{X}	S.D.	S.E.	Pooled Variance Estimate			Separate Variance Estimate		
					F VALUE	P VALUE	T VALUE	D.F.	P VALUE	T VALUE
T.A.2	161	28.5901	8.077	0.637	1.01	0.975	2.01	313	0.046	2.01
T.A.1	154	26.7597	8.052	0.649						

TABLE A-17: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC DISCUSSION SECTION SATISFACTION SCORES (T.A.1),
USING THE SATISFACTION 2 MEASURE

Section Type	N	\bar{X}	S.D.	S.E.	Pooled Variance Estimate			Separate Variance Estimate		
					F VALUE	P VALUE	T VALUE	F VALUE	P VALUE	T VALUE
Control	77	29.2078	9.088	1.036	2.68	0.000	1.34	0.184	125.83	0.185
Democratic	77	27.5844	5.554	0.633						

TABLE A-18: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC LECTURE SATISFACTION SCORES (T.A.1),
USING THE SATISFACTION 2 MEASURE

Section Type	N	\bar{X}	S.D.	S.E.	Pooled Variance Estimate			Separate Variance Estimate		
					F VALUE	P VALUE	T VALUE	F VALUE	P VALUE	T VALUE
Control	77	29.1429	9.249	1.054	2.56	0.000	3.83	0.000	127.58	0.000
Democratic	77	24.3766	5.786	0.659						

TABLE A-19: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC DISCUSSION SECTION SATISFACTION SCORES (T.A.2), USING THE SATISFACTION 2 MEASURE

Section Type	N	\bar{X}	S.D.	S.E.	Pooled Variance Estimate				Separate Variance Estimate			
					F VALUE	P VALUE	T VALUE	D.F.	P VALUE	T VALUE	D.F.	P VALUE
Control	85	30.9647	8.604	0.933	1.23	0.369	-0.42	152	0.676	-0.43	158.98	0.674
Democratic	76	31.5132	7.766	0.891								

TABLE A-20: RELATIONSHIP BETWEEN CONTROL AND DEMOCRATIC LECTURE SATISFACTION SCORES (T.A.2), USING THE SATISFACTION 2 MEASURE

Section Type	N	\bar{X}	S.D.	S.E.	F			Pooled Variance Estimate			Separate Variance Estimate		
					VALUE	P VALUE	T VALUE	D.F.	P VALUE	T VALUE	D.F.	P VALUE	
Control	85	28.1176	7.974	0.865	1.06	0.795	-0.78	159	0.438	-0.78	155.86	0.439	
Democratic	76	29.1184	8.211	0.942									

TABLE A-21: RELATIONSHIP BETWEEN CONTROL DISCUSSION SECTION SATISFACTION SCORES OF T.A.1 AND T.A.2's SECTIONS, USING THE SATISFACTION 2 MEASURE

Instructor	N	\bar{X}	S.D.	S.E.	Pooled Variance Estimate			Separate Variance Estimate		
					F VALUE	P VALUE	T VALUE	D.F.	P VALUE	T VALUE
T.A.2	85	30.9647	8.604	0.933	1.12	0.6727	1.26	160	0.210	1.26
T.A.1	77	29.2078	9.088	1.036					156.30	0.211

TABLE A-22: RELATIONSHIP BETWEEN CONTROL LECTURE SATISFACTION SCORES OF T.A.1 AND T.A.2's SECTIONS, USING THE SATISFACTION 2 MEASURE

Instructor	N	\bar{X}	S.D.	S.E.	Pooled Variance Estimate			Separate Variance Estimate		
					F VALUE	P VALUE	T VALUE	D.F.	P VALUE	T VALUE
T.A.2	85	28.1176	7.974	0.865	1.35	0.186	-0.76	160	0.454	-0.75
T.A.1	77	29.1429	9.249	1.054					150.90	0.457

TABLE A-25: RELATIONSHIP BETWEEN PERFORMANCE IN
CONTROL AND DEMOCRATIC SECTIONS

Section Type	A.A.	AV.	B.A.	Total
Control	26 (38.2)	31 (45.6)	11 (16.2)	68 (100%)
Democratic	28 (45.9)	24 (39.3)	9 (14.8)	61 (100%)
Total	54	55	20	129

df = 2

 $\chi^2 = .787$

p < .750 > .500

TABLE A-26: RELATIONSHIP BETWEEN PERFORMANCE OF ALL
STUDENTS OF T.A.₁ AND T.A.₂

Instructor	A.A.	AV.	B.A.	Total
T.A. ₁ Control	34 (55.7)	24 (39.2)	3 (4.9)	61 (99.9%)
T.A. ₂ Control	20 (29.4)	31 (45.9)	17 (25.)	68 (100%)
Total	54	55	20	129

df = 2

 $\chi^2 = 13.982$

p < .500

*Does not equal 100% due to rounding of cell percentages

TABLE A-27: RELATIONSHIP BETWEEN PERFORMANCE IN CONTROL AND DEMOCRATIC SECTIONS (T.A.1)

Section Type	A.A.	AV.	B.A.	Total
Control	14 (48.3)	14 (48.3)	1 (3.4)	29 (100%)
Democratic	20 (62.5)	10 (31.3)	2 (6.2)	32 (100%)
Total	34	24	3	61

$df = 2$
 $\chi^2 = 1.916$
 $p < .500 > .250$

TABLE A-28: RELATIONSHIP BETWEEN PERFORMANCE IN CONTROL AND DEMOCRATIC SECTION (T.A.2)

Section Type	A.A.	AV.	B.A.	Total
Control	12 (33.3)	17 (47.2)	7 (19.5)	36 (100%)
Democratic	8 (25.0)	14 (43.7)	10 (31.3)	32 (100%)
Total	20	31	17	68

$df = 2$
 $\chi^2 = 1.389$
 $p < .500 > .250$

TABLE A-29: RELATIONSHIP BETWEEN PERFORMANCE IN CONTROL SECTIONS OF T.A.₁ AND T.A.₂

Instructor	A.A.	AV.	B.A.	Total
T.A. ₁ Control	14 (48.3)	14 (48.3)	1 (3.4)	29 (100%)
T.A. ₂ Control	12 (33.3)	17 (47.2)	7 (19.5)	36 (100%)
Total	26	31	8	65

df = 2

 $\chi^2 = 4.239$

p < .250 > .100

TABLE A-30: RELATIONSHIP BETWEEN PERFORMANCE IN DEMOCRATIC SECTIONS OF T.A.₁ AND T.A.₂

Instructor	A.A.	AV.	B.A.	Total
T.A. Democratic	20 (62.5)	10 (31.3)	2 (6.2)	32 (100%)
T.A. Democratic	8 (25.0)	14 (43.7)	10 (31.3)	32 (100%)
Total	28	24	12	64

df = 2

 $\chi^2 = 11.43$

p < .005

TABLE A-31: ASSOCIATION BETWEEN PERFORMANCE AND
DISCUSSION SECTION SATISFACTION SCORES OF ALL
STUDENTS, USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	28 (49.1)	22 (38.6)	7 (12.3)	57 (100%)
Med	13 (30.2)	23 (53.5)	7 (16.3)	43 (100%)
Und	4 (40.0)	5 (50.0)	1 (10.0)	10 (100%)
Low	6 (60.0)	3 (30.0)	1 (10.0)	10 (100%)
Total	51	53	16	120

df = 6
 $\chi^2 = 5.11790$
 P = 0.52878

TABLE A-32: ASSOCIATION BETWEEN PERFORMANCE AND
DISCUSSION SECTION SATISFACTION SCORES OF ALL
STUDENTS, USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	16 (57.1)	10 (35.7)	2 (7.1)	28 (100%)
Med	32 (38.6)	40 (48.2)	11 (13.3)	83 (100%)
Low	3 (33.3)	3 (33.3)	3 (33.3)	9 (100%)
Total	51	53	16	120

df = 4
 $\chi^2 = 6.39645$
 P = 0.17144

TABLE A-33: ASSOCIATION BETWEEN PERFORMANCE AND
LECTURE SATISFACTION SCORES OF ALL STUDENTS,
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	14 (42.4)	15 (45.5)	4 (12.1)	33 (100%)
Med	28 (41.2)	31 (45.6)	9 (13.2)	68 (100%)
Und	4 (50.0)	1 (12.5)	3 (37.5)	8 (100%)
Low	5 (45.5)	6 (54.5)	0 (0.0)	11 (100%)
Total	51	53	16	120

df = 6
 $\chi^2 = 7.29237$
 P = 0.29466

TABLE A-34: ASSOCIATION BETWEEN PERFORMANCE AND
LECTURE SATISFACTION SCORES OF ALL STUDENTS,
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	5 (29.4)	10 (58.8)	2 (11.8)	17 (100%)
Med	42 (47.7)	36 (40.9)	10 (11.4)	88 (100%)
Low	4 (26.7)	7 (46.7)	4 (26.7)	15 (100%)
Total	51	53	16	120

df = 4
 $\chi^2 = 5.48275$
 P = 0.24125

TABLE A-35: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
DISCUSSION SECTION SATISFACTION SCORES, USING
THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	20 (62.5)	9 (28.1)	3 (9.4)	32 (100%)
Med	5 (26.3)	9 (47.4)	5 (26.3)	19 (100%)
Und	3 (50.0)	3 (50.0)	0 (0.0)	6 (100%)
Low	1 (33.3)	2 (66.7)	0 (0.0)	3 (100%)
Total	29	23	8	60

df = 6

$\chi^2 = 9.47113$

P = 0.14877

TABLE A-36: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
DISCUSSION SECTION SATISFACTION SCORES, USING
THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	11 (64.7)	6 (35.3)	0 (0.0)	17 (100%)
Med	18 (46.2)	15 (38.5)	6 (15.4)	39 (100%)
Low	0 (0.0)	2 (50.0)	2 (50.0)	4 (100%)
Total	29	23	8	60

df = 4

$\chi^2 = 9.52072$

P = 0.04932

TABLE A-37: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
LECTURE SATISFACTION SCORES, USING THE
SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	9 (60.0)	6 (40.0)	0 (0.0)	15 (100%)
Med	18 (47.4)	13 (34.2)	7 (18.4)	38 (100%)
Und	2 (40.0)	3 (60.0)	0 (0.0)	5 (100%)
Low	0 (0.0)	1 (59.0)	1 (50.0)	2 (100%)
Total	29	23	8	60

df = 6
 $\chi^2 = 7.75199$
P = 0.25684

TABLE A-38: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
LECTURE SATISFACTION SCORES, USING THE
SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	3 (37.5)	5 (62.5)	0 (0.0)	8 (100%)
Med	26 (55.3)	16 (34.0)	5 (10.6)	47 (100%)
Low	0 (0.0)	2 (40.0)	3 (60.0)	5 (100%)
Total	29	23	8	60

df = 4
 $\chi^2 = 14.02302$
P = 0.00723

TABLE A-39: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
DISCUSSION SECTION SATISFACTION SCORES, USING THE
SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	8 (32.0)	13 (52.0)	4 (16.0)	25 (100%)
Med	8 (33.3)	14 (58.3)	2 (8.3)	24 (100%)
Und	1 (25.0)	2 (50.0)	1 (25.0)	4 (100%)
Low	5 (71.4)	1 (14.3)	1 (14.3)	7 (100%)
Total	22	30	8	60

df = 6

$\chi^2 = 5.81210$

P = 0.44457

TABLE A-40: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
DISCUSSION SECTION SATISFACTION SCORES, USING THE
SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	5 (45.5)	4 (36.4)	2 (18.2)	11 (100%)
Med	14 (31.8)	25 (56.8)	5 (11.4)	44 (100%)
Low	3 (60.0)	1 (20.0)	5 (20.0)	9 (100%)
Total	22	30	8	60

df = 4

$\chi^2 = 3.46301$

P = 0.48353

TABLE A-41: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
LECTURE SATISFACTION SCORES, USING THE
SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	5 (27.8)	9 (50.0)	4 (22.2)	18 (100%)
Med	10 (33.3)	18 (60.0)	2 (6.7)	30 (100%)
Und	4 (66.7)	0 (0.0)	2 (33.3)	6 (100%)
Low	3 (50.0)	3 (50.0)	0 (0.0)	6 (100%)
Total	22	30	8	60

df = 6
 $\chi^2 = 10.50909$
 P = 0.10479

TABLE A-42: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
LECTURE SATISFACTION SCORES, USING THE
SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	2 (22.2)	5 (55.6)	2 (22.2)	9 (100%)
Med	16 (39.0)	20 (48.8)	5 (12.2)	41 (100%)
Low	4 (40.0)	5 (50.0)	1 (10.0)	10 (100%)
Total	22	30	8	60

df = 4
 $\chi^2 = 1.32883$
 P = 0.85647

TABLE A-43: ASSOCIATION BETWEEN PERFORMANCE AND
DISCUSSION SECTION SATISFACTION SCORES OF ALL
STUDENTS OF T.A.₁, USING THE SATISFACTION
1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	20 (69.0)	8 (27.6)	1 (3.4)	29 (100%)
Med	7 (33.3)	12 (57.1)	2 (9.5)	21 (100%)
Und	2 (40.0)	3 (60.0)	0 (0.0)	5 (100%)
Low	4 (100.0)	0 (0.0)	0 (0.0)	4 (100%)
Total	33	23	3	59

df = 6
 $\chi^2 = 10.70675$
 P = 0.09788

TABLE A-44: ASSOCIATION BETWEEN PERFORMANCE AND
DISCUSSION SECTION SATISFACTION SCORES OF ALL
STUDENTS OF T.A.₁, USING THE SATISFACTION
2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	12 (75.0)	4 (25.0)	0 (0.0)	16 (100%)
Med	19 (46.3)	19 (46.3)	3 (7.3)	41 (100%)
Low	2 (100.0)	0 (0.0)	0 (0.0)	2 (100%)
Total	33	23	3	59

df = 4
 $\chi^2 = 5.87743$
 P = 0.20849

TABLE A-45: ASSOCIATION BETWEEN PERFORMANCE AND LECTURE
SATISFACTION SCORES OF ALL STUDENTS OF T.A.₁,
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	9 (56.3)	7 (43.8)	0 (0.0)	16 (100%)
Med	18 (50.0)	15 (41.7)	3 (8.3)	36 (100%)
Und	2 (100.0)	0 (0.0)	0 (0.0)	2 (100%)
Low	4 (80.0)	1 (20.0)	0 (0.0)	5 (100%)
Total	33	23	3	59

df = 6
 $\chi^2 = 4.75731$
 P = 0.57530

TABLE A-46: ASSOCIATION BETWEEN PERFORMANCE AND LECTURE
SATISFACTION SCORES OF ALL STUDENTS OF T.A.₁,
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	3 (50.0)	3 (50.0)	0 (0.0)	6 (100%)
Med	26 (54.2)	20 (41.7)	2 (4.2)	48 (100%)
Low	4 (80.0)	0 (0.0)	1 (20.0)	5 (100%)
Total	33	23	3	59

df = 4
 $\chi^2 = 5.37918$
 P = 0.25056

TABLE A-47: ASSOCIATION BETWEEN PERFORMANCE AND
DISCUSSION SECTION SATISFACTION SCORES OF ALL
STUDENTS OF T.A.₂, USING THE SATISFACTION
1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	8 (28.6)	14 (50.0)	6 (21.4)	28 (100%)
Med	6 (27.3)	11 (50.0)	5 (22.7)	22 (100%)
Und	2 (40.0)	2 (40.0)	1 (20.0)	5 (100%)
Low	2 (33.3)	3 (50.0)	1 (16.7)	6 (100%)
Total	18	30	13	61

df = 6

$\chi^2 = 0.44084$

P = 0.99849

TABLE A-48: ASSOCIATION BETWEEN PERFORMANCE AND
DISCUSSION SECTION SATISFACTION SCORES OF ALL
STUDENTS OF T.A.₂, USING THE SATISFACTION
2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	4 (33.3)	6 (50.0)	2 (16.7)	12 (100%)
Med	13 (31.0)	21 (50.0)	8 (19.0)	42 (100%)
Low	1 (14.3)	3 (42.9)	3 (42.9)	7 (100%)
Total	18	30	13	61

df = 4

$\chi^2 = 2.45043$

P = 0.65354

TABLE A-49: ASSOCIATION BETWEEN PERFORMANCE AND LECTURE
SATISFACTION SCORES OF ALL STUDENTS OF T.A.2, USING
THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	5 (29.4)	8 (47.1)	4 (23.5)	17 (100%)
Med	10 (31.3)	16 (50.0)	6 (18.8)	32 (100%)
Und	2 (33.3)	1 (16.7)	3 (50.0)	6 (100%)
Low	1 (16.7)	5 (83.3)	0 (0.0)	6 (100%)
Total	18	30	13	61

df = 6

$\chi^2 = 6.86429$

P = 0.33358

TABLE A-50: ASSOCIATION BETWEEN PERFORMANCE AND LECTURE
SATISFACTION SCORES OF ALL STUDENTS OF T.A.2, USING
THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	2 (18.2)	7 (63.6)	2 (18.2)	11 (100%)
Med	16 (40.0)	16 (40.0)	8 (20.0)	40 (100%)
Low	0 (0.0)	7 (70.0)	3 (30.0)	19 (100%)
Total	18	30	13	61

df = 4

$\chi^2 = 7.39251$

P = 0.11655

TABLE A-51: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
DISCUSSION SECTION SATISFACTION SCORES (T.A.₁),
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	16 (72.7)	5 (22.7)	1 (4.5)	22 (100%)
Med	3 (37.5)	4 (50.0)	1 (12.5)	8 (100%)
Und	1 (50.0)	1 (50.0)	0 (0.0)	2 (100%)
Low	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	20	12	2	32

df = 4

$\chi^2 = 3.58182$

P = 0.46555

TABLE A-52: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
DISCUSSION SECTION SATISFACTION SCORES (T.A.₁),
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	9 (90.0)	1 (10.0)	0 (0.0)	10 (100%)
Med	11 (50.0)	9 (40.9)	2 (9.1)	22 (100%)
Low	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	20	10	2	32

df = 2

$\chi^2 = 4.77091$

P = 0.09205

TABLE A-53: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
LECTURE SATISFACTION SCORES (T.A.₁),
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	7 (77.8)	2 (22.2)	0 (0.0)	9 (100%)
Med	12 (57.1)	7 (33.3)	2 (9.5)	21 (100%)
Und	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Low	1 (50.0)	1 (50.0)	0 (0.0)	2 (100%)
Total	20	10	2	32

df = 4
 $\chi^2 = 2.01904$
 P = 0.73226

TABLE A-54: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
LECTURE SATISFACTION SCORES (T.A.₁),
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	2 (66.7)	1 (33.3)	0 (0.0)	3 (100%)
Med	18 (64.3)	9 (32.1)	1 (3.6)	28 (100%)
Low	0 (0.0)	0 (0.0)	1 (100.0)	1 (100%)
Total	20	10	2	32

df = 4
 $\chi^2 = 15.54286$
 P = 0.00370

TABLE A-55: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
DISCUSSION SECTION SATISFACTION SCORES (T.A.₂),
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	4 (40.0)	4 (40.0)	2 (20.0)	10 (100%)
Med	2 (18.2)	5 (45.5)	4 (36.4)	11 (100%)
Und	2 (50.0)	2 (50.0)	0 (0.0)	4 (100%)
Low	1 (33.3)	2 (66.7)	0 (0.0)	3 (100%)
Total	9	13	26	38

df = 6
 $\chi^2 = 4.27868$
 P = 0.63902

TABLE A-56: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
DISCUSSION SECTION SATISFACTION SCORES (T.A.₂),
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	2 (28.6)	5 (71.4)	0 (0.0)	7 (100%)
Med	7 (41.2)	6 (35.3)	4 (23.5)	17 (100%)
Low	0 (0.0)	2 (50.0)	2 (50.0)	4 (100%)
Total	9	13	26	28

df = 4
 $\chi^2 = 6.21116$
 P = 0.18393

TABLE A-57: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
LECTURE SATISFACTION SCORES (T.A.₂),
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	2 (33.3)	4 (66.7)	0 (0.0)	6 (100%)
Med	6 (35.3)	6 (35.3)	5 (29.4)	17 (100%)
Und	0 (0.0)	1 (50.0)	1 (50.0)	2 (100%)
Low	1 (33.3)	2 (66.7)	0 (0.0)	3 (100%)
Total	9	13	6	28

df = 6
 $\chi^2 = 5.14881$
 P = 0.52487

TABLE A-58: ASSOCIATION BETWEEN PERFORMANCE AND DEMOCRATIC
LECTURE SATISFACTION SCORES (T.A.₂),
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	1 (20.0)	4 (80.0)	0 (0.0)	5 (100%)
Med	8 (42.1)	7 (36.8)	4 (21.1)	19 (100%)
Low	0 (0.0)	2 (50.0)	2 (50.0)	4 (100%)
Total	9	13	6	28

df = 4
 $\chi^2 = 6.29905$
 P = 0.17790

TABLE A-59: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
DISCUSSION SECTION SATISFACTION SCORES (T.A.₁),
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	4 (57.1)	3 (42.9)	0 (0.0)	7 (100%)
Med	4 (30.8)	8 (61.5)	1 (7.7)	13 (100%)
Und	1 (33.3)	2 (66.7)	0 (0.0)	3 (100%)
Low	4 (100.0)	0 (0.0)	0 (0.0)	4 (100%)
Total	13	13	1	27

df = 6
 $\chi^2 = 7.04480$
 P = 0.31673

TABLE A-60: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
DISCUSSION SECTION SATISFACTION SCORES (T.A.₁),
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	3 (50.0)	3 (50.0)	0 (0.0)	6 (100%)
Med	8 (42.1)	10 (52.6)	1 (5.3)	19 (100%)
Low	2 (100.0)	0 (0.0)	0 (0.0)	2 (100%)
Total	13	13	1	27

df = 4
 $\chi^2 = 2.73279$
 P = 0.60349

TABLE A-61: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
LECTURE SATISFACTION SCORES (T.A.₁),
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	2 (28.6)	5 (71.5)	0 (0.0)	7 (100%)
Med	6 (40.0)	8 (53.3)	1 (6.7)	15 (100%)
Und	2 (100.0)	0 (0.0)	0 (0.0)	2 (100%)
Low	3 (100.0)	0 (0.0)	0 (0.0)	3 (100%)
Total	13	13	1	27

df = 6
 $\chi^2 = 7.63516$
 P = 0.26607

TABLE A-62: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
LECTURE SATISFACTION SCORES (T.A.₁),
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	1 (33.3)	2 (66.7)	0 (0.0)	3 (100%)
Med	8 (40.0)	11 (55.0)	1 (5.0)	20 (100%)
Low	4 (100.0)	0 (0.0)	0 (0.0)	4 (100%)
Total	13	13	1	27

df = 4
 $\chi^2 = 5.33077$
 P = 0.25501

TABLE A-63: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
DISCUSSION SECTION SATISFACTION SCORES (T.A.2),
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	4 (22.2)	10 (55.6)	4 (22.2)	18 (100%)
Med	4 (36.4)	6 (54.5)	1 (9.1)	11 (100%)
Und	0 (0.0)	0 (0.0)	1 (100.0)	1 (100%)
Low	1 (33.3)	1 (33.3)	1 (33.3)	3 (100%)
Total	9	17	7	33

df = 6
 $\chi^2 = 5.50389$
P = 0.48099

TABLE A-64: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
DISCUSSION SECTION SATISFACTION SCORES (T.A.2),
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	2 (40.0)	1 (20.0)	2 (40.0)	5 (100%)
Med	6 (24.0)	15 (60.0)	4 (16.0)	25 (100%)
Low	1 (33.3)	1 (33.3)	1 (33.3)	3 (100%)
Total	9	17	7	33

df = 4
 $\chi^2 = 3.30143$
P = 0.50871

TABLE A-65: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
LECTURE SATISFACTION SCORES (T.A.₂),
USING THE SATISFACTION 1 MEASURE

	A.A.	AV.	B.A.	Total
Hi	3 (27.3)	4 (36.4)	4 (36.4)	11 (100%)
Med	4 (26.7)	10 (66.7)	1 (6.7)	15 (100%)
Und	2 (50.0)	0 (0.0)	2 (50.0)	4 (100%)
Low	0 (0.0)	3 (100.0)	0 (0.0)	3 (100%)
Total	9	17	7	33

df = 6
 $\chi^2 = 11.05172$
 P = 0.08680

TABLE A-66: ASSOCIATION BETWEEN PERFORMANCE AND CONTROL
LECTURE SATISFACTION SCORES (T.A.₂),
USING THE SATISFACTION 2 MEASURE

	A.A.	AV.	B.A.	Total
Hi	1 (16.7)	3 (50.0)	2 (33.3)	6 (100%)
Med	8 (38.1)	9 (42.9)	4 (19.0)	21 (100%)
Low	0 (0.0)	5 (83.3)	1 (16.7)	6 (100%)
Total	9	17	7	33

df = 4
 $\chi^2 = 4.79351$
 P = 0.30915

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LEADERSHIP, SATISFACTION AND PERFORMANCE
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LEADERSHIP, SATISFACTION AND PERFORMANCE
IN THE ACADEMIC CLASSROOM: An Exploratory Study

by

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This thesis explores the relationships among the variables of satisfaction, performance and instructor leadership role type within the context of a particular type of classroom setting—the large sections of Introductory Sociology classes. In particular, the influence of different leadership styles on classroom member behavior is examined. The questions raised are: (1) Do different types of classroom leadership influence students' performance and satisfaction; and (2) To what extent is student performance and satisfaction related under different types of classroom leadership? Identified as the key variables, then, were satisfaction and performance as the dependent variables and leadership role type as the independent variable.

Eight discussion sections of one Introductory Sociology section at Kansas State University were discerned by the type of leadership role employed by the graduate teaching assistants: four sections were designated as "laissez-faire" and four as "democratic," as described by Lewin, Lippitt and White. Discussion sections were randomly assigned to one of the two types.

To measure student satisfaction, an attitude survey questionnaire was utilized. The questionnaire was administered to students during the lecture class, and at three periods during the semester, prior to each of the three examinations given in the course. The measure of performance was derived from students final grades.

The subjects in this study were students in one class of Introductory Sociology at Kansas State University, during the Spring semester of 1970. Class enrollment numbered 177 students; however, the actual number of subjects was 131.

The data indicate that satisfaction did not significantly vary between the two types of discussion section. However, data controlling for teaching assistant suggest that the primary source of variance in satisfaction were the teaching assistants and not leadership role type. Overall, hypothesis 1 which suggests that satisfaction will be higher in democratic sections and 1a the obverse are not supported by the data. However, hypothesis 1 does hold for sections taught by only one of the T.A.s.

Two alternative hypotheses were formulated to test the influence of leadership role type upon performance: hypothesis 2 which predicts that no significant variance between the two sections types would occur and 2a which suggests that such differences would be found. The data provides little support for hypothesis 2a. Other data indicate that significant differences occurred only in sections taught by one T.A. As with satisfaction, performance was more influenced by the T.A. than by leadership role type employed.

Hypothesis 3 and 3a tests the association between satisfaction and performance. Performance is found not to be closely associated with general satisfaction—the satisfaction 1 measure. By this measure hypothesis 3a is supported and 3 is not. However, data from students exposed to the democratic context do suggest a close association. Closer associations are found in data from the democratic students of one T.A., using the satisfaction 2 measure—instructor evaluation items.

The data consistently suggest that a salient source of variation in performance and satisfaction is the teaching assistants. Leadership role type effects only a marginal influence on those two variables. Such variation was not controlled for by the design in a fashion which would have been desired.

There is some evidence suggesting that instructors, as leaders, are predisposed to certain styles of leadership. It is proposed in this study one teaching assistant may have been predisposed to the democratic style, while the other to the laissez-faire style. This study, then, shows the influence of teaching assistants on students' performance and satisfaction. Other evidence suggests that students' opinions of the lecturer and the discipline are highly influenced by the T.A. These factors suggest practical implications for the selection, training and use of teaching assistants.