

Effects of Gender Composition and Group Status Differences on Member Perceptions of Group Developmental Patterns, Effectiveness, and Productivity

Susan A. Wheelan¹

Temple University

This field study sought to ascertain whether all female or female dominated work groups, all male or male dominated work groups, and mixed sex work groups varied systematically in member perceptions of group developmental patterns, effectiveness, and productivity. The study also sought to determine whether high versus low status groups differed significantly on these variables. One hundred seventy-one work groups participated in the study. The results suggested that member perceptions of group functioning were more similar than different. Where significant differences were noted, group status, as opposed to gender composition, seemed to account for these differences in perception.

The purpose of this field research was to investigate the effects of gender composition and group status differences on member perceptions of developmental patterns, effectiveness, and productivity in work groups. Specifically, the study sought to ascertain whether all female or female dominated groups, all male or male dominated groups, and mixed gender groups varied systematically in member perceptions of group developmental patterns, effectiveness, and productivity. The study also sought to determine whether high versus low status groups differed significantly on these variables. The ultimate goal of the investigation was to determine whether gender composition or group status more adequately explained potential group differences in these areas.

¹Correspondence should be sent to Susan A. Wheelan, 6607 Greene Street, Philadelphia, Pennsylvania 19119.

Group development has been an area of study since 1950 when Robert Freed Bales developed a system to code interaction patterns in small groups. Since that time impressionistic studies which relied on experiences and reflections of observers (e.g., Bennis & Shepard, 1956; Bion, 1961; Caple, 1978; Rogers, 1970; Slater, 1966) and empirical studies using observational systems (e.g., Bales, 1950; Dunphy, 1964; Hill, 1974; Mills, 1964; Verdi & Wheelan, 1992) have been conducted. The accumulated evidence supports the general conclusion that groups move through successive phases that can be identified and described (Cissna, 1984; Kuypers, Davies, & Glaser, 1986; Yalom, 1975).

In view of the general consensus that groups develop, some writers have conducted extensive reviews of the literature in order to consolidate previous work and to propose a unified model of group development (e.g., Tuckman, 1965; Tuckman & Jensen, 1977; Wheelan, 1990; Wheelan, 1994). The reviews have produced very similar results. What follows is a brief description of the five stages of group development outlined by Wheelan (1994) in the Integrated Model of Group Development.

The earliest period of group development (*Dependency and Inclusion*) is characterized by significant member dependency on the designated leader. The situation is new and not clearly defined. Members of a newly formed group have concerns about safety and inclusion. Politeness, tentativeness, and deference to authority are evident at this stage. Members avoid conflict at all cost, including work-related tasks which might generate conflict. Members tend to avoid working by engaging in flight, or discussions unrelated to the group's goals and tasks. Some work occurs at this early stage but it is minimal and is typically initiated by the leader with the passive compliance of members.

The second stage of group development is referred to as a period of *Counterdependency and Fight*. The group's task at this stage is to make decisions about how it will operate and what roles members will assume in the process. Members feel freer to express conflicts during this period since some needs for safety have been met and participants are becoming more familiar with each other. The group seeks to liberate itself from its dependence on the leader and members fight among themselves about group goals and procedures. Conflict is an inevitable part of this process since the group's task at this stage is to develop a unified set of goals, values, and operational procedures which will elicit differences of opinion among members. Conflict is also necessary for the establishment of trust and a climate in which members feel free to disagree with each other.

If the group manages to work through the inevitable conflicts of Stage Two, member trust, commitment to the group, and willingness to cooperate increase. Communication becomes more open and task-oriented. This third

stage of group development, referred to as the *Trust and Structure* phase, is characterized by more mature negotiations about goals, roles, organization and procedures. It is also a time in which members work to solidify positive relationships with each other.

As its name implies, the fourth, or *Work* stage, of group development is a time of intense team productivity and effectiveness. Having resolved many of the issues of the previous stages, the group can focus the majority of its energy on goal achievement and task accomplishment. Finally, in groups with a distinct ending point, a fifth or *Termination* stage occurs in which conflicts may reoccur or members may review and assess their work together as a way of completing the group experience.

The integrated model of group development was derived from previous work. An analysis of theoretical models and research was conducted to determine their common threads and these commonalities formed the basis for the model. A number of validation studies have been completed and the results of these studies generally support the validity of the proposed model of group development (Verdi & Wheelan, 1992; Wheelan & Abraham, 1993; Wheelan & Krasick, 1993; Wheelan & McKeage, 1993; Wheelan & Verdi, 1992).

Among the findings of these studies were some that run counter to the conventional wisdom regarding the influence of gender composition on group dynamics and development. No gender differences in verbal behavior were noted between men and women operating in the same group or in the developmental patterns of all-female and all-male groups (Verdi & Wheelan, 1992; Wheelan & Verdi, 1992). The current study is an attempt to explore those findings further.

The assumption that the perceptions and behaviors of women and men in groups are different is widely accepted in the culture and is supported by considerable research evidence. For example, many studies have concluded that men contribute significantly more task statements than women in mixed or homogeneous groups (Bartol & Butterfield, 1976; Crocker & McGraw, 1984; Denmark, 1977; Ellis & McCallister, 1980; Eskilson & Wiley, 1976; Forsyth et al., 1985; Geis et al., 1984; Geis, Boston, & Hoffman, 1985; Greene, Morrison, & Tischler, 1981; Hare, 1976; Lockheed, 1975; Lockheed & Hall, 1976; Mabry, 1985; Nemeth, Endicott, & Wachtler, 1976; Piliavin & Rosemann-Martin, 1978; Stein & Heller, 1983; Stitt et al., 1983; Strodtbeck & Mann, 1956; Sturm, 1989). Task statements are those that contribute to group goal achievement such as giving suggestions, opinions or information or requesting these types of information from others (Bales, 1950, 1970).

Likewise, most studies have concluded that women contribute significantly more maintenance input than men (Bartol & Butterfield, 1976; Bor-

gatta & Stimson, 1963; Ellis & McCallister, 1980; Eskilson & Wiley, 1976; Forsyth et al., 1985; Geis et al., 1984; Hare, 1976; Jago & Vroom, 1982; Lockheed & Hall, 1976; Mabry, 1985; Piliavin & Rosemann-Martin, 1978; Strodtbeck & Mann, 1956; Sturm, 1989; Tower, 1979; Wexley & Hunt, 1974; Wheelan, 1974). Social-emotional or maintenance statements are those which contribute to the affective life of the group such as agreeing, helping, supporting and the like (Bales, 1950, 1970).

While Bales (1950, 1970) concluded that both task and maintenance input are necessary to adequate group functioning, leadership has been very consistently associated with task input as opposed to maintenance input. (Aries, 1976; Eskilson & Wiley, 1976; Geis et al., 1985; Hare, 1976; Hawkins, 1995; Lockheed & Hall, 1976; Nemeth et al., 1976; Strodtbeck, James, & Hawkins, 1957). This is thought to explain why men are more likely to be perceived as leaders in groups. Thus, differences between women and men in verbal contributions to group discussion have provided, albeit inadvertently, a scientific rationale for the continuing dearth of female leaders at all levels of American society. The small number of female leaders may not be due to prevailing sexist views. Rather, the behavior of women themselves could be viewed as causal.

The conclusion that the perceptions and behaviors of men and women in groups are different is not without its critics. For example, a number of investigations have found no differences between men and women in task input (Bartol & Wortman, 1979; Chapman, 1975; Helmich, 1974; Hoffman & Maier, 1961; Jacobson & Effertz, 1974; Kerr & Sullaway, 1983; Maier, 1970; Wexley, 1974; Wheelan, 1974; Wheelan & Verdi, 1992). Other studies reported no gender differences in maintenance input (Chapman, 1975; Helmich, 1974; Nemeth et al., 1976; Stitt et al., 1983; Wheelan & Verdi, 1992). The existence of gender differences in group member behaviors remains controversial (Andrews, 1992).

Research in this area has been criticized for relying almost exclusively on laboratory studies where groups are assembled for the purpose of the study and typically meet for one session only (Bormann, 1970; Poole, 1983). Groups that meet for extended periods of time might produce different interaction patterns (Brown, 1979; Eagly, 1987; Eagly & Wood, 1982). Also, naturally occurring groups, as opposed to laboratory groups, might yield different results. In fact, one field study that observed the behavior of an all male and all female group for a longer period of time reported no differences between the groups that could be attributed to gender composition (Wheelan & Verdi, 1992).

Since most studies of gender differences in groups have been conducted in laboratory settings, other salient processes, variables, and competing explanations cannot be explored. In experimental settings, gender

differences are widely reported (e.g., Dobbins & Platz, 1986; Wood, 1987). In field studies, however, these differences are more elusive. For example, while a meta-analysis by Eagly and Johnson (1990) found gender differences in leadership styles in studies conducted in laboratory settings, no differences were noted in organizational field studies. Likewise, no differences were noted in the content of conversations occurring in all-male, all-female or mixed gender groups observed in a field setting (Wheelan & Abraham, 1993; Wheelan & Krasick, 1993).

The elusiveness of gender differences in naturally occurring groups suggests that other factors may be operating that reduce the salience of gender composition. Unlike laboratory groups, where conditions can be controlled, natural groups may vary in size, task, developmental stage and the like. All of these factors have been known to produce differences in member behaviors and perceptions. For example, large groups increase member perceptions of threat and decrease group productivity (Gibb, 1951; Gist, Locke, & Taylor, 1987; Wheelan, Johnston, McKeage, & Kaeser, 1994). Large groups also elicit less supportive and task-oriented statements from members than smaller groups (Wheelan & McKeage, 1993). Learning groups elicit less task oriented statements than work groups (Wheelan, Johnston, McKeage, & Kaeser, 1994). Finally, group development theories suggest that groups experience phasic shifts across time which cause changes in members' perceptions and actions (e.g., Bennis & Shepard, 1956; Bion, 1961; Slater, 1966; Tuckman, 1965; Wheelan, 1990, 1994).

All of these factors may influence member perceptions and behaviors. However, it is rare for them to be considered in studies focusing on gender differences in groups. The salience and immutability of gender as a predictor of perception and behavior is so embedded in the culture that other, potentially confounding, variables are either systematically controlled in laboratory studies or ignored in field studies.

There are many other factors that may contribute to differences among groups. Group status is one that has not been explored to any great extent. In the real world of work, groups tend to be composed of persons of similar educational, occupational, and professional status. Engineers meet together. The maintenance crew meets together and the underwriters meet together. The influence of group status on member perceptions or behavior has not been explored sufficiently.

Status may be especially important in the ongoing investigation of gender composition since women tend to occupy low status roles more frequently than men. High status roles are associated with rationality, independence, dominance, ambition, and leadership. Low status roles are associated with emotionality, dependence, submissiveness, contentment, and followership (Geis et al., 1984). The descriptions of these status roles

are very similar to descriptions of male versus female behavior in groups. Task focused behavior tends to represent the behavior of dominant group members and maintenance focused behavior tends to represent the behavior of subordinate group members. A task or maintenance orientation, then, may not be related to gender differences at all. It may be that gender and role status are confounded since men typically occupy higher status roles in society than women do (Geis et al., 1984).

Gender may operate like any other status characteristic (Lockheed & Hall, 1976). That is, since men tend to have higher status in the society, they are perceived, and may act, in accordance with that status. Women, having lower status, are perceived, and may act, in accordance with that status. Eagly (1987) suggested that status may contribute to the formulation of shared expectations of male and female behavior which, in turn, may lead to actual differences in behavior or perception. This conclusion has led others to postulate that differences in male and female interaction in groups may be due to these initial status differences (Berger, Rosenholtz, & Zelditch, 1980; Meeker & Weitzel-O'Neil, 1982; Ridgeway, 1982; Ridgeway & Berger, 1986).

The problem for researchers, then, is to attempt to disentangle gender and status in order to determine the relative influence of each on either the perceptions or behaviors of members of groups containing various numbers of men and women. In addition, other variables, such as group size and age need to be considered since, as noted previously, these factors affect member perceptions and behaviors. Finally, this type of research is best conducted in the field since gender may be especially salient in laboratory settings where other status differences typically are not operative.

Discovering whether gender or status is more influential in shaping the behaviors or perceptions of group members is not simply an interesting academic challenge. The assumption of differences in the perceptions and behaviors of men and women has real consequences in the lives of persons. As was stated previously, the prevailing assumption that gender differences are real has provided a scientific rationale for the dearth of female leaders at all levels of American society. It also may account for the continuing differential in the salaries of men and women working in equivalent jobs.

This field study focused on the perceptions of members of all female or female dominated groups, all male or male dominated groups, and mixed sex groups. Group status also was investigated in an attempt to gain a fuller understanding of the dynamics of groups in the workplace.

Specifically, the primary research questions were: (Q1.) Are there significant differences in member perceptions of group functioning in all female and female dominated groups versus all male and male dominated groups versus groups containing equivalent numbers of males and females? (Q2.)

Are there significant differences in member perceptions of group functioning in high status versus low status groups? (Q3.) Are there significant differences in member perceptions of group functioning in all female and female dominated high status groups versus all male and male dominated high status groups versus high status mixed gender groups? (Q4.) Are there significant differences in member perceptions of group functioning in all female and female dominated low status groups versus all male and male dominated low status groups versus low status mixed gender groups? (Q5.) Are there significant differences in member perceptions of group functioning in all female and female dominated high status groups versus all female and female dominated low status groups, all male and male dominated high status groups versus all male and male dominated low status groups, or high status mixed gender groups versus low status mixed gender groups?

METHOD

The Participating Groups

One hundred seventy-one work groups made up the sample for this study. Forty-eight groups (28.2%) were operating in financial organizations, specifically banks and insurance companies. Sixty-eight groups (40.0%) were working in engineering or manufacturing organizations. Forty-eight groups (28.2%) were operating in educational, social service, and government organizations. Another six groups (3.6%), operating in small businesses, completed the sample. Twenty groups worked in organizations located in the Southern United States. Another 139 worked in organizations located in the Middle Atlantic States and five were located in New England. Four groups were working in the Midwest, two in a Western state and one in a Western province of Canada. Finally, the groups were functioning in 41 separate organizations.

The size of each group ranged from 2 to 25 members. The average group size was 8.7 and the median size was 8 members per group. The total number of individuals in the 171 groups was 1,467 of whom 737 were female and 730 were male. While data on racial ethnic differences were not available for every group, approximately 75% of all group members were Caucasian. Group members were middle managers, professionals, technical employees, hourly employees, and support staff of their respective organizations. The groups had been functioning together, with little or no change in membership, for a minimum of one month and a maximum of 180 months. The groups also varied in status. Ninety-five groups were designated as high status groups. Of these, 38 were male or male dominated,

32 were female or female dominated, and 25 were mixed gender groups. Seventy-six groups were designated as low status groups. Of these, 23 were male or male dominated, 29 were female or female dominated, and 24 were mixed gender groups.

The Instrument

Based on the Integrated Model of Group Development described previously, the 60 item *Group Development Questionnaire* (GDQ) contains four scales that correspond to the first four stages of group development (see Fig. 1). Each scale contains 15 items. The instrument does not measure the Termination stage since it is meant for use with ongoing groups.

The items on Scale I measure the amount of energy a group is expending in attempting to deal with issues of dependency and inclusion. Test questions were designed to identify the presence or absence of the characteristic behaviors of groups at this first stage of development. Questions on Scale II seek to ascertain the degree of group focus on issues of conflict, counterdependency and other characteristics associated with the second stage of development. The third scale assesses the degree of trust and structure that is present in the group. Scale III, then, is related to issues associated with the third stage of group development. The characteristics of the fourth developmental stage (Work) are assessed by Scale IV. Table I contains sample items from each GDQ scale.

Each item is scored from 1 (never true of this group) to 5 (always true of this group). Therefore, the minimum score on each scale is 15 and the maximum score is 75. An effectiveness ratio is also determined by dividing a team's actual mean score on GDQ Scale IV by its potential maximum score (75). The minimum effectiveness ratio, then, is 20% and the maximum is 100%. A group's productivity mean represents the average response to the question "In your opinion, how productive is this group?"

<u>GDQ Scale</u>	<u>Stage of Group Development</u>
Scale I	Dependency / Inclusion, Stage One
Scale II	Counterdependency / Fight, Stage Two
Scale III	Trust / Structure, Stage Three
Scale IV	Work and Productivity, Stage Four

Fig. 1. GDQ scales and their corresponding stage of group development.

Table I. Sample Items Contained in Each GDQ Scale

Scale	Sample Questions
GDQ I	<ul style="list-style-type: none"> *Members tend to go along with whatever the leader suggests. *There is very little conflict expressed in the group. *We haven't discussed our goals very much.
GDQ II	<ul style="list-style-type: none"> *People seem to have very different views about how things should be done in this group *Members challenge the leader's ideas. *There is quite a bit of tension in the group at this time.
GDQ III	<ul style="list-style-type: none"> *The group is spending its time planning how it will get its work done. *We can rely on each other. We work as a team. *The group is able to form subgroups, or subcommittees, to work on specific tasks.
GDQ IV	<ul style="list-style-type: none"> *The group gets, gives, and uses feedback about its effectiveness and productivity. *The group acts on its decisions. *This group encourages high performance and quality work.

Respondents rate the group from 1 (not productive at all) to 4 (very productive).

To ensure the reliability and validity of the GDQ, the instrument was subjected to a number of statistical tests (Wheelan & Hochberger, 1996). Test-retest correlations for each scale ranged from .69 to .89. All correlations were highly significant. The internal consistency of each fifteen item scale was investigated using Cronbach's alpha. Coefficients ranged from .54 to .88 and all alpha coefficients were significant. To establish concurrent validity the GDQ was correlated with the Group Attitude Scale (Evans & Jarvis, 1986). The Group Attitude Scale (GAS) measures member attraction to the group. The results indicated that the concurrent validity of the GDQ and GAS is in the moderate range with significant positive correlations between the two measures overall.

Criterion-related validity also was investigated. Work groups that ranked high on organizational measures of productivity had significantly higher scores on GDQ Scales III and IV, the effectiveness ratio and the productivity mean than groups that ranked low on these external productivity measures. Likewise, groups ranked high on organizational measures of productivity had significantly lower scores on GDQ Scales I and II (Wheelan & Murphy, in process).

The reliability and validity of the *Group Development Questionnaire* have been established. One can safely assume that the instrument measures what it purports to measure. That is, the GDQ provide an accurate assessment of a group's current developmental level, effectiveness ratio, and productivity.

This instrument was chosen for use in this study for the following reasons. If, as an abundance of research suggests, men are more task oriented than women, then male or male dominated groups should be rated higher by their members on GDQ Scale IV, the effectiveness ratio, and the productivity mean which measure the degree to which a group is focused on goal and task accomplishment. Likewise, if women are more maintenance oriented, then female or female dominated groups should be rated higher by their members on GDQ Scale I which measures dependency and needs for inclusion and possibly GDQ Scale III since many of the items on that scale relate to trust, cooperation, and team work.

In addition, some research has concluded that groups containing a predominance of women are less successful in solving problems and less productive than predominantly male groups (e.g., Hare, 1976; Hoffman, 1965). If this is the case, then all female or female dominated group members should describe those groups as less effective and productive than all male or male dominated groups and mixed groups. Finally, the GDQ was used because member responses to the instrument correlate highly with actual group behavior and performance (Wheelan & Hochberger, 1996; Wheelan & Murphy, in process).

Procedures

Data were collected from each group at its work site. The Group Development Questionnaire was administered by a total of 94 individuals who had completed a minimum of four days of training in GDQ administration and interpretation. All questionnaire administrators were professionals in human resources, group or organizational consulting and they all held advanced degrees. Each group completed the GDQ at the end of a regularly scheduled meeting. Administration of the GDQ took an average of 25 minutes. Group demographics, such as age in months, size, number of males and females, were collected. Individual member demographics, such as profession, position in the organization, age, educational level years with the organization, were collected as well. Descriptive statistics and analyses of variance procedures were used to answer the research questions.

RESULTS

Q1. Are there significant differences in member perceptions of group functioning in all female and female dominated groups versus all male and

male dominated groups versus groups containing equivalent numbers of males and females?

A *female or female dominated group* was defined as one in which all the members were female or in which the number of females in the group was twice the number of males. A *male or male dominated group* was defined as one in which all the members were male or in which the number of males in the group was twice the number of females. Groups containing equivalent numbers of males and females (e.g., 7 and 5; 3 and 4) are referred to as *mixed groups* in the remainder of the paper. There were 61 groups that were female or female dominated. Male or male dominated groups numbered 61 and there were 49 mixed groups in the sample.

The mean score for each group, rather than individual member scores, served as the unit of analysis in all statistical procedures. This was done since the study focused on the group as a whole. In addition, while using group means increases the difficulty of achieving significant results, it also ensures that any significant results will be robust.

Since this was a field study, other potentially intervening variables were investigated before the main question was addressed. Group development suggests that groups of different ages are dealing with specific issues (e.g., Tuckman, 1965; Wheelan, 1994). This would, in all likelihood, cause members of groups of different ages to rate the functioning of their respective groups in different ways. If systematic age differences were noted among the group types, these differences would pose a threat to the validity of the study. For example, if younger groups were primarily female or female dominated, this could skew the results and make interpretation very difficult. However, if group age is distributed across group types, then group age would not be a factor in the study. This possibility was investigated first. A one way analysis of variance revealed no significant differences among the three group types in the variable group age in months. The mean group age in the 60 female/female dominated groups was 19.6. The mean age in the 58 male/male dominated groups was 18.9. The mean age in the 52 mixed groups was 18.7.

Likewise, group size has been identified as a variable that affects member behavior and member perceptions of group functioning (e.g., Berkowitz, 1958; Gibb, 1951; Hackman & Vidmar, 1970; Patterson & Schaeffer, 1977; Slater, 1958; Wheelan & McKeage, 1993). This possibility was investigated as well. A one way analysis of variance revealed no significant differences among the three group types in the variable group size. The mean size of the female/female dominated groups was 9.1. The mean size of the male/male dominated groups was 8.5. The mean size of the mixed groups was 8.2.

To answer the primary research question, a series of two way analyses of variance were conducted comparing group mean scores on the four GDQ scales, Effectiveness Ratio, and Productivity Measure. Analyses of variance revealed no significant differences on any measure with one exception. A significant difference ($F = 4.5$, $df = 5,164$, $p = .01$) was noted on Dependency and Inclusion (Scale I). All male or male dominated groups had significantly lower mean scores on GDQ Scale I than all female/female dominated groups. No differences were noted between the mean scores of mixed groups on this scale and either of the other two group types. Female and female dominated groups had the highest mean scores on Dependency and Inclusion and male and male dominated groups had the lowest mean scores (see Table II).

Q2. Are there significant differences in member perceptions of group functioning in high status versus low status groups?

A *high status group* was defined as one in which the majority of members had job titles which indicated higher status, managerial roles, and/or jobs that required at least a college degree to perform. A *low status group* was defined as one in which the majority of members had job titles which indicated lower status, non-managerial roles, and/or jobs that required less than a college degree to perform. There were 95 groups that were designated high status and 76 that were designated as low status groups.

Again, potentially confounding variables were investigated. Neither age in months nor size differed systematically between high and low status groups. The average size of high status groups was 9.0 and the average size of low status groups was 8.4. The average age in months of a high status group was 20.4 and the average age in months of a low status group was 17.6.

To answer this research question, a series of two way analyses of variance were conducted comparing group mean scores of high versus low

Table II. Mean GDQ Scores of Female/Female Dominated Groups Versus Male/Male Dominated Groups Versus Mixed Gender Groups

GDQ scores	Group type		
	F/FD	M/MD	Mixed
Scale I	44.1	42.1*	42.4
Scale II	39.8	39.5	39.8
Scale III	53.8	53.2	53.2
Scale IV	56.7	57.1	56.6
Effectiveness ratio	75.3	75.8	75.3
Productivity mean	3.1	3.1	3.1

* $p = .01$.

status groups on the four GDQ scales, Effectiveness Ratio, and Productivity Mean. Analyses of variance revealed no significant differences on Scale II or the Productivity Mean. A significant difference ($F = 10.8$, $df = 5,164$, $p = .001$) was noted on Dependency and Inclusion (Scale I). High status groups had significantly lower mean scores on GDQ Scale I than low status groups. A significant difference ($F = 6.7$, $df = 5,164$, $p = .01$) was noted on Trust and Structure (Scale III). High status groups had significantly higher mean scores on GDQ Scale III than low status groups. A significant difference ($F = 6.2$, $df = 5,164$, $p = .01$) was noted on Work (Scale IV). High status groups had significantly higher mean scores on GDQ Scale IV than low status groups. Finally, a significant difference ($F = 5.4$, $df = 5,164$, $p = .02$) was noted on the Effectiveness Ratio. High status groups had significantly higher mean scores on the Effectiveness Ratio than low status groups (see Table III). There were no significant interaction effects.

Q3. Are there significant differences in member perceptions of group functioning in all female and female dominated high status groups versus all male and male dominated high status groups versus high status mixed groups?

Of the 95 groups designated as high status, 32, or 34.0%, were all female or female dominated, 38, or 40.0%, were all male or male dominated, and 25, or 26.0%, were mixed gender groups. To answer this research question, a series of one way analyses of variance were conducted comparing group mean scores of all female and female dominated high status groups versus all male and male dominated high status groups versus high status mixed groups on the four GDQ scales, Effectiveness Ratio, and Productivity Mean. No significant differences were noted on any measure.

Table III. Mean GDQ Scores of High Versus Low Status Groups

GDQ scores	Group type	
	High status	Low status
Scale I	41.9	43.9***
Scale II	38.7	40.7
Scale III	54.5	52.3**
Scale IV	58.0	55.6**
Effectiveness ratio	77.0	73.9*
Productivity mean	3.1	3.0

* $p = .02$.

** $p = .01$.

*** $p = .001$.

Q4. Are there significant differences in member perceptions of group functioning in all female and female dominated low status groups versus all male and male dominated low status groups versus low status mixed gender groups?

Of the 76 groups designated as low status, 30, or 39.5%, were all female or female dominated, 22, or 28.9%, were all male or male dominated, and 24, or 31.6%, were mixed gender groups. To answer this research question, a series of one way analyses of variance were conducted comparing group mean scores of all female and female dominated low status groups versus all male and male dominated low status groups versus low status mixed gender groups on the four GDQ scales, Effectiveness Ratio, and Productivity Mean. Analyses of variance revealed no significant differences on any measure, with one exception. A significant difference ($F = 3.1$, $df = 2,73$, $p = .05$) was noted on Dependency and Inclusion (Scale I). Low status female or female dominated groups had significantly higher mean scores on that scale.

Q5. Are there significant differences in member perceptions of group functioning in all female and female dominated high status groups versus all female and female dominated low status groups, all male and male dominated high status groups versus all male and male dominated low status groups, or high status mixed gender groups versus low status mixed gender groups?

Of the 58 all male or male dominated groups, 35 were high status and 23 were low status. A series of one way analyses of variance were conducted comparing group mean scores of all male and male dominated high status groups versus all male and male dominated low status groups on the four GDQ scales, Effectiveness Ratio, and Productivity Mean. No significant differences were noted on any measure.

Of the 61 all female or female dominated groups, 30 were high status and 31 were low status. A series of one way analyses of variance were conducted comparing group mean scores of all female and female dominated high status groups versus all female and female dominated low status groups on the four GDQ scales, Effectiveness Ratio, and Productivity Mean. Analyses of variance revealed no significant differences on any measure with one exception. A significant difference ($F = 7.09$, $df = 1,59$, $p = .01$) was noted on GDQ Scale 1 (Dependency and Inclusion). The lower status all female or female dominated groups had significantly higher mean scores on this scale than the high status female/female dominated groups (see Table IV).

Of the 49 mixed gender groups, 25 were high status and 24 were low status. A series of one way analyses of variance were conducted comparing

Table IV. Mean GDQ Scores of High Versus Low Status Female or Female Dominated Groups

GDQ scores	Group type	
	High status	Low status
Scale I	42.5	45.7*
Scale II	39.3	40.7
Scale III	54.3	53.3
Scale IV	57.6	56.0
Effectiveness ratio	76.5	74.0
Productivity mean	3.2	3.0

* $p = .01$.

group mean scores of mixed gender high status groups versus mixed gender low status groups on the four GDQ scales, Effectiveness Ratio, and Productivity Mean. Analyses of variance revealed no significant differences on GDQ Scale I or the Productivity Mean. A significant difference ($F = 4.2$, $df = 1,47$, $p = .046$) was noted on GDQ Scale 2 (Counterdependency and Fight). The lower status mixed gender groups had significantly higher mean scores on this scale than the higher status mixed gender groups. A significant difference ($F = 10.6$, $df = 1,47$, $p = .002$) was noted on GDQ Scale 3 (Trust and Structure). The lower status mixed gender groups had significantly lower mean scores on this scale than the higher status mixed gender groups. A significant difference ($F = 6.6$, $df = 1,47$, $p = .01$) was noted on GDQ Scale 4 (Work). The lower status mixed gender groups had significantly lower mean scores on this scale than the higher status mixed gender groups. Finally, a significant difference ($F = 7.01$, $df = 1,47$, $p = .01$) was noted on the Effectiveness Ratio. The lower status mixed gender groups had significantly lower mean scores on this scale than the higher status mixed gender groups (see Table V).

DISCUSSION

The proposition, raised earlier, that male or male dominated groups should be rated higher by their members on the Work scale (GDQ IV), the Effectiveness Ratio, and Productivity measure was not supported by these results. Male or male dominated groups did not differ from female or female dominated groups or mixed gender groups on these measures. The second proposition, that female or female dominated groups should be rated higher by their members on GDQ Scale I and possibly GDQ Scale III was partially supported in that female or female dominated groups had

**Table V. Mean GDQ Scores of High Versus Low Status
Mixed Sex Groups**

GDQ scores	Group type	
	High status	Low status
Scale I	41.3	42.9
Scale II	37.0	41.9*
Scale III	56.0	50.5***
Scale IV	59.4	53.9**
Effectiveness ratio	79.2	71.9**
Productivity mean	3.2	3.0

* $p = .046$.

** $p = .01$.

*** $p = .002$.

significantly higher scores on GDQ Scale I (Dependency and Inclusion) than male or male dominated groups. The group types did not differ on any other measure, however.

At first glance, the finding that members of female or female dominated groups perceive those groups as more dependent and having higher needs for inclusion and safety seems to support previous research which concluded that women were more dependent and maintenance oriented than men. However, this did not turn out to be the case. When status was factored into the equation, the salience of gender composition as an explanation of this difference in perception became questionable.

The findings of this study do support the following conclusions. First, similarities outweigh differences in all the gender analyses. Female or female dominated, male or male dominated, and groups containing equivalent numbers of men and women are more alike than different on the measured GDQ scores. Of the eighteen analyses of gender composition, only two yielded significant results. On the other hand, of the eighteen analyses of status differences, nine yielded significant results. Significant gender differences were few and far between. This suggests that member perceptions of group development, effectiveness, and productivity are not influenced strongly by the gender composition of the group. Status seems to be much more influential.

Second, the noted differences between male or male dominated groups and female and female dominated groups on Dependency and Inclusion (GDQ Scale I) cannot be attributed to gender composition since the same significant difference was found when comparing high and low status groups regardless of gender composition. Additional support for this conclusion was obtained in comparisons of group types of the same status level. No

significant differences were noted among all female or female dominated, all male or male dominated, or mixed gender high status groups. Likewise, no significant differences were noted among all female or female dominated, all male or male dominated, or mixed low status groups on all but one measure. Members of low status female/female dominated groups described those groups as more dependent. Men and women, operating in groups of similar status, regardless of the gender composition of those groups, do not differ in their evaluations of those groups on five of the six measures. One cannot conclude that gender composition influenced these results. Group status, rather than gender composition, seems to provide a more logical explanation.

The results of analyses within group types, however, posed a challenge to the conclusion that group status, as opposed to gender composition, is a more logical explanation of the significant difference on the Dependency and Inclusion scale. If status is the more salient variable, then one would expect low status female or female dominated, male or male dominated, and mixed sex groups to be higher on this scale when compared to high status groups of the same gender composition. This was the case in the all female or female dominated low status groups. These groups had significantly higher scores on this scale than their high status counterparts. However, no significant differences were noted between high and low status all male or male dominated groups. In addition, there were significant differences between high and low status mixed groups. Members of low status mixed gender groups rated their groups as exhibiting more conflict (Scale II), less trust, and less organization (Scale III), less work focus (Scale IV) and less effectiveness than did members of high status mixed gender groups.

Rather than challenging the notion that status, as opposed to gender composition, is more influential in shaping member perceptions of group functioning, however, these findings could be viewed as added support for that conclusion. That is, in groups of low status, within the work place hierarchy, other kinds of status indicators may be invoked. Sex may become operative as a status indicator in situations where other status indicators are absent. Thus, members of all male or male dominated low status groups rate their groups as less dependent while members of all female or female dominated low status groups rate themselves as more dependent since they are relying on the most obvious status indicator available to them which is the gender composition of the group. Where a more influential status indicator is available, such as status in the organizational hierarchy, gender composition becomes irrelevant. However, in the absence of organizational status, its relevance reemerges.

Some support for this interpretation of the findings comes from an experimental study of compliance and influence (Eagly & Wood, 1982). When subjects were presented scenarios in which job titles were omitted, they assumed that women would be less influential and more compliant than men in a given situation. However, when job titles were included, subjects assumed that the individual with the higher status job title, regardless of the individual's sex, would be more influential and less compliant. These findings may apply to the current results as well. In the absence of other status indicators, cultural notions about gender become more salient.

Can this reasoning be applied in the case of the mixed groups as well? Here, even the cultural status indicator of gender was not clearly operative. The groups contained equivalent numbers of males and females. Group members could not use the gender composition of the group as a status indicator. It is interesting to note that as a result, members of these low status groups rated their groups as significantly more conflictual, less trusting, cooperative, organized, and less work oriented. These ratings may indicate struggles internal to the group to develop a status hierarchy.

Groups with more diverse memberships, in terms of sex, race, and other characteristics, are thought to have more difficulty with trust, cohesion, and organization (Back, Bunker, & Dunnagan, 1972). Some researchers have concluded that members of societal subgroups will still seek advantages for their subgroups even when doing so interferes with group goal achievement (Komorita & Lapworth, 1982; Kramer & Brewer, 1984). Tajfel (1974, 1982) attributes this to the tendency of members of differing subgroups to compete for status. Perhaps this conclusion should be amended. It may be that mixed groups of low status within the organizational hierarchy have more difficulty with trust, cooperation, and organization due to the tendency to compete for status within the group. In high status mixed groups, intragroup competition for status may seem unnecessary.

In summary, two conclusions can be drawn from these data. First, members of groups with differing gender compositions evaluated those groups in very similar ways. Second, where significant differences did occur, group status, as opposed to gender composition seemed to account for those differences. Both group status in the workplace hierarchy and gender composition can influence member perceptions of a group. Group status in the workplace hierarchy, however, appears to be more influential. Gender composition was influential only in low status groups where the stronger status indicator, higher placement in the workplace hierarchy, was not operative.

Further research is needed to explore these findings and conclusions more thoroughly. To that end, a replication study is underway. The repli-

cation will investigate member behavior as well as member perceptions. The results of this study indicated that members of low status groups evaluate those groups as more dependent, and in mixed gender groups more conflictual, less cooperative and less effective. Are the members' assessments accurate? Do members of low status groups behave in more dependent ways than members of high status groups? Does the behavior of members of low status mixed gender groups demonstrate more conflict, less trust, organization and effectiveness? Do these findings reflect reality or a social construction of reality? These, and other questions, remain to be answered.

More research in this area is clearly called for. Prevailing cultural assumptions regarding sex differences, and other status indicators, in groups have very real, often negative, effects on the work lives of human persons. Exploring the veracity of those assumptions, then, is of critical importance.

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