

CHARACTERISTIC GOAL ORIENTATION AS A
DETERMINANT OF ALLOCATION PATTERNS

By

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I have, at times, carried on research for other reasons--to satisfy others, to convince opponents and sceptics, to get ahead professionally, to gain prestige, and for other unsavory reasons. These errors in judgement and activity have only served to convince me more deeply that there is only one sound reason for pursuing scientific activities, and that is to satisfy a need for meaning which is in me.

Carl R. Rogers

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CHAPTER I

INTRODUCTION

Equity theory as formulated by Adams (1965) and extended by Walster, Berscheid, and Walster (1976) proposes that individuals in work situations prefer a division of rewards that maintains proportionality between their own inputs and outcomes and those of their co-workers. What is considered a relevant input or contribution to the group depends on many factors such as the type of task, the goals of the group, and the characteristics of the group members (Leventhal and Michaels, 1971). Effort, skill, age, sex, and actual performance are a few of the inputs that allocators may consider to be relevant.

Similarly, outcomes, or the rewards accrued from participation in the group, can also take different forms. Status, monetary compensation, personal recognition, or friendship all are possible forms of reward. This study specifically examined three factors, sex, individual achievement and affiliation motivation, and performance on the task, that are potentially relevant to differential weighting of inputs. The outcome measure was monetary compensation.

The changing economic and social conditions of today prompt a closer examination of the way men and women approach work situations and handle monetary pay. Clarification of the differences or similarities between the sexes could lead to more effective and satisfying rewards and allocation patterns. The current state of flux in sex roles makes such an assessment even more vital. This section first gives an overview of the most popular equity paradigms, the recent findings on sex differences in reward allocation, and the major theories that have evolved to explain these findings. The discussion then turns to past work on achievement and affiliation orientations and the norms that appear to facilitate these orientations. The intersection of these areas and the hypotheses derived from this intersection is the focus of the present experiment.

The impact of the norm of equity on outcome allocation has been heavily researched in the past fifteen years (for an extensive bibliography of work in this area, see Adams and Freedman, 1976). Two major approaches typically have been utilized to study sex differences in outcome distribution. The first paradigm evolved out of bargaining research and examined coalition formation in triads. In general, the participants play a board game similar in appearance to parchisi. Each subject randomly draws a counter which designates that person's weight or strength in the game. By systematically varying the

weights, different power structures and subsequent coalitions occur.

Vinacke and his associates have looked at the differences between the ways males and females play the bargaining game (Vinacke, 1959; Uesugi and Vinacke, 1963; Vinacke and Gullickson, 1964). It was found that females use what was termed an "accommodative strategy" while males use an "exploitative strategy." Females appear to focus on the social aspects of the situation and they attempt to arrive at mutually satisfactory outcomes. Males tend to focus on a competitive orientation and work to win more than the other players (Uesugi and Vinacke, 1963).

In a later study, Vinacke and Gullickson (1964) investigated the developmental aspects of the accommodative and exploitative strategies. They found that 7 and 8 year old males and females both use an accommodative strategy. However, by the time males and females are college age, the sex differences in strategy become pronounced. This change as a function of age mitigates against a totally genetic explanation in favor of an explanation that focuses on sex role differences that are learned over time. It is likely that a competitive or achievement orientation is learned by the males while a social or affiliation orientation is learned by the females.

The second major paradigm used in the research of sex differences and allocation patterns typically uses a work situation where the subject and a partner both work

on a task. The inputs of the two "partners" are varied so that one person has a high input and the other person a low input or both partners contribute equally to the work situation. By chance, one member of the dyad is selected to divide the pay between him or herself and the co-worker. The major dependent variable is the amount of the joint reward the subject allots to him or herself.

This general procedure has several variations that differ across important dimensions. In some studies such as Leventhal, Popp, and Sawyer (1973), the subject had to divide the pay between two hypothetical people. In contrast, Lane and Messé (1971) had subjects participate in the work and the subject was paired with a "real" partner although face-to-face interaction was limited. The crucial difference between these approaches lies in the self-interest of the subject. In one case the situation is somewhat impersonal while in the second case the subject's decision would have very real personal consequences, monetary gain or lose. Although this distinction is important, the results of the studies using these two approaches have been quite consistent. Therefore, in the following discussion, both kinds of studies are examined together.

Leventhal and Lane (1970) paired male and female subjects with a same-sexed co-worker and systematically varied the performance level of the subject. After receiving feedback from the ambiguous math task, the subject was chosen by "chance" to divide the rewards between him or

herself and the co-worker. They found that males with superior inputs took more than half the reward. Males with inferior performance took slightly less than half the reward. In contrast, females with superior performance only took about half the reward. Females with inferior inputs took much less than half the reward.

The results found by Leventhal and Lane (1970) have led to the formulation of several different explanations. Subsequent research has focused on the developmental aspects of allocation behavior. Leventhal and Anderson (1970) and Leventhal and Lane (1970) used 5 to 6 year old children in experiments where the child had to divide colorful picture seals between him or herself and a fictitious same-sexed partner. Both studies found that males in the superior input condition kept more than half the reward while females divided the pay more equally. Both the males and females in the inferior input condition kept half the reward. The pattern in the superior condition approximates the pattern found among college-age subjects demonstrating that some differences exist before the age of 6. However, the comparison also shows that allocation behavior in inferior input conditions does alter with time. One plausible explanation is that self-interest often conflicts with equity solutions. Children may still be functioning on the self-interest level and equity solutions occur later in the developmental process (Leventhal and Anderson,

1970). However this explanation does not explain why young females only keep half the reward when their performance was superior. Both self-interest and equity would predict that females would keep more than half of the picture seals.

One possible explanation for these results is that males and females may differ in the internalization of the equity norm. Males may have incorporated this norm as the primary way of allocating rewards while females use a different norm such as equality to divide rewards. Leventhal, Popp, and Sawyer (1973) removed self-interest as a factor and had 5 and 8 year olds divide picture seals between two fictitious children with unequal inputs. The results showed that both male and female 5 year olds used equity in dividing the rewards. The study using 8 year olds had a simpler task and asked half the subjects to allocate as they thought best while the other half divided as they thought their teacher would. When the child was dividing as he or she thought best, males made strong equity decisions while females made weak equity decisions. However, when dividing as they thought the teacher would divide, both males and females made weak equity divisions. This flexibility shown by the male subjects even at this young age indicates that the situation can influence the use of the norm. In addition, it shows that knowledge of the norm does not necessarily mean that the person will use it. The females in this study demonstrated that they had knowledge of and could use the norm, however, the studies of

Leventhal and Anderson (1970) and Leventhal and Lane (1970) showed that when a female was a member of the work dyad, she did not use the equity norm to make her allocations to herself.

This explanation is similar to the "less of a connection" hypothesis formulated by Messé and Callahan (1975). They conducted a study where males and females either determined just the reward for another person, or just their own reward. They found that in the self-allocation condition, the females paid themselves less than male subjects paid themselves. However, when paying only another person, both men and women paid other women more. The females may see "less of a connection" between their performance on a task and monetary compensation. This is rooted in the idea that women may not see the relationship between working and pay as clearly or strongly as men.

Watts (1977) attempted to test the "less of a connection" hypothesis by having male and female subjects participate in either a role-playing situation or an actual self-allocation situation. Each subject was given a chance to self-allocate the pay resulting from their work and also to give themselves a gift which was not contingent on their performance. The results showed that in the role-playing situation, women allocated less in both the gift and work conditions than did the men. This result is congruent with past research and also supports the "less of a connection" hypothesis in that women took less of the gift as well as

less of the work money. However, in the actual self-allocation study, the females did not take significantly less of the gift and work money than did the males; in fact, if anything, they took more. Examination of the Bem Sex Role Inventory scores revealed that the females in the actual allocation condition were more "masculine" than the females in the role-playing condition. It is possible that sex role and not biological sex is the mediating factor. However, given such mixed results, no definite conclusions about the "less of a connection" hypothesis can be made.

Yet another explanation of sex differences in allocation suggests that males and females may be attending to different aspects of the experimental situation and may be focusing on somewhat different goals. Deutsch has proposed that the goal of a group, whether it be economic advancement or enjoyable social relations, will affect which norm will be used for distributing outcomes within the group. When economic productivity is a primary goal, the norm of equity will be the dominant principle. This norm provides for and rewards an achievement orientation. When social relationships are the primary goal, the norm of equality will be used to distribute the outcomes of the group. By dividing the reward equally, each individual member is granted equal status and power, thus reducing power conflicts and fostering affiliation.

Several experiments have produced evidence supporting Deutsch's formulation. Leventhal and Whiteside (1973) had

subjects assign grades to hypothetical students who differed in aptitude. They divided the rewards under two different conditions. They were told to give a grade to be fair and to give a grade to elicit high performance. During their discussion of the results it was noted that subjects seemed to shift their distribution pattern in response to the objective their grades were serving. Low aptitude students were given higher grades when increased performance was the objective. In addition, the experimenters note that all subjects hesitated to give very low grades in any of the conditions. The possibility that the student may have become resentful or aggressive towards the allocator may have tempered the distribution of grades even in a hypothetical situation. Although other norms were primary, a minimal amount of interpersonal harmony may have been desired so the allocation was somewhat equalized.

Leventhal, Michaels, and Sanford (1972) had subjects divide a reward among a group composed of four members with unequal inputs. On the first division, subjects were not given any specific instructions. They simply divided the pay as they deemed best. An equity division was usually made in this situation. On the second division, the subject was either told to prevent conflict within the group or to prevent conflict directed at him or her, the allocator. Under these two conditions, there was generally a move made to equalize the pay. The poorest performer was

given an extra reward at the expense of the best performer. This study clearly showed that people are capable of shifting norms to accommodate different goals. When no goals were specified, the economic aspect of the situation was salient and an equity division was made. When affiliation became an issue, equality tempered the equity decision.

Given this evidence that the goals of an individual affect allocation pattern, the remaining question concerns whether males and females differ in their characteristic goal orientations. Bakan (1966) proposed that individuals characteristically possess a tendency to behave in an affiliative or achievement manner towards other people and objects in their world. In effect, each individual carries with them an internal goal which is basically either affiliative or achievement oriented. Bakan proposed that two opposing tendencies exist within individuals and must be integrated as part of their developmental growth. The masculine principle, agency, is expressed in mastery, separation, conquest, and ego-enhancement. The feminine principle, communion, is manifested in fusion, cooperation, and acceptance. It is apparent that these concepts parallel Vinacke's results in the coalition formation studies. Males (exploitative strategy) used a competitive stance and formed coalitions only when it was necessary to win. Females used an accommodative or communion approach where cooperation and mutual satisfaction were the chief goals.

A complementary area of research has produced evidence that males and females differ in their achievement and affiliation orientation (Bardwick, 1971; Maccoby and Jacklin, 1974). Males are usually higher in achievement while females are high in affiliation. Although various definitions have been applied to these orientations, they are usually more specific than the global concepts of Bakan. Achievement usually refers to task orientation, a concern for mastering, completing, and excelling at a job or activity. Affiliation refers to an orientation towards other people, a desire to maintain or initiate interpersonal relationships. These orientations can function as norms, or rules of conduct in social and work situations.

The studies of equity behavior in children (Leventhal, Popp, and Sawyer, 1973; Leventhal and Anderson, 1970; Leventhal and Lane, 1970) demonstrated that sex differences in allocation behavior develop with age. It is likely that the child gradually learns the allocation norm appropriate for their sex role as they mature and assume more distinct roles. In a more extensive study examining this possibility, Callahan-Levy (1975) compared the self-allocation behavior of males and females in the first, fourth, seventh, and tenth grades. She found that self-allocation was related to the subject's sex role preference score. Subjects with more feminine preferences tended to reward themselves less. In addition, it was found that the

discrepancy between male and female allocation patterns increases somewhat at adolescence where sex roles are more defined.

If in fact, sex roles have an affect on allocation behavior, the results of the Leventhal, Michaels, and Sanford (1972) study cited earlier during the discussion of Deutsch's formulations, may have been confounded by personality and situational variables. The study used 87 male subjects and 21 female subjects to test the hypotheses. This overabundance of males may have biased the results towards an equity decision if males, in fact, are more achievement oriented or agentic. It is entirely possible that males and females enter a situation with different initial goals in mind. The instructional sets to increase economic production or decrease conflict may simply alter the subject's dominant or "natural" way of viewing the group's goals. This would explain why males and females have traditionally allocated rewards differently in the two-person equity design.

Although achievement may be the dominant orientation among males, and affiliation the dominant orientation among females, every individual possesses both orientations to some degree. Although males ordinarily are achievement-oriented, some males are undoubtedly affiliation-oriented. The same is true for females. Some females probably have achievement as their dominant orientation. The first hypothesis of the present study explores the correspondence

between biological sex and achievement and affiliation orientation. Based on past research (Bardwick, 1971; Maccoby and Jacklin, 1974) I predicted that in general, males would be more achievement oriented than females, while females would be more affiliation oriented than males.

Chaney and Vinacke (1960) used all male triads to examine the effects of achievement and nurturance orientation on coalition formation strategies. Subjects were chosen for their extreme scores on the achievement and nurturance subscales of the Edwards Personal Preference Schedule. Triads were composed of one member high in achievement, one member high in nurturance, and one control subject. The authors found that differences in strategy soon emerged. Achievement subjects initiated coalitions more than others when they were in a weak position. When they were in a strong position, they entered coalitions less than the other players. The emphasis was obviously on winning as many points as possible. The nurturance subjects were following a more cooperative strategy where coalitions were formed even when the nurturance subject was in a power position.

These results support the idea that individuals possess a characteristic way of approaching a situation. Some people tend to view each situation from an achievement perspective. Their goal is to perform the task as well as possible and surpass the other players. Other people

characteristically view a situation as an opportunity to initiate or maintain an interpersonal relationship. Everybody probably possesses each motive to some degree, however, one tends to be the dominant response. In the American culture, males usually have an achievement or agentic orientation. Females are reared into a communal or affiliation orientation. It is the major hypothesis of this experiment that it is the achievement or affiliation orientation of an individual, not his or her biological sex, that determines how a situation will be interpreted. In line with this interpretation, an achievement person should use equitable reward allocations to foster and promote the type of situation they favor. Conversely, an affiliation person should use an equality norm to further their goal of initiating or maintaining interpersonal relationships.

At this point a digression is necessary to examine the value judgments that sometimes are made about achievement and affiliation orientations. To say that one or the other is good or bad is a meaningless exercise. The "success" or appropriateness of each orientation or method of reward distribution depends on what the participants desire and what the situation demands. It is somewhat unfortunate that equity research has a bias towards the agentic, or achievement orientation (Sampson, 1975). It is often assumed that money is the only outcome measure the subjects view as important. Although this study examined

pay allocation as the dependent variable, I was aware that other goals such as the approval or liking of another person can be just as salient a reward. However, it was necessary for this study to focus on only one of the many rewards possible, economic gain. Clearly, later studies should explore other possible rewards.

Numerous factors can interact to affect reward allocation behavior. One of the main factors is the co-worker's sex. Most of the studies performed in the past have utilized same-sexed dyads (Kahn, 1972; Lane and Messé, 1972; Leventhal and Anderson, 1972; Leventhal and Lane, 1970). Although Benton (1971) used same-sexed pairs of children, he also examined the friendship patterns existing between the subjects. He used pairs of friends, neutrals, and non-friends who apparently disliked each other. The results indicated that boys expected an equity division when paired with a friend or nonfriend. Females paired with a friend seemed to prefer an equal division but when this was unavailable they agreed to an equity decision. However, females paired with nonfriends behaved in a similar fashion to the boys. They wanted an equity division. It can be postulated that in this situation, the affiliation motive was inappropriate, so the girls switched to an achievement orientation.

Gruder and Cook (1971) systematically varied the subject's sex, co-worker's sex, and dependency in a helping

experiment. They found that both males and females helped female co-workers more than male co-workers. Dependent females received more help than any of the other combinations.

In the present experiment, the sex of the subject and co-worker was systematically varied. The hypothesis was that both male and female subjects would be more generous in allocating pay when their co-worker was female.

Materials and Hypotheses

The present study consisted of two major phases. During the first part of the experiment, a large number of subjects were given a series of measures designed to assess achievement and affiliation orientation. One of these was the terminal value scale of the Rokeach Value Survey (Rokeach, 1968). This scale was selected for several reasons. The initial screening group was large and the Rokeach scale is easy to administer, simple to score, and takes only about ten minutes to complete. In addition, the terminal values closely resemble the concept of a goal orientation. A goal orientation is a predisposition to pursue a desired end state. Terminal values are conceptualized as such an end state. Some modifications were made in the scale to more closely align the values to the conceptualizations of achievement and affiliation being used in the present study. These modifications are detailed in the Method Section.

In addition, a modified version of Cantril's Hopes for the Future test was administered during the screening session. This measure allowed the subject more latitude in responding than the Rokeach Scale. It was hoped that by using both measures, the orientation of the subjects could be more clearly revealed. On the basis of the Rokeach and Hopes tests, subjects were selected to participate in the second phase of the study.

A factorial design systematically varying sex of subject, sex of co-worker, achievement (high, low), and affiliation orientation (high, low) was used in the second phase of the study. Each subject was placed in a situation where he or she worked on a task with a co-worker. In every case the subject received feedback that his or her performance was superior to that of the co-worker. The subject then was chosen by "chance" to allocate the pay. Finally, a post-questionnaire assessed the subject's perception of the work situation.

To summarize, the hypotheses for the study were as follows:

1. Based on past research (Bardwick, 1971), in the general population of undergraduate students, females will score "Interpersonal Harmony" (affiliation) higher among their values on the Rokeach Value Survey than will males. Males will rank "Achievement" higher than females.

2. Individuals of either sex who are high in achievement and low in affiliation as determined by the Rokeach Scale and Cantril's Hopes test, will divide rewards according to the norm of equity. Males and females who are low in achievement and high in affiliation will divide rewards according to the norm of equality (Deutsch, 1975; Chaney and Vinacke, 1960).
3. Both male and female subjects will be more generous when dividing rewards with a female co-worker (Gruder and Cook, 1971).

CHAPTER II

METHOD

This chapter presents the methodology and design that were used to test the hypotheses. The experiment was conducted in two phases. During the first phase, the screening session, a large number of subjects were administered a modified version of the Rokeach Value Survey and Cantril's Hopes for the Future test. Subjects who met the criterion level on achievement and affiliation orientation on the Rokeach Scale and Hopes test were asked back for phase two of the experiment, the equity work session. A factorial design was used in phase two to determine the effects of the subject's sex, sex of co-worker, achievement orientation, and affiliation orientation on the reward allocations made by the subject. In addition, a post-session questionnaire assessing the subject's perception of the work situation was administered and its relationship to allocation behavior was examined.

Screening Sessions

Recruitment of Subjects

The subjects were male and female undergraduate students at Michigan State University. A variety of

recruitment techniques were used to secure a large initial pool of subjects. All the subjects were paid \$1.00 for their participation.

An advertisement was placed in the classified section of the State News, a local student newspaper, which read as follows:

UNDERGRADS WANTED to participate in social science research for pay. Work sessions will be 1-3 hours long. Paid (\$1) pre-employment interview (1/2 hr.) begins promptly (date, time, location).

This advertisement appeared for three consecutive days, giving different times and locations for the "pre-employment interview" each day.

Despite the high number of daily readers of the State News, the number of respondents to the advertisement was insufficient to permit the execution of this research as planned. It was possible that the prospect of making an oftentimes long walk in inclement weather was preventing many undergraduates from participating. To eliminate this difficulty, recruitment was taken directly to fraternity and sorority houses. Michigan State University has over 1800 students who are members of 47 formal fraternities and sororities. It was felt that this sub-population of undergraduates was sufficiently large to be representative of the total undergraduate population.

Fraternity and sorority presidents were contacted and each house that showed interest in the project was

individually approached so that arrangements could be made for conducting the testing sessions.

To insure a more general representation of the resident student population, notices also were posted in several large dormitories on campus. These notices were very similar to the original newspaper advertisement. Sessions were run at prespecified times within each dormitory.

Finally, subjects were recruited from several large enrollment undergraduate psychology classes. No course credit was given in partial fulfillment of the course requirements; instead, each subject was paid \$1.00.

The total useable sample was composed of 234 females and 223 males.

Materials

Each subject completed a booklet containing three parts. A sample of this booklet is included in Appendix A. The first section asked for the following demographic information: sex, age, last year of school completed, current enrollment status, current occupational status, and prior work experience. Along with this demographic information, the subjects were requested to provide their phone number and fill out a schedule indicating when they would be available for future work sessions if they were contacted later.

The second section of the booklet was a modified version of Cantril's Hopes Test. Subjects were asked to spend 10 minutes writing their hopes for the future. The following instructions appeared at the top of a blank sheet of paper.

You will have 10 minutes to list your hopes for the future. Work only on this question until time is called. Do not work ahead in the booklet.
What are your hopes for the future?

The third part of the booklet was composed of a modified version of the Rokeach Value Survey. Only the terminal value scale was administered. The original terminal value scale consisted of 18 values that the subject was to rank order according to their importance as guiding principles in her or his life.

This scale was selected for several practical reasons. Due to the size of the initial subject pool, an instrument which was easy to administer, simple to score, and only took a few minutes to complete was desired. In every respect, the Rokeach scale fit these requirements.

Rokeach's conceptualization of terminal values closely resembles the concept of a goal orientation. A goal orientation is a predisposition to pursue a desired end state. Terminal values are conceptualized as such an end state.

Modification of the Rokeach scale was held to a minimum so that previous results found with the instrument would be comparable to the present experiment. The item,

"A SENSE OF ACCOMPLISHMENT, lasting contribution" was altered to read "A SENSE OF ACCOMPLISHMENT, succeeding at what you do." The term "brotherhood" was dropped from the item "EQUALITY" and the descriptive statement was altered to read "equal treatment for all." A major change was made in the item "INNER HARMONY." It was altered to read, "INTERPERSONAL HARMONY, getting along well with those around you."

The other major change involved the addition of two new items. One new item read, "JUSTICE, fair treatment, getting what you deserve." This item functioned as a counterpart to "EQUALITY, equal treatment for all." These two items were used to assess directly the relative value the subjects placed on the norms of equity (JUSTICE) and equality.

The second item added to the Rokeach Scale was initiated in view of the definitional problems associated with achievement. The general achievement item "A SENSE OF ACCOMPLISHMENT, succeeding at what you do" does not specify the area of accomplishment, i.e., whether it is a task or social area. Because of this ambiguity, males and females may not have differed in their ranking of this item, even though they may have differed in their concern with task achievement. Thus, narrowing the definition to a task specific context apparently was necessary to provide a more valid test to examine if, in fact, males would rank an

achievement-related item higher than would females. The new item read, "ACHIEVEMENT, doing tasks well."

The two items considered to represent best the goal orientations of achievement and harmony were "ACHIEVEMENT, doing tasks well" and "INTERPERSONAL HARMONY, getting along well with those around you." The rankings of these items were used to select subjects for participation in the second phase of the experiment.

Procedure

Subjects met at the appointed times and locations. Two people ran each screening session. One person handed out materials, while the second person introduced the study and gave instructions. The study was introduced as the first phase in an examination of simulated work situations. It was made clear that if the subject was called to participate in later work sessions, the sessions would be only 1 to 2 hours long and would not be equivalent to a part-time job, although the subject would be paid for their participation.

The booklet was self-administered except for the Hopes test, which was timed by the experimenter. The anonymity of the subject was stressed. Names and phone numbers were requested only for future contact in case of selection for the second phase of the experiment.

Reward Allocation Study

Variables and Experimental Design

The design of the present research contained both manipulated and subject variables. Sex of Subject (male, female), Sex of Co-Worker (same, different), Achievement Orientation (high, low), and Affiliation Orientation (high, low) were examined in a 2 X 2 X 2 X 2 factorial design.

There were two types of dependent measures in this design:

- (a) the amount of pay subjects allocated to themselves, and
- (b) the responses made to the ten Likert-type items on the Post-Session Questionnaire.

In addition, the amount of pay subjects allocated to themselves and the sex of the subject were examined as a function of: (1) the scores on the Rokeach Scale, (2) the demographic variables on the Screening Questionnaire, and (3) the scores on the Hopes test.

Selection of Subjects

Four hundred fifty-seven undergraduates participated in the screening phase of this study. From this initial pool, 80 subjects were selected for participation in the paid work sessions. Ten males and ten females from each factorial combination of achievement orientation (high, low) and affiliation orientation (high, low) were called back for the work sessions.

To be classified as high in achievement, the subject had to rank the item "ACHIEVEMENT" on the Rokeach

Scale among their first seven values in importance. To be classified as low in achievement, the subject had to rank "ACHIEVEMENT" among their 13th to 20th choice in values.

To be classified as high in affiliation, the subject ranked the item "INTERPERSONAL HARMONY" among their first to seventh choices. A classification of low in affiliation resulted from ranking "INTERPERSONAL HARMONY" 13th or lower in its importance to them.

Likewise, to be classified as high in both achievement and affiliation, the subject had to rank both target values among their first seven choices. To be ranked as low in both orientations, the subject had to rank both target values 13th or lower in their rankings. To be considered high in achievement and low in affiliation, "ACHIEVEMENT" had to appear among their top seven rankings and "INTERPERSONAL HARMONY" among their bottom eight values. A person scoring just the reverse of this pattern would be considered low in achievement and high in affiliation.

The Hopes test was read for each of the subjects selected by the above criterion. The subjects had been instructed to write for 10 minutes about their hopes for the future. Coders scored each response unit in terms of whether it reflected a concern for achievement, affiliation, or world affiliation. One response unit could contain a combination of any of the possible scoring categories. Hopes reflecting none of these concerns

were coded as miscellaneous. The complete code book is included in Appendix B.

In general, the achievement category includes any reference to obtaining a college degree, finding what the subject considers a "good" rather than satisfactory job, excelling beyond the average person's capacity at some activity or task, or expressing a desire to compete against other people in some area of their life. Personal improvement in personality or appearance was not scored as an achievement unless it specifically referred to other people or material tasks.

The affiliation category consisted of any references which referred to maintaining or initiating a positive relationship to other people. Some common examples were the desire to marry, have children, and remain close to friends and family. The key dimension of this category was that the relationships were personal, face-to-face interactions.

In contrast, the world affiliation category consisted of a general, abstract, or nonspecific desire to maintain or initiate positive helping relationships to people in general. This often took the form of choosing a helping profession where others would benefit, i.e., nursing, teaching, VISTA, or the Peace Corps. In other cases it was the general wish for social betterment such as an end to war or new medical discoveries.

The final category consisted of all miscellaneous items not relevant to the purpose of the code book, the

assessment of affiliation and achievement orientation. Some of the unscored items referred to vacations, general physical or attitudinal improvement unattached to outside or material goals, and references to negatively viewed goals, i.e., what the subject did not want to do or maintain.

The two categories relevant to the present study were achievement and affiliation. The achievement category approximates Rokeach's "ACHIEVEMENT" and "ACCOMPLISHMENT" categories while the affiliation category approximates the "INTERPERSONAL HARMONY" category. After coding was completed, if the correspondence between the Rokeach and Hopes test was grossly disparate, the subject was eliminated from the pool. Of the remaining subjects, ten males and ten females were randomly chosen to represent each of the four orientation groups.

Materials

The written instructions, booklets, and scales used in this phase of the experiment are included in Appendix C. It took approximately 40-50 minutes to complete one work session. The instruments used in the study are presented below.

Proofreading Task. The proofreading task consisted of two parts, a sheet of instructions and the booklet to be proofread. The instruction sheet included exact procedures

for marking errors, examples of errors and how to mark them, and instructions on how pay was determined by calculating each found and missed error. The booklet itself consisted of a General Knowledge Test in a multiple-choice format. The instructions asked the subject to ignore the content and focus on correcting typographical and spelling errors.

This task has been used in previous equity studies (e.g., Messé, Vallacher, and Phillips, 1975; Kahn, 1972). It seemed to be particularly appropriate to the college student population in that it consists of a behavior performed by both male and female subjects in the course of their college education, i.e., proofreading their own and other's papers before submitting them in class. It was important to use a task equally suitable for both males and females; this task seems to fit that qualification. In addition, the content of the booklet was varied and, thus, may have been somewhat involving for some subjects.

Feedback Sheets. Part of the performance feedback manipulation required that the subject know the relative inputs of his/her partner's performance and their own performance in the determination of the total amount of pay each "team" would receive. To provide this feedback, the subject was given a "Results Sheet" which included the subject's number of correct corrections, incorrect corrections and oversights, and net total. On the same

sheet, the partner's number of correct corrections, incorrect corrections and oversights, and net total also was given. At the bottom of the page there was a brief description of how the team's pay was determined by awarding 10¢ for each point in their total team score.

Unknown to the subjects, the figures used on the results sheets were predetermined on a sliding scale prepared by the experimenter. By counting the number of booklet pages the subject proofread, the number of corrections and errors for each member of the team was determined. Each subject was told he/she had a net score of 29 while the partner had a net score of 15. To keep these figures believable across the different numbers of pages proofread by the subject, if only a few pages were proofread, few errors were recorded. However, as more pages were proofread, it appeared to the subject that many more errors were correctly found but a greater number of errors and incorrect corrections had also been committed. Thus, the trade-off of speed for accuracy should have appeared plausible.

Post-Session Questionnaire. After the subjects had completed the experiment, they were asked to fill out a post-session questionnaire. This questionnaire assessed both the subject's perception of their own performance and their perception of their partner's performance. The first questions were direct and asked how much money they had to

divide, how they divided the pay, and they were to indicate the sex of their partner. From this information it was possible to see if discrepancies between self-report and actual behavior had occurred.

The next section was comprised of an open-ended question which asked the subject why he or she had divided the pay in the manner that he or she did.

The last part of the questionnaire had ten items which were rated on five-point Likert scales. The end points of these scales varied with the nature of the question. The questions included rating the enjoyment of the task, comparing the quality of the subject's work to their partner's work, rating how much the partner's opinion of the subject influenced the subject's division of the pay, and rating whether the subject would like the same partner in the future.

In addition, there were three sets of complementary questions that asked the subject to assess her or his own skill, effort, and performance and then assess the relative skill, effort, and performance of his or her own work compared to that of the partner.

Due to the large number of subjects that participated in the study, and the possibility that their friends had discussed or heard about the experiment, a final question asked the subject to indicate if she or he had heard about the experiment.

Procedure

Subjects previously identified as belonging in one of the four goal orientation groups: high achievement/low affiliation, high achievement/high affiliation, low achievement/low affiliation, or low achievement/high affiliation, were telephoned and arrangements were made for the work sessions.

The work sessions were conducted in a room divided into six cubicles approximately 5' X 6' in size. Each cubicle contained one table, one chair, and the materials to be used in the work session. Although the walls did not reach to the ceiling, the cubicles were provided with doors so visual examination of other group members was limited to entering and exiting the experimental room. The cubicles were arranged to the right and left of the main entrance such that three cubicles were on one side and the other three cubicles were on the opposite wall.

Two experimenters conducted each work session. Groups of six were tested during each session. Of the six participants, three were subjects and three were confederates. To facilitate the manipulation of partner's sex, all the subjects tested at each session were all males or all females. The confederates, who appeared to be genuine participants to the "real" subjects, were all either male or female. This procedure made it easy to manipulate partner's sex by having all the participants the same sex or by having the group evenly divided into males and females.

After all the participants were assembled in the hall, the experimenter apparently "randomly" assigned subjects to cubicles such that all the confederates were on one side of the room and all subjects were on the opposite side of the room.

To control for the often imperfect attendance rate of the "real" subjects, a confederate of the appropriate sex was "waiting in the wings" to take the place of a missing subject. The constancy of the six person group thus was kept intact.

Preliminary remarks read by the experimenter included a general outline of the sequence of activities planned for the work session, an explanation of the consent form, and a general description of the study as a "simulated industrial work situation." A copy of these remarks and all other prepared remarks by the experimenter are included in Appendix D.

An important manipulation appeared in the preliminary remarks. The subjects were told that in the present work session they were paired with a partner in a cubicle on the other side of the room, and although their pay would be jointly determined, they would be working independently. They were also told that if they were called back for future sessions, they could be working face-to-face with the same partner they now had. This possibility of future contact was included to increase the affiliative flavor of

the situation to counterbalance the heavy emphasis on achievement and equity contained in the formula for determining pay and reinforced by the "Results Sheet" information (Austin and McGinn, 1976). This additional balance in the situational context should have allowed subjects more latitude in choosing an allocation norm.

After the preliminary remarks and the signing of the consent form, the subjects were given the proofreading task. All subjects worked for 30 minutes on the booklet. When time was called, the assistant experimenter collected the booklets and left the room to "score" them. A coin toss was then performed to identify which side of the room would be responsible for dividing the pay between themselves and their partner on the opposite side of the room. The experimenter explained the procedure to be used in determining the pay allocator and then "randomly" selected one of the confederate subjects to call the toss. As prearranged, the confederate's side of the room "lost" and the real subjects were appointed the allocators.

A nonreactive self-descriptive trait list was then administered to keep the subjects occupied while the booklets were being "scored."¹ After the scale was

¹A modified version of the Bem Sex Role Inventory was administered to the subjects but the scale was not scored for the present study. All the adjectives directly related to achievement, altruism, and interpersonal harmony were deleted to prevent reactivity.

completed, the assistant experimenter returned with a Results Sheet for each subject and confederate. In addition, the allocator received a brief written instruction sheet on the procedure to be used in dividing the pay, an envelope marked "Total Pay," an envelope marked "Own Pay," and an envelope labelled "Other's Pay." Each "Total Pay" envelope contained two one dollar bills, eight quarters, and four dimes, which totalled \$4.40. The instructions directed the subject to divide the total pay as they saw fit. The portion they were keeping as their own pay was to be sealed in the "Own Pay" envelope; the portion allotted to their partner was to be put in the "Other's Pay" envelope and sealed. The experimenter would then pick up the "Other's Pay" envelopes and hand them to the confederates with the admonition to not open them until they were outside.

The post-session questionnaire was handed out to all the subjects after they had allocated their pay. Upon completing the questionnaire, the real subjects were allowed to leave first, followed by the confederates. To enhance the reality of the experiment and decrease suspicious rumors, the confederates actually left the building with their pay envelopes. This precaution proved warranted when several subjects waited outside to speak to their "partners" about the experiment and pay.

Subjects who participated in the work session were mailed an explanation of the purpose and results of the experiment. This letter served as a debriefing instrument.

CHAPTER III

RESULTS

The initial screening session was used primarily (1) to examine if, in fact, there was a sex difference in interpersonal orientation, and (2) to identify high and low achievement and affiliation subjects. The question of whether or not there was a sex difference was examined via one-way analyses of variance that were performed on subject's rankings of the target items on the Rokeach Value Survey. There were two major dependent variables obtained from the work sessions of the present study: (1) the amount of pay self-allocated by the subject, and (2) the subject's responses to the 10 post-session questionnaire items. These measures were examined using analyses of variance. The major independent variables in these analyses were subject sex, co-worker sex, and achievement and affiliation (Rokeach Scale). In addition, possible relationships between the two measures of affiliation and achievement that were obtained during the screening sessions, the subject's ranking of the Rokeach Value Survey and the Hopes Test, as well as possible relationships between these measures and pay allocation behavior, were explored via correlational analyses.

The present chapter first examines the tests of the hypotheses by focusing on the results of the analyses of variance. In the last part of the chapter, the correlations between the major variables are examined.

Tests of the Hypotheses

Hypothesis 1.--The Rokeach Value Survey required subjects to rank order 20 terminal values in the order of their importance to the subject. The values of primary interest in this study were Interpersonal Harmony and Achievement. Of secondary interest were the values of Accomplishment, Equality, and Justice. The mean ranks were submitted to a one-way analysis of variance by sex of subject. The results are presented in Table 1.

Table 1.--Mean Ranks and 1-Way ANOVAs on the Rokeach Scale Target Items for 457 Males and Females.

Value	Mean Rank		<u>F</u>
	Males	Females	
Interpersonal Harmony	9.86	8.68	7.59**
Achievement	8.94	8.91	.01
Accomplishment	6.96	6.35	2.24
Equality	12.81	12.43	.62
Justice	12.13	12.19	.02

** $p < .01$

Hypothesis 1 predicted that females would rank Interpersonal Harmony higher than males, and males would rank Achievement higher than females. The hypothesis was only partially supported by the results. Females did rank Interpersonal Harmony higher than males ($F = 7.59$, $p < .01$). However, there was no significant difference between males and females in their ranking of Achievement ($F = .01$, n.s.). There were also no significant differences between males and females on the values of Accomplishment, Equality, and Justice.

Hypotheses 2 and 3.--The dependent measure of reward allocation was the proportion of the pay that the subject allotted to him/herself at the end of the work session. This dependent variable was submitted to a 2(Sex of Subject) X 2(Sex of Co-Worker) X 2(Achievement, high or low) X 2(Affiliation, high or low) unweighted means analysis of variance, which is summarized in Table 2. As Table 2 indicates, three effects were marginally significant.

Contrary to prediction, the Achievement and Affiliation classifications, based on the subject's rankings on the Rokeach Value Survey, yielded no significant main effects. Thus, findings did not support Hypothesis 2, which predicted that individuals high in Achievement would keep significantly more pay for themselves, while people high in Affiliation would divide the pay equally.

Table 2.--Summary of the 2 (Sex of Subject) X 2 (Sex of Co-Worker) X 2 (Achievement) X 2 (Affiliation) ANOVA with Self-Allocation as the Dependent Variable.

Source	df	SS	MS	<u>F</u>
Sex (A)	1	.017	.017	3.03 *
Co-Worker's Sex (B)	1	.016	.016	2.91 *
Achievement (C)	1	.010	.010	1.82
Affiliation (D)	1	.003	.003	.49
A X B	1	.001	.001	.19
A X C	1	.004	.004	.70
A X D	1	.001	.001	.22
B X C	1	.020	.020	3.57 *
B X D	1	.001	.001	.20
C X D	1	.007	.007	1.23
A X B X C	1	.001	.001	.19
A X B X D	1	.000	.000	.00
A X C X D	1	.001	.001	.16
B X C X D	1	.000	.000	.01
A X B X C X D	1	.006	.006	1.02
Error	64	.359	.006	

* $p < .10$

However, the Sex of Co-Worker X Achievement interaction was marginally significant. Table 3 presents the means relevant to this interaction. This effect was explored further via simple effects analyses. These analyses revealed that for subjects who distributed the reward between themselves and a same-sexed co-worker, there was no significant difference as a function of achievement ($F = .33$, n.s.). However, for subjects who were paired with a different-sexed co-worker, those who were identified as high in achievement kept significantly more pay for themselves than did those who were identified as low in achievement ($F = 5.00$, $p < .05$). This latter finding offers partial support for Hypothesis 2.

Table 3.--Mean Proportion of Pay Kept by the Subjects as a Function of Achievement and Sex of Co-Worker.

Sex of Co-Worker	Achievement	
	High	Low
Same	.56	.57
Different	.62	.57

The Sex of Subject main effect was marginally significant, suggesting that female subjects tended to keep a larger proportion of the pay for themselves than did the male subjects. This finding directly contradicts most previous research, which has shown that males with

"superior inputs" generally keep a larger proportion of the pay, while females with "superior inputs" divide the pay more equally.

The Sex of Co-Worker main effect also was marginally significant. Subjects paired with a same-sexed co-worker tended to divide the pay more equally, while subjects with a co-worker of the other sex tended to keep a larger proportion of the pay for themselves. This finding offers only partial support for Hypotheses 3, which predicted that both males and females would be more generous to females, and, thus, allocate rewards more equally when paired with female partners.

Post-Session Questionnaire

There were 10 post-session questionnaire items that were presented as 5-point Likert-type scales. Each item was subjected to a 2 (Sex of Subject) X 2 (Sex of Co-Worker) X 2 (Achievement) X 2 (Affiliation) unweighted means analysis of variance. Five significant effects were found.¹

Item 4 read, "How would you rate your skill on proofreading tasks such as this one?" A Sex of Subject X Sex of Co-Worker X Achievement interaction was found ($F = 5.97, p < .05$). Table 4 summarizes the means relevant to this effect. This interaction was explored further via simple effects analyses. These analyses revealed that for

¹Appendix E presents the summaries of these analyses of variance.

female subjects, there was a significant Sex of Co-Worker X Achievement interaction ($F = 4.30$, $p < .05$). Females low in Achievement saw themselves as more skilled when they were paired with a male partner, while females high in Achievement saw themselves as more skilled when paired with a female partner. Simple effects analyses revealed no significant effects for male subjects.

Table 4.--Mean Scores on Item 4: the Achievement X Sex of Subject X Sex of Co-Worker Interaction.

Sex of Co-Worker	Achievement	
	High	Low
<u>Male Subjects</u>		
Same	2.8	2.8
Different	2.5	3.3
<u>Female Subjects</u>		
Same	2.5	3.1
Different	3.2	2.6

Item 7 read, "How much effort did you expend on the proofreading task compared to your partner?" A significant main effect was found for Sex of Co-Worker ($F = 6.50$, $p < .05$). When subjects were paired with a different-sexed co-worker, they perceived themselves as expending more effort compared to their co-worker than did subjects paired with a same-sexed co-worker.

Item 7 also yielded two significant 3-way interactions. The significant Sex of Subject X Sex of Co-Worker X Achievement interaction ($F = 4.12, p < .05$) is presented in Table 5. This interaction was explored further via simple effects analyses. These analyses revealed that for female subjects there was a simple main effect for Sex of Co-Worker ($F = 4.83, p < .05$). Females perceived that they expended more effort on the proofreading task compared to their co-worker when they worked with a male co-worker. Female subjects saw themselves as expending less effort relative to their co-worker when they were working with a female co-worker.

Table 5.--Mean Scores on Item 7: the Achievement X Sex of Subject X Sex of Co-Worker Interaction.

Sex of Co-Worker	Achievement	
	High	Low
<u>Male Subjects</u>		
Same	3.0	2.63
Different	2.3	2.88
<u>Female Subjects</u>		
Same	2.7	2.89
Different	2.3	2.5

Within the same 3-way interaction, the simple effects analyses revealed that for male subjects paired with a same-sexed co-worker, there were no significant differences as a function of Achievement ($F = 2.11$, n.s.). Male subjects paired with a female co-worker perceived that they expended significantly more effort compared to their co-worker when they were identified as low in Achievement compared to male subjects identified as high in Achievement ($F = 5.13$, $p < .05$).

The significant Sex of Co-Worker X Achievement X Affiliation interaction for Item 7 ($F = 4.37$, $p < .05$) is presented in Table 6. A simple effects analysis revealed that there was a significant simple main effect for Achievement for subjects who had a different-sexed co-worker. Subjects who were high in achievement and paired with a different-sexed co-worker perceived themselves as expending more effort compared to their co-worker than did subjects who were low in achievement ($F = 4.50$, $p < .05$). This relationship held only for subjects with different-sexed co-workers; no significant effects were found for subjects paired with same-sex co-workers.

Item 9 read, "To what extent did you consider how your division of the money would affect your partner's opinion of you?" The analysis of variance revealed a significant Sex of Co-Worker X Achievement interaction ($F = 6.22$, $p < .05$). This interaction is shown in Table 7.

Table 6.--Mean Scores on Item 7: Achievement X Sex of
Co-Worker X Affiliation Interaction.

Affiliation	Achievement	
	High	Low
<u>Same-Sexed Co-Worker</u>		
High	2.8	2.9
Low	2.9	2.57
<u>Different-Sexed Co-Worker</u>		
High	2.4	2.5
Low	2.2	2.88

Table 7.--Mean Scores on Item 9: Achievement X Sex of
Co-Worker Interaction.

Sex of Co-Worker	Achievement	
	High	Low
Same	3.25	3.9
Different	3.5	2.85

The interaction was explored further via simple effects analyses. Subjects who were low on achievement and had a same-sexed co-worker, reported considering their co-worker's opinion of them less than did subjects paired with a different-sexed co-worker ($F = 7.41, p < .01$). This relationship held only for subjects low on achievement. There were no significant differences for subjects high in achievement ($F = .42, n.s.$).

Correlation Matrix

As noted above, two measures of achievement and affiliation orientation were administered during the screening interview; the Rokeach Value Survey and the Hopes Test. The Rokeach Value Survey was used to select subjects for participation in the work sessions. However, I felt that exploration of the relationship between the Rokeach and Hopes tests would help to clarify the meaning of each test score. The correlation matrix in Table 8 summarizes the interrelationships for the main variables in the study. For a more complete correlation matrix, see Appendix F.

As discussed earlier in the Method Section, subjects were designated as high or low in achievement and affiliation based on their rankings of "Achievement" and "Interpersonal Harmony" on the Rokeach Scale. To be scored as high in achievement, the subject had to rank "Achievement" among their top seven values in importance. To be scored as low in achievement, the subject had to rank "Achievement"

Table 8.--Correlation Matrix for the Major Variables.

	Sex of Subject	Achievement	Interpersonal Harmony	Self- Allocation	Hopes
Sex of Subject (1=Male, 2=Female)	1.00				
Achievement (N = 457)	-.004	1.00			
Interpersonal Harmony (N = 457)	-.13**	-.11**	1.00		
Self-Allocation (N = 80)	.20**	-.16***	-.09	1.00	
Hopes Test (N = 80)	-.22**	-.14	.18***	-.06	1.00

* $p < .001$ ** $p < .05$ *** $p < .10$

13th or lower in importance. The same criteria were used for determining if a subject was high or low in affiliation based on their rankings of "Interpersonal Harmony." However, as Table 8 illustrates, the original rankings of the item "ACHIEVEMENT" on the Rokeach Scale were not significantly related to the subject's sex ($r = -.004$, n.s.) and the rankings of "INTERPERSONAL HARMONY" were only weakly correlated with subject sex ($r = -.13$, $p < .05$) when the large sample size ($N = 457$) is considered. Thus, the underlying criteria that were used as the basis of subject selection, the relationship of achievement and affiliation to sex, was not found in the current study.

The Hopes Test was coded¹ and the subject's score determined by the following formula:

$$\frac{\text{Total Number of Achievements} - \text{Total Number of Affiliations}}{\text{Total Number of Achievements} + \text{Total Number of Affiliations}}$$

Thus, the higher the score on the Hopes Test, the more achievement oriented the subject, while the lower the subject's score, the more affiliation oriented the subject. The correlation analyses revealed that the achievement-affiliation difference score as determined by the Hopes Test, was significantly related to the subject's sex ($r = -.18$, $p < .001$). Males tended to be more achievement

¹Intercoder reliability was .84 on the achievement category and .86 on the affiliation category of the Hopes test.

oriented, while females tended to be more affiliation oriented.

Examination of the relationship between affiliation and achievement as determined by the Rokeach Scale and the difference score as determined by the Hopes Test showed no significant intercorrelations ($\underline{r} = .03, -.002, n.s.$). Thus, the two measures appear to be unrelated.

The work sessions used 80 subjects selected for their scores on the Rokeach Scale. Achievement, affiliation, subject sex, and sex of co-worker were factorialized. The correlation matrix revealed that achievement as determined by the Rokeach Scale was marginally significantly correlated with self-allocation of the pay ($\underline{r} = -.15, p < .10$). The more achievement oriented the subject, the more pay was self-allocated. However, affiliation as determined by the Rokeach Scale was unrelated to self-allocation ($\underline{r} = -.08, n.s.$) and the achievement-affiliation difference score as determined by the Hopes Test was not related to self-allocation ($\underline{r} = -.06, n.s.$).

CHAPTER IV

DISCUSSION

Three major hypotheses were tested in the present experiment. As noted in the previous chapter, results revealed no support for one hypothesis while the remainder were only partially supported. This final chapter explores some of the methodological factors that may have contributed to these results. The discussion also focuses on the theoretical impact of the present findings and their relationship to human behavior. Finally, new lines of profitable research are outlined.

Hypothesis 1

The first hypothesis examined in the present research was the relationship between biological sex and achievement and affiliation orientation. It was hypothesized that in ranking their values, males would rank achievement higher than females and that females would rank affiliation higher than males. Analysis revealed that males and females did not significantly differ in their rankings of achievement but females did rank affiliation higher among their values than did male subjects.

This first hypothesis was the cornerstone of the present research and its partial disconfirmation jeopardized interpretation of the subsequent findings. If males and females do not differ in their achievement orientation, then the "forced" separation of orientation and sex through an orthogonal design is not meaningful. This design was utilized because of an assumed covariance, a covariance which apparently does not exist.

The above finding could be the result of the problems that were encountered during the subject selection phase of the study. It is possible that the emphasis on monetary pay as the primary motive for participation may have resulted in some self-selection by the subjects; thus, only men and women interested in money or working might have participated, and the range of interest in achievement thereby would have been truncated. Although this possibility cannot be ruled out, the large sample size, 457 subjects, makes this particular problem in self-selection less probable. The sample was simply too large to be totally unrepresentative of the subject population.

Another potential reason for the partial disconfirmation of the major hypothesis could be the choice of the Rokeach Value Survey as the selection instrument. Although this instrument had several advantages, which were listed earlier, it is possible that the scale was too transparent and too subject to concerns with social desirability to be

an accurate assessment of orientation. With the press towards women's liberation, it is possible that the females wanted to present themselves as more achievement oriented, a trait which is presented as desirable by the liberation movement. This speculation, if valid, could explain why males and females scored the same on achievement, but differed in the predicted direction on affiliation orientation.

A subgoal of the present research was the development of a coding scheme for the Hopes test which would assess an individual's orientation by looking at an unstructured, less demanding sample of their thoughts. This measure may be less reactive and more accurate than the Rokeach scale in assessing orientation, and, thus, be more useful in future research. The present experiment, in which 80 cases were selected primarily by the Rokeach scale and factorialized by sex, achievement orientation, and affiliation orientation was designed to eliminate assumed "natural" correlations between sex and orientation. However, results from the Hopes test showed males to be significantly higher in achievement than females. Although these findings cannot properly be used in discussing the current research, future research in this area may show that males and females do differ in achievement and affiliation orientation.

Assuming that the current results reflect the true orientations of males and females, two different

explanations are possible. First, it is possible that the feminine gender role is changing. Women may be more comfortable or accepting in achievement situations. However, it is noteworthy that affiliation is still considered more important by women than by men. If the female gender role is changing, it seems to be expanding rather than taking on "male characteristics." Women still consider interpersonal relationships to be more important than do males.

It is important to examine the male gender role if the female role is perceived as changing. The male and female gender roles are inextricably interrelated. If women are changing their orientation, their role, then men eventually will have to adjust their own roles and behavior. The current results show no shift in male roles. If the changes in the female role are genuine, then this lack of shift in the male role may be due to a cultural lag, a period of readjustment. However, if the female shift is an artifact of a current fad, the lack of a shift in the male role is realistic.

The second possible explanation for the shift in orientation found in the current study is not considered tenable by the author, but has been expounded by some advocates of women's rights. This position says that there has been no shift in gender roles, the roles have disappeared. It is the contention of this author that roles are an intrinsic, central aspect of the self-concept.

People function through roles and because of roles, not despite roles. The distinction is trivial on a functional level, however on a theoretical level the distinction is necessary.

Hypothesis 2

The remaining hypotheses and conclusions are based on the subjects selected during the screening sessions on the basis of their scores on the Rokeach Value Survey. This group of 80 subjects was factorialized by sex, achievement orientation, and affiliation orientation. The major dependent variable was the amount of pay self-allocated by the subject.

Hypothesis 2 predicted that subjects high in achievement orientation and low in affiliation would allocate pay equitably while subjects low in achievement and high in affiliation would allocate equally. The analyses revealed no significant main effects for orientation. Moreover, contrary to prediction, and most past research findings, females tended to use equitable allocations more often than male subjects.

Past research such as Leventhal and Lane (1970) have found results directly contrary to the present findings; men have preferred equitable divisions more often than women. However, recent studies such as Watts (1977) and Kidder, Bellettirrie, and Cohn (1977) have shown some evidence of reversals and suggested conditions in the work

situation which may influence allocation behavior. The results found by Watts (1977) revealed that males and females in the role-playing condition allocated pay and gifts in the same pattern found in traditional research. However, when in an actual work situation, women if anything, allocated more pay than the male subjects. This supports the contention that gender roles are changing but the changes have not yet stabilized. As Watts pointed out, the participants in the actual work situation scored as more "masculine" on the Bem Scale than the women in the role-playing condition. Its possible that this discrepancy between the two samples represents the current state of the female gender role. Wide differences in "appropriate" behavior for women may currently exist.

The present research did not directly assess gender role so it is not known whether the males and females were "atypical" subjects. It is possible that during the selection process a large number of "masculine" females and "feminine" males were selected and scattered across all the cells in the design. If the atypical gender role individuals fell into only the high achievement-female cell or the high affiliation-male cell, then a main effect for orientation should have been found. However, since this did not occur, the assumption must be that the entire sample was atypical. This does not seem likely in the present study, however.

The research of Kidder et al. (1977) had male and female subjects either allocate their pay in private or publicly. The crucial difference between the allocation situations seems to be whether the subject would later have to face their partner and justify their divisions or they could make their allocations with no threat of confrontation. It was found that when the allocation decision was to be put to a confrontational public discussion, males and females assumed traditional allocation patterns where males divided equitably and females divided equally. However, in the private or secret allocation, males shifted towards equality and females shifted towards equity. It appears that when the social expectation demand is eliminated, the males and females assumed less gender stereotyped behavior.

The present experiment seems to be a mix of "private" and "public" allocations. Subjects did not know exactly who their partner was. It could have been any of the three people on the other side of the room so a direct confrontation would be difficult. However, it was also stated in the experimenter's prepared comments that the "partners" could be placed in a face-to-face situation in the near future. It is difficult to say whether this situation would be termed public or private. From the results obtained, if Kidder's formulation was correct, then the present subjects behaved as if the allocation was private.

Another possibility, the bane of any researcher, is that achievement and affiliation orientation are not

related to equity behavior. It is possible that the situation specific nature of the research, monetary pay in work situations, dictates a completely different set of norms for these behaviors. There may be very little relationship between the person's everyday behavior and standards and accepted behavior in the business world. This possibility, if valid, would render a broad range of individual differences insignificant.

Hypothesis 3

The third and last hypothesis predicted that male and female subjects would be more generous and, thus, allocate more equally with a female partner. The analyses revealed that male subjects were more generous to male partners and female subjects were more generous to female partners. This generosity bias towards partners of the same sex resulted in only partial support of the hypothesis.

There appear to be three major explanations for these results. The first, and perhaps the simplest, is that the experimental procedure used to manipulate the sex of the partner was ineffective. Several of the post-session questionnaires indicated that the subject did not know what sex their partner was. The manipulation was made as obvious as possible in the work sessions. Either all the subjects and confederates were the same sex or the subjects and "confederate partners" were different sexes. When the mixed sex situation occurred, the experimenter

simply asked all the men to sit on one side of the room and the women on the other side. This procedure seems to blatantly point out the sex of the partner. The only procedure which would make the variable more salient would be face-to-face interaction. Unfortunately, such an interaction would produce problems in differential attractiveness and individual variation which would obscure other conditions in the experiment.

One other possibility exists. Some of the subjects could have been blocking or intentionally ignoring the sex of their partner. This denial or rejection of sex as important would result in "not knowing" the sex of the partner. The possible explanations that are presented below could each be a motive or reason to "forget." Unfortunately, there are no data on the subject's motives, but, the results of the study suggest that even if the sex of the partner was consciously not known, it had an effect on the subject's behavior.

The second possible explanation for the current results is by far the most hopeful one. It is possible that the males and females in this study were concerned with pleasing their co-worker or living up to some expectation they assumed the other person had. The men may have thought that their female partners would want to be treated in a fair business-like fashion, i.e., equitably. Undoubtedly many men have been assailed by women who demand to be treated on the same basis as an equal competitor. The

male subject may have been responding to what he thought his partner wanted. When dealing with a male partner, the male subject may have been making a bid for friendship by dividing the pay equally. (A simple switch from considering pay the relevant criteria to making time spent the criteria would make the equal division, "equitable".)

The female subjects could be performing in a similar fashion. They could be dealing equitably with the male partner in order to place themselves in a more desirable or equal relationship with the male partner. They may prefer this type of relationship, especially since the expected future interactions were economic in nature. When paired with a female partner, the motive could once again be friendship.

The third possible explanation is the dire and pessimistic companion of the preceeding argument. It is possible that men and women are hostile towards each other. Both the male and female subjects when paired with a different sexed partner may have decided to not give their partner "the benefit of the doubt." They may have decided to adhere to the economic nature of the work session and use the equity norm, especially since their performance was superior. The division could have been made within a hostile or simply very unsympathetic framework. In contrast, when paired with a same sexed partner, this "framework," mood, or predisposition was not present and more equal divisions were made.

If hostility is present, it is difficult to know whether it exists only in economic settings or whether it is also present in social interactions. The women's movement and the governmental press for hiring minorities may have made both men and women very sensitive to economic competition. It could simply be that any affiliation orientation is submerged under the achievement aspects of the situation. This submerging may not occur in same-sexed dyads.

Future Research

The major implications of the results of this study, especially the disturbing possibility that men and women may adapt a hostile or nonpositive relationship towards each other in economic situations, need further research. The present study did not assess the underlying motivation of the subjects or their perception of their partner's motivation and feelings towards them. Only questions directly related to task performance were asked. It would be profitable to assess whether men and women view the other sex positively or negatively as a function of situation: economic, social, or intimate. Some of the important questions would be: Does hostility exist between men and women? If it exists, is it confined to certain situations or is it pervasive? Does the hostility seem to be increasing or decreasing?

Obviously, other issues are very relevant to these questions. Does the type and amount of gender role internalized by the subject effect their perception of members of the other sex? Do "masculine" women and "feminine" men view members of their own sex with more or less hostility than member's of the other sex?

Of particular interest to the author is the relationship between hostility, gender role, and achievement and affiliation orientation. Are they related in some systematic way? One of the major problems in this line of research would be operationalizing liking and hostility in economic and social situations. Although difficult, the result would be worthwhile and could help clarify the often perplexing relationships between men and women in the economic and social world.

APPENDICES

APPENDIX A

SCREENING SESSION MATERIALS

APPENDIX A

GENERAL INFORMATION

Name: _____

Telephone Number: _____

We need your name and telephone number to make arrangements for the paid work sessions.

Circle the letter beside the correct response:

Sex A. Male
 B. Female

Age A. 17-19
 B. 20-22
 C. 23-25
 D. over 25

Last year of school completed A. less than 12th grade
 B. 12th grade
 C. 1-2 years of college
 D. 3-4 years of college
 E. over 4 years of college

Are you currently enrolled at M.S.U.? A. Full-time
 B. Part-time
 C. Special student
 D. Not enrolled

Occupational Status A. Employed full-time
 B. Employed part-time
 C. Unemployed

Briefly describe previous employment: length of time

- 1.
- 2.
- 3.
- 4.

Hopes Test

You will have 10 minutes to list your hopes for the future. Work only on this question until time is called. Do not work ahead in the booklet.

What are your hopes for the future?

Rokeach Scale Instructions

On the next page are 20 values listed in alphabetical order. Your task is to arrange them in order of their importance to YOU, as guiding principles in YOUR life.

Study the list carefully and pick out the one value which is the most important for you. Place a 1 in the blank beside it.

Then pick out the value which is second most important for you. Place a 2 beside it. Then do the same for each of the remaining values. The value which is least important should be labeled 20.

Work slowly and think carefully. If you change your mind, feel free to change your answers. The end result should truly show how you really feel.

Rokeach Scale

- _____ A COMFORTABLE LIFE
a prosperous life
- _____ AN EXCITING LIFE
a stimulating, active life
- _____ A SENSE OF ACCOMPLISHMENT
succeeding at what you do
- _____ A WORLD AT PEACE
free of war and conflict
- _____ A WORLD OF BEAUTY
beauty of nature and the arts
- _____ EQUALITY
equal treatment for all
- _____ FAMILY SECURITY
taking care of loved ones
- _____ FREEDOM
independence, free choices
- _____ HAPPINESS
contentedness
- _____ INTERPERSONAL HARMONY
getting along well with those around you
- _____ JUSTICE
fair treatment, getting what you deserve
- _____ MATURE LOVE
sexual and spiritual intimacy
- _____ NATIONAL SECURITY
protection from attack
- _____ PLEASURE
an enjoyable, leisurely life
- _____ SALVATION
saved, eternal life
- _____ SELF-RESPECT
self-esteem

- _____ SOCIAL RECOGNITION
 respect and admiration
- _____ TRUE FRIENDSHIP
 close companionship
- _____ ACHIEVEMENT
 doing tasks well
- _____ WISDOM
 a mature understanding of life

APPENDIX B

CODEBOOK FOR THE HOPES TEST

APPENDIX B

CODEBOOK FOR THE HOPES TEST

I. Basic Rules

- A. A "sentence" is defined by any of the following:
1. A new line in the text.
 2. A dash at the left margin of the paper indicating a separate thought.
 3. A phrase beginning with a capital letter.
 4. A phrase ending with a period.
 5. A complete sentence.
 6. Each separate thought numbered by the respondent.
- B. Any "sentence" can receive a maximum of one point for any one category. No "sentence" can be scored twice for the same category, however, a "sentence" can be scored once for each different category found in the text.

EXAMPLE:

"I want to graduate from M.S.U. then finish law school and become a lawyer."
(Graduating from M.S.U. and finishing law school to become a lawyer would each be scored as one Achievement if they had appeared in different sentences. However, because both appear in the same sentence, only one Achievement is scored because any sentence can receive a maximum of one point for any one category.)

EXAMPLE:

"I want to finish nursing school and become a nurse so I can help other people."
(In this sentence, finishing nursing school would receive one Achievement score. "Help other people" would be scored as one World Affiliation score. This sentence would be given one point

for Achievement and one point for World Affiliation because any sentence can be scored once for each different category found in the text.)

C. Standard symbols are used to denote the type of hope scored. An Achievement hope is indicated by the letter A, Affiliation by F, and World Affiliation by W. The "sentences" are designated by numbering them consecutively through the test. All coding should be written in a contrasting color for easy readability. Marks should be made in the left margin whenever possible.

D. Final scores

1. The Achievement score is found by adding the Achievement hopes found in the text and arriving at a total.
2. The Affiliation score is found by adding the Affiliation hopes found in the text and arriving at a total.
3. The World Affiliation score is found by adding the World Affiliation hopes found in the text and arriving at a total.
4. The total number of "sentences" is found by counting all the sentences found in the test. Both coded and uncoded sentences are included in the total number.

II. Achievement. Atkinson's definition of achievement content is the focus for this category.

Score as Achievement:

- A. Competition with another individual or group is scored as Achievement.
- B. A concern with evaluating the excellence of performance against an internal or external standard is scored as Achievement.

EXAMPLE:

"I want to be the best symphony conductor I can possibly be." (This illustrates a concern with an

internal standard of excellence. Internal standards are often indicated by the terms "good," "better," or "best.")

EXAMPLE:

"I want to graduate with a high GPA in chemistry." (This sentence indicates a concern with evaluating performance against an external standard, the university's grade point system.)

- C. Achievement is scored for unique as opposed to run-of-the-mill accomplishments.

EXAMPLE:

"I want to be able to play all the musical instruments in a small orchestra."
(Being able to play all the instruments would be a unique accomplishment, so the sentence is scored as an Achievement. If the sentence had read, "I want to be able to play the piano," it would not be scored because playing the piano is not a unique accomplishment.)

- D. Long term involvement with something, unless some other goal is primary, would be scored as an Achievement. This would include any career requiring much preparation (i.e., doctor, lawyer, nurse, therapist, engineer, etc.). An indication of an emotional involvement with the career or job would also be scored as an Achievement.

EXAMPLE:

"I want to be an opera singer."
(Wanting to be an opera singer requires much preparation and long term involvement so it would be scored as an Achievement.)

EXAMPLE:

"I want a career that I will enjoy and be happy in."
(Although the career is not specified, the respondent wants emotional involvement with the career so it is scored as an Achievement.)

Do not code as Achievement "a summer job," "a steady job," "a 9 to 5 job," or "a job paying enough to live on." None of these phrases indicate long term or emotional involvement.

E. Academic accomplishments are coded as Achievement.

1. "Graduating," "finishing school," "getting a degree," and "obtaining a B.A." all indicate academic accomplishments and are scored as Achievements.
2. "Raising my grades," reaching a certain GPA, and working harder in classes all indicate achievement.
3. "Going to graduate school," going to another school, and "taking advanced training" all indicate achievement.
4. Picking a major, getting involved in a major, and deciding on a major all indicate achievement.
5. Do not code a sentence as Achievement when some other motive is primary.

EXAMPLE:

"I want to graduate so I can go to Florida."

"I want to finish school so I can get my parents off my back."

(Both these examples indicate that another motive is primary so they are not coded as Achievement.)

6. The following examples illustrate cases which are not coded as Achievement because they show no evidence that the respondent is working towards a goal or working to improve their performance.

EXAMPLE:

"I want to get through my classes." "I don't

want to flunk out." "I want to pass botany."

"I want to get by with no hassle."

(None of these sentences would be scored as Achievements because they do not show evidence that the person is working towards a goal or on improving their performance.)

F. Physical skills (sports) and hobbies are coded as Achievement only when the respondent is a

participant and if any of the following conditions are met.

1. Competition is involved.
2. The respondent hopes to obtain, is working towards, or wants some type of honor.
3. An indication of long-term effort or intense involvement is scored as Achievement.
4. A sports career is scored as Achievement.
5. A concern with evaluating performance against an internal or external standard of excellence is scored as Achievement.

EXAMPLE:

"I want to be an excellent cook."

(This sentence shows competition with an internal standard and is scored as an Achievement.)

EXAMPLE:

"I want to run a 4'10" mile."

(This shows competition against an external standard and is scored as an Achievement.)

6. Do not code the following as Achievement.
 - a. Learning to play an instrument, sport, or game. "I want to learn to cook." (Notice the difference between this example and the example in F.5.)
 - b. Keeping in shape, getting exercise, or keeping fit are not scored as Achievement because another motive, health, is dominant.
 - c. Having time or making time for certain activities is not coded as Achievement. "I want to have time to go bicycling," would not be coded.

- G. Wanting fame or a reputation are coded as Achievement.

EXAMPLE:

"I've always wanted to be famous and have people recognize me on the street."

(This would be coded as an Achievement because the person desires fame or a reputation.)

- H. Money and material possessions are not coded as Achievement unless they relate to specific occupational goals or competition is implied. Winning a lottery, gambling, and being rich are not coded as Achievement.

EXAMPLE:

"I eventually want to own my own Formula One race car so I can be an owner-driver on the Grand Prix circuit."

(This would be coded as an Achievement because the material possession, the race car, is directly related to an occupational goal, an owner-driver on the circuit.)

EXAMPLE:

"I want a house in the country and a new car."

(This is not coded as an Achievement because it does not indicate competition and is not occupation related.)

EXAMPLE:

"I want to be a millionaire."

"I want to have enough money to live a comfortable life."

(Neither of these examples would be coded as Achievement.)

- I. Being personally responsible for social change is coded as an Achievement. Personal activity and participation must be indicated to be an Achievement.

EXAMPLE:

"I want to enter politics and work for passage of the ERA."

(This would be scored as an Achievement because it indicates a personal responsibility for social change.)

EXAMPLE:

"I want the ERA to pass."

(This would not be coded as Achievement because it does not indicate that the person will actively work for social change. See section IV for the coding of sentences like this example.)

- J. Personal traits and self-descriptive adjectives can be coded as Achievement when the person indicates they are desirable and/or they are working to improve themselves on these dimensions. Some of the adjectives which usually indicate an achievement orientation include: intelligent, capable, competent, successful, accomplished, competitive, hard-working, diligent, persistent, respected, famous, and important. Other traits may be scored as Achievement depending on the context in which they appear.

EXAMPLE:

"I want to become more competitive."

(This would be coded as an Achievement because the respondent wants to improve along this dimension which indicates an achievement orientation.)

- K. The respondent's desire to improve some aspect of their physical appearance is not coded as Achievement unless competition is indicated or the change in appearance is related to career opportunities.

EXAMPLE:

"I want to lose 30 pounds so I can be an airline stewardess."

(This is coded as an Achievement because it is career related.)

EXAMPLE:

"I want to lose 30 pounds and keep it off."

(This example would not be scored as an Achievement because it is not career oriented and does not indicate competition.)

- L. Do not code domestic accomplishments as Achievements.

EXAMPLE:

"I want to be a good mother (father)."

"I want to be a good husband (wife)."

(These examples are not coded as Achievement.)

- M. Travel, vacations, or trips are not coded as Achievement unless the travel is job related.

EXAMPLE:

"I want to be a diplomat and travel to foreign countries."

(Traveling is related to the job of diplomat so it would be coded as an Achievement.)

- III. Affiliation. Affiliation is a concern with establishing , maintaining, or restoring a positive affective relationship with another person. Wanting something positive for someone else is another dimension of Affiliation.

- A. Wanting or hoping to have a mate and/or children is scored as Affiliation.

EXAMPLE:

"I want to get married someday."

(This is scored as an Affiliation because the respondent wants to have a spouse someday in the future.)

If the spouse and/or children are included as an item in a list of material possessions within the same sentence, and no mention of a positive affective relationship is made, the sentence is not coded as an Affiliation.

EXAMPLE:

"I want a large house, two cars, a wife, and a sailboat."

(In this example, a wife seems to be viewed as a material possession separate from the affective aspects of the relationship. This sentence would not be scored as an Affiliation.)

- B. Wanting to remain in contact with or close to friends and relatives is scored as an Affiliation. Wanting to meet more people or interesting people is also scored as Affiliation.

EXAMPLE:

"I don't want to lose track of my friends after I finish school."

(This would be scored as an Affiliation because it indicates that the respondent wants to

maintain a positive affective relationship with other people.)

Simply mentioning relatives or friends is not coded as an Affiliation unless a positive relationship or hope is specified.

- C. Wanting something positive for another person is scored as an Affiliation. Some of the common wishes for other people include happiness, wealth, security in old age, health, material comforts, marriage, and success.
- D. Participation in team sports is not coded as Affiliation unless the motive focuses on the relationships between people.

EXAMPLE:

"I want to join the dorm football team so I can meet new people."

(This sentence would be coded as an Affiliation because the motive for joining the team is to meet and possibly establish new relationships.)

- E. Personal traits (self-descriptive adjectives) can be scored as Affiliation when the respondent indicates that he/she finds the traits desirable or is working to improve himself/herself on that trait. The traits must show an orientation toward other people and imply that the presence of another person is necessary for the trait to be used or developed. However, the traits must not indicate dominance of one person over another. Some of the adjectives which usually indicate an Affiliation orientation include: sympathetic, warm, caring, loving, sharing, concerned, understanding, friendly, "communicate better," open, "expressing my feelings," outgoing, and tolerant. Other traits may be coded as Affiliation depending on the context in which they appear.

- F. Indications that the respondent wants to improve or utilize various aspects of their physical appearance is not coded as Affiliation unless the purpose of the alteration is to initiate or improve a positive relationship with another person.

EXAMPLE:

"I want to lose 20 pounds so Harold will ask me out."

(This sentence would be coded as Affiliation because the motive for losing weight is to increase the likelihood of initiating a relationship with another person.)

- G. Travel is not coded as an Affiliation unless something positive is specifically indicated for other people or the object of the trip is to visit other people.

EXAMPLE:

"I want to take my kids to many different countries so they can experience as much of life as possible."

(This would be coded as Affiliation because something positive is desired for another person.)

EXAMPLE:

"I want to go to California to see my brother and sister."

(The object of the trip is to visit with relatives so it would be coded as Affiliation.)

EXAMPLE:

"I want to go to Hawaii."

(This sentence would not be coded as Affiliation because other people are not the object or reason for the trip.)

- IV. World Affiliation. World Affiliation is defined as wanting something positive for other people. It is distinguished from plain Affiliation because it refers to people in general rather than specific individuals. Common examples include wanting to help people, wanting to help a disadvantaged group, wanting to eliminate poverty, etc. The emphasis is on general giving or

helping, not on initiating or maintaining one-to-one relationships or friendships.

EXAMPLE:

"I want to be a teacher and help emotionally disturbed children."

(This sentence would receive one Achievement and one World Affiliation score. The Achievement would be given because teaching is a career and requires special training and preparation. The desire to help a group, emotionally disturbed children, would receive a World Affiliation score. This combination of an Achievement and World Affiliation score in one sentence indicates two motives and is common among people interested in the "helping professions.")

EXAMPLE:

"I hope for a world in which poverty and hunger will end."

(This sentence is scored as World Affiliation because it indicates that something positive is wished for people in general.)

EXAMPLE:

"I want a job where I can meet and get to know a lot of people."

"I want to meet lots of neat men."

(These sentences would be coded as Affiliation not World Affiliation. When people in general are mentioned but the respondent's focus is on friendship, a personal relationship, or receiving affiliation from others, it should be coded as plain Affiliation, not World Affiliation.)

V. Uncoded Miscellaneous Items

- A. References to the respondent's personal health, age, or death are not coded unless it specifically falls into an Achievement or Affiliation category.

EXAMPLE:

"I want to live a long life and be healthy until the end."

(This sentence would be uncoded.)

- B. Unless an Achievement or Affiliation motive is indicated, the desire to improve some aspect of the respondent's physical appearance is not coded.

(See II.K. and III.F.)

- C. Traveling, trips, vacations, or touring are not coded unless an Achievement or Affiliation motive is indicated. (See II.M. and III.G.)
- D. Personal traits (self-descriptive adjectives) are not coded unless they indicate an Achievement or Affiliation orientation. In particular, traits indicating self-actualization are not coded. Some of these adjectives include wise, "aware of the world," happy, content, self-actualized, aware, and independent.
- E. Negative affiliation, wanting someone to leave you alone or wanting something negative for another person is left uncoded.

EXAMPLE:

"I want to tell my roommate to shut up."
(This sentence indicates negative affiliation and would not be coded.)

- F. Negative achievement, an active avoidance or rejection of achievement situations as outlined in section II would not be coded.

EXAMPLE:

"I don't care about rising to the top of my profession."
"I value my freedom too much to get involved with a career."
(Neither of these two sentences would be coded. They each show a negative achievement orientation.)

Supplement to Hopes Codebook

1. Further examples of safety-oriented or self-actualizing statements which are not to be coded.

Happiness
 Comfortable life style
 No worries or cares
 A feeling of security
 To learn about and accept myself
 Develop myself and my personality
 Like myself
 Die happy
 Be independent
 Be able to stimulate myself emotionally

2. Code as affiliation:

Become more open about my feelings
 Secure love
 Like others
 Meet lots of people
 Raise a family
 Be a wife/mother

3. Do code as achievement

A good job
 An interesting job
 A job in a profession
 Never stop my education
 Grow mentally
 Learn as much as I can
 Continue learning all my life
 Know all there is to know
 Live in a community full of opportunities

4. Do not code as achievement

1. A stable job in one of my favorite places
 (stability implies focus just on security & emphasis here is on location.)
2. Finish school
3. Any hope where location is the main focus.
4. Subsistence, stability, comfortable living, lots of money. Try using the criterion that if the hope could be completely fulfilled by winning \$1,000,000 in the lottery, then it doesn't represent achievement.

APPENDIX C

WORK SESSION MATERIALS

APPENDIX C

PROOFREADING TASK INSTRUCTIONS:

We would like you to proof-read the following multiple-choice test for any typographical or spelling errors. The content of the multiple-choice test is not relevant to the present research; you are to merely read over each item sufficiently to locate and correct errors.

All spelling, punctuation, and capitalization errors should be circled and the proper correction should be written beside the circled error. You will be given 30 minutes to correct as much as you can of the test.

The example below should make clear what you are to do. example:

144. ^cIn the U.S., the volum^e of freight shipped
by water is greatest on the

1. Mississippi River system.
2. Atlantic Coast rivers.
3. ^Pacific Coast rivers.
4. Great Lakes system.

The three errors contained in this test item have been located, circled, and corrected. You are to scan the following pages for similar errors and correct any you find, in the manner above.

It is extremely important to us that you do your best to locate and correct all errors in the test. Accuracy is especially important since you will be penalized (in terms of amount of payment) for oversights and incorrect corrections. Your performance will be rated and the amount of payment you and your teammate receive will be contingent on how well both of you do.

At the end of 30 minutes the tests will be collected and scored. Since the test is fairly long, don't be concerned if you don't finish in the 30 minutes. This scoring should take only a few minutes, after which time your score and that of your partner will be brought to you. One of you, either you or your partner, will be chosen, by chance, to determine how the total pay will be divided.

Your team will be awarded 1 point (each point worth \$.10) for each proper correction, and will lose 1 point for

each oversight or incorrect correction. As you can see, it will be to your advantage to do the best you can, working as accurately as possible.

Please begin the proof-reading task now.

Self Description: Trait List

Please indicate how well each of the following characteristics describe you as you now see yourself. Use the 7 point scale noted. Mark the number that corresponds to your rating on the answer sheet that is provided.

1	2	3	4	5	6	7
Never or almost never true of me				Always or almost always true of me		
1. Self-reliant				26. Secretive		
2. Yielding				27. Makes decisions easily		
3. Defends own beliefs				28. Sincere		
4. Cheerful				29. Self-sufficient		
5. Moody				30. Conceited		
6. Shy				31. Dominant		
7. Conscientious				32. Soft spoken		
8. Athletic				33. Likeable		
9. Affectionate				34. Masculine		
10. Theatrical				35. Warm		
11. Assertive				36. Solemn		
12. Flatterable				37. Willing to take a stand		
13. Happy				38. Tender		
14. Strong personality				39. Friendly		
15. Loyal				40. Gullible		
16. Unpredictable				41. Inefficient		
17. Forceful				42. Acts as a leader		
18. Feminine				43. Childlike		
19. Reliable				44. Adaptable		
20. Analytical				45. Does not use harsh language		
21. Jealous				46. Unsystematic		
22. Has leadership abilities				47. Loves children		
23. Truthful				48. Tactful		
24. Willing to take risks				49. Gentle		
25. Understanding				50. Conventional		

Allocation Instructions

You have been chosen, by chance, to divide the payment between yourself and your partner. Your partner knows that you have been chosen to divide the money and that he will receive whatever amount of money you decide upon.

From the results sheet you just received, you can see that you and your partner have \$ in total pay. Decide on how you want to divide the money. Put the pay designated for your partner in the envelope labeled "Other's Pay." Seal the envelope. The pay which you are allocating to yourself should be put in the "Own Pay" envelope and be sealed. The envelope labeled "Other's Pay" will be picked up by the assistant and distributed to your partner. All of today's participants will be asked to keep their envelopes sealed until they leave the building.

Feedback Sheet

Your score = _____ correct corrections
 - _____ incorrect corrections & oversights
 = _____ = your net score

Your
 Partner's
 score = _____ correct corrections
 - _____ incorrect corrections & oversights
 = _____ your partner's net score

Total
 Team
 score = _____

- - - - -

As you were told, teams are paid according to their overall performance. As a team, you and your partner received 1 point (worth \$.10) per proper correction; you were also penalized 1 point (also worth \$.10) for each incorrect correction or oversight.

Therefore, your team payment, based on your total team score and the above payment schedule is _____ total points X \$.10 = \$ _____.

Results Sheet

Pages Completed	Subject	Confederate
2	$\begin{array}{r} 29 \\ - 0 \\ \hline 29 \end{array}$	$\begin{array}{r} 16 \\ - 1 \\ \hline 15 \end{array}$
3	$\begin{array}{r} 31 \\ - 2 \\ \hline 29 \end{array}$	$\begin{array}{r} 20 \\ - 5 \\ \hline 15 \end{array}$
4	$\begin{array}{r} 34 \\ - 5 \\ \hline 29 \end{array}$	$\begin{array}{r} 21 \\ - 6 \\ \hline 15 \end{array}$
5	$\begin{array}{r} 38 \\ - 9 \\ \hline 29 \end{array}$	$\begin{array}{r} 26 \\ -11 \\ \hline 15 \end{array}$
6	$\begin{array}{r} 43 \\ -14 \\ \hline 29 \end{array}$	$\begin{array}{r} 31 \\ -16 \\ \hline 15 \end{array}$
7	$\begin{array}{r} 46 \\ -17 \\ \hline 29 \end{array}$	$\begin{array}{r} 33 \\ -18 \\ \hline 15 \end{array}$
8	$\begin{array}{r} 50 \\ -21 \\ \hline 29 \end{array}$	$\begin{array}{r} 37 \\ -22 \\ \hline 15 \end{array}$
9	$\begin{array}{r} 53 \\ -24 \\ \hline 29 \end{array}$	$\begin{array}{r} 40 \\ -25 \\ \hline 15 \end{array}$
10	$\begin{array}{r} 57 \\ -28 \\ \hline 29 \end{array}$	$\begin{array}{r} 44 \\ -29 \\ \hline 15 \end{array}$
11	$\begin{array}{r} 61 \\ -32 \\ \hline 29 \end{array}$	$\begin{array}{r} 46 \\ -31 \\ \hline 15 \end{array}$

Pages Completed	Subject	Confederate
12	$\begin{array}{r} 63 \\ -34 \\ \hline 29 \end{array}$	$\begin{array}{r} 48 \\ -33 \\ \hline 15 \end{array}$
13	$\begin{array}{r} 66 \\ -37 \\ \hline 29 \end{array}$	$\begin{array}{r} 53 \\ -38 \\ \hline 15 \end{array}$
14	$\begin{array}{r} 70 \\ -41 \\ \hline 29 \end{array}$	$\begin{array}{r} 57 \\ -42 \\ \hline 15 \end{array}$

Post-Session Questionnaire

How much total pay did you receive to divide between yourself and your partner? _____

How did you divide the money?

Own pay _____ Other's Pay _____

Was your partner male or female? _____

Why did you decide to divide the total pay in this way?

Put an X inside the box that best describes your answer.

1. Did you enjoy the proofreading task?

I found the task to be:

extremely enjoyable	somewhat enjoyable	neutral	somewhat less enjoyable	not at all enjoyable

2. How would you rate your performance on the proofreading task?

I did:

extremely well	moderately well	adequately	poor	very poor

3. How did your performance compare to that of your partner?

Compared to my partner, I did:

--	--	--	--	--

much
better

somewhat
better

the
same

somewhat
worse

much
worse

4. How would you rate your skill on proofreading tasks such as this one?

I am:

--	--	--	--	--

very
skilled

somewhat
skilled

adequately
skilled

somewhat
unskilled

unskilled

5. How would you rate your skill compared to that of your partner?

Compared to my partner I am:

--	--	--	--	--

much more
skilled

somewhat
more skilled

the
same

somewhat
less skilled

much less
skilled

6. How much effort did you expend on the task?

I expended:

--	--	--	--	--

much
effort

somewhat
more effort

moderate
effort

somewhat
less effort

very little
effort

7. How much effort did you expend on the proofreading task compared to your partner?

Compared to my partner I expended:

--	--	--	--	--

much more effort	somewhat more effort	the same	somewhat less effort	much less effort
---------------------	-------------------------	-------------	-------------------------	---------------------

8. Was the quality of your work similar to that of your partner?

The quality of my work, compared to my partner, was:

--	--	--	--	--

much better	somewhat better	the same	somewhat worse	much worse
----------------	--------------------	-------------	-------------------	---------------

9. To what extent did you consider how your division of the money would affect your partner's opinion of you?

--	--	--	--	--

very much	somewhat more consideration	moderate consideration	somewhat less consideration	not at all
--------------	-----------------------------------	---------------------------	-----------------------------------	---------------

10. If you were to participate in this study again, would you want the same partner?

--	--	--	--	--

absolutely yes	maybe yes	not sure at all	maybe not	definitely not
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11. Had you heard about this experiment before you participated today? Yes _____ No _____

If yes, what had you heard?

APPENDIX D

EXPERIMENTER'S PREPARED COMMENTS

APPENDIX D

Experimenter Instructions:

1. Subjects and confederates meet in room 302 or 306 Olds.
2. As soon as assembled, the experimenter points to people and tells them to go to a particular cubicle.
 - a. if Ss and Cs are opposite sex--just say "all the men on that side, all the women on the other side."
 - b. if Ss and Cs are the same sex--point to people and assign them to cubicles--all Cs on one side
3. Materials are stacked in order on the tables in each cubicle. Cubicle ____ should be written and filled in on the top of each paper the subject uses.
4. Ask each cubicle if they can hear you.
5. Preliminary Remarks:

"We are concerned with simulated industrial situations. This study is part of a series of studies on industrial work situations. In some situations you work face-to-face with a partner, while in other cases you have a partner, but you both work independently. Today, you are in the independent work situation. Each one of you on one side of the room is paired with a person in a cubicle on the other side of the room. If you are called back for further work sessions, it is possible that you would work face-to-face with the same partner you have now. But, for today, you and your partner are working in separate cubicles.

In a few minutes you will be given a proofreading job to work on for 30 minutes. At the end of that 30 minutes, the papers will be checked for accuracy and

the joint pay of you and your partner will be calculated from your joint accuracy and error rate. There will be a coin toss to see which side of the room has to divide the pay between yourself and your partner. The money will be divided. All of you will then have a post-session questionnaire to complete. Then you will be ready to go. You will be telephoned if you are called back for another session."

6. "The consent form on the desk in front of you is for today's work session. Please read and sign it. My assistant will collect them in a moment. If you have any questions about the consent form, just ask him (her)." (Collect consent forms in order around the room. We now have the Ss name and know which cubicle he/she is sitting in.)
7. The task instructions and booklets are handed out to the subjects. Ask the subjects to read along as you read the instructions out loud. At the end of the reading, ask if there are any questions. Begin timing.
8. "O.K., the time is up. All of you can stop working on the task. My assistant will pick up the booklets. While my assistants are scoring the booklets, we will have the coin toss to determine which side of the room will be dividing the pay for the team. (Go to the nearest confederate and ask s/he to call it. S/he calls heads or tails out loud, but whatever is actually flipped, the confederate says out loud, that it is not what s/he called so s/he loses.) "Cubicles __, __, and __ (indicating the Ss) will be dividing the money. At this point let me just summarize again what we are doing. This is an industrial simulation where in this condition each person works independently on the task, but your pay is jointly determined. If you are called back for a further session, you may be matched with the same partner in a face-to-face situation. However, for today's session, this is what we have left to do.

While we are scoring the correction sheets, we have a brief questionnaire for you to fill out. When you are finished with this questionnaire, just remain seated in your cubicles. We will give you the results of your own and your partner's work as soon as we have them scored. These people in cubicles ____ (indicating the Ss) will then divide the pay. Finally, everyone will fill out one last brief questionnaire, then you will be finished and can leave."

9. Hand out the results. Give the allocators their instruction sheet, money (in an envelope), and two envelopes. Ask them if there are any questions. The money is divided. Take the Other's pay envelope and give it to one of the other Cs. Warn all Ss and Cs not to open the envelope until they are outside. Hand out the post-questionnaire. When it is done, pick them up and allow the Ss to leave the lab first.

Technical Instructions:

1. At the top of all the papers for each cubicle, there should be written Cubicle ____ (letter of the cubicle). We will easily be able to keep track of names and materials.
2. While you are waiting as the Ss do the proofreading task, please do not talk with the person you are working with and do not read any psychology books. Any other form of reading or homework is fine.

Alternate Confederates

1. You will be called by the scheduler and told where and when to arrive. If a subject does not appear, you will take that person's place.
2. There is a bench down the hall. Arrive there at the appointed time and simply wait. If you are needed, the experimenter will get you. If the subjects all arrive, you can leave. Do not be conspicuous. Fade into the background.
3. If you are called in, you are replacing a subject so you will win the drawing and allocate the money.

Callers

1. The callers will receive a list containing the names of subjects, confederates, alternate confederates, and experimenters. Seventy-two hours before the session call all the participants and tell them the time and place. The night before the experiment, call the subjects again to remind them of the time and place.
2. If there are any scheduling problems, contact me at once. All the participants must be personally contacted. Do not leave messages for them--have them call you back.

Materials--the experimenter is responsible for bringing and returning all the materials to the sessions.

1. pencils--enough for 3 per participant
2. consent forms--one for every S and C
3. task instructions--one for every C and S
4. task booklets--one for every C and S
5. intervening task--one for every S and C
6. results sheets--one for every S and C
7. pay instructions--one for each S
8. money and three envelopes per S
9. post-session questionnaire--one for each S and C

APPENDIX E

**ANOVA TABLES FOR THE POST-SESSION
QUESTIONNAIRE**

APPENDIX E
Summary of the 2 (Sex of Subject) X 2 (Sex of Co-Worker)
X 2 (Achievement) X 2 (Affiliation) ANOVA for
Post-Session Questionnaire Items 1-5

Source	Item 1		Item 2		Item 3		Item 4		Item 5	
	MS	F	MS	F	MS	F	MS	F	MS	F
Sex of Subject (A)	1.01	1.05	.01	.02	.00	.00	.00	.00	.05	.13
Sex of Co-Worker (B)	1.01	1.05	.61	1.11	.05	.10	.20	.24	.05	.13
Achievement (C)	1.51	1.56	.31	.57	.80	1.60	.80	.96	.05	.13
Affiliation (D)	1.51	1.56	.31	.57	.80	1.60	1.25	1.49	1.25	3.18
A x B	2.11	2.18	.11	.21	.20	.40	.00	.00	.05	.13
A x C	.61	.63	.31	.57	.05	.10	.80	.96	1.25	3.18
A x D	2.81	2.90	.11	.21	.45	.90	.45	.54	.05	.13
B x C	.01	.01	1.01	1.84	.20	.40	.20	.24	.05	.13
B x D	.11	.12	.01	.02	.00	.00	.45	.54	.45	1.14
C x D	.01	.01	.11	.21	.05	.10	.05	.06	.45	1.14
A x B x C	1.01	1.05	.61	1.11	.05	.10	5.00	5.97*	.05	.13
A x B x D	.11	.12	1.01	1.84	.45	.90	.45	.54	.45	1.14
A x C x D	.01	.01	.01	.02	.20	.40	.45	.54	.05	.13
B x C x D	.31	.32	.01	.02	.45	.90	.05	.06	.45	1.14
A x B x C x D	1.01	1.05	.11	.21	.20	.40	.45	.54	.05	.13
Error	.97		.55		.50		.84		.39	

* $p < .05$

** $p < .01$

APPENDIX E

Summary of the 2 (Sex of Subject) X 2 (Sex of Co-Worker)
X 2 (Achievement) X 2 (Affiliation) ANOVA for
Post-Session Questionnaire Items 6-10

Source	Item 6		Item 7		Item 8		Item 9		Item 10	
	MS	F	MS	F	MS	F	MS	F	MS	F
Sex of Subject (A)	.12	.15	.24	.80	.35	1.07	1.27	.85	.33	.45
Sex of Co-Worker (B)	.01	.02	1.95	6.50*	.33	1.00	1.79	1.20	.02	.02
Achievement (C)	.02	.02	.44	1.47	.12	.37	.24	.16	.04	.06
Affiliation (D)	.04	.05	.00	.00	.09	.27	3.80	2.55	.15	.20
A x B	.61	.77	.07	.24	.03	.08	.54	.36	.28	.38
A x C	.09	.11	.08	.26	.85	2.62	2.50	1.68	.00	.00
A x D	2.69	3.39	.58	1.94	1.12	3.43	.13	.09	2.45	3.34
B x C	.004	.01	.99	3.29	.14	.43	9.26	6.22*	.02	.02
B x D	.001	.001	.09	.30	.57	1.75	1.41	.95	.01	.02
C x D	.25	.31	.01	.04	.17	.53	.08	.05	.98	1.34
A x B x C	.03	.04	1.23	4.12*	.001	.004	.30	.20	.84	1.15
A x B x D	1.83	2.31	.10	.35	.12	.36	.92	.62	.51	.69
A x C x D	.10	.12	.38	1.28	.00	.001	.12	.08	.04	.06
B x C x D	2.64	3.33	1.31	4.37*	.12	.38	5.44	3.66	.22	.30
A x B x C x D	1.12	1.41	.49	1.63	.61	1.86	.03	.02	.91	1.24
Error	.79		.30		.33		1.49		.73	

* $p < .05$ ** $p < .01$

APPENDIX F

CORRELATION MATRIX

APPENDIX F

CORRELATION MATRIX

	Subject Sex	Hopes Test	Self-Allocation	Achievement	Accomplishment	Interpersonal Harmony	Justice	Equality
Subject Sex (1 = male, 2 = female)	1.00							
Hopes Test ¹	-.18***	1.00						
Self-Allocation ¹	.20*	-.06	1.00					
Achievement	-.004	-.07	-.16	1.00				
Accomplishment	-.07	.01	-.09	.36***	1.00			
Interpersonal Harmony	-.13**	.06	-.09	-.11**	-.02	1.00		
Justice	.01	-.01	.02	-.08*	-.17***	-.14***	1.00	
Equality	-.04	-.16***	.002	-.16***	-.19***	-.03	.35***	1.00

ROKACH SCALE
(1 = most important,
20 = least important)

¹Self-Allocation correlations based on the 80 subjects in the work sessions. All other correlations based on 457 cases in the general pool.

* $p < .05$ ** $p < .01$ *** $p < .001$

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