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Robert Jacobs and Donald Campbell's generational paradigm was used to examine the effects of group decision rule and performance feedback on the extent to which use of the decision rule was maintained as groups underwent turnover in membership. Confederates initially established a norm regarding rule use: Half the groups began with a majority rule and half with a seniority-based dictatorial rule. Groups made decisions about hiring (fictitious) job applicants. Half the groups in each decision rule condition received feedback that their decisions were correct and half that their decisions were incorrect. Groups that began with majority rule continued to use the rule. Groups that began with seniority rule always changed the rule and always changed it to majority rule. Performance feedback had no effect on maintenance of the decision rule, although it influenced group members' perceptions of the decision process and feelings toward the senior member under seniority rule.

The members of any group faced with making a decision may have different preferences with regard to the alternatives from which they are to choose. One way in which these different preferences may be combined, and a group decision reached, is by using a *group decision rule.* Examples of commonly used decision rules are majority rule, unanimity rule, and rule by dictatorship.

Miller (1989) has noted that there are organizational, social, and cultural norms about the use of different decision rules. The rule that is considered appropriate may differ from situation to situation. In many business or work groups, for example, some version of dictatorial rule may be deemed appropriate. A manager, owner, or supervisor may make decisions for the entire group, rather than group members themselves making the decisions. In many clubs, boards, and committees, however, the use of majority rule is so common that it may be taken for granted (Johnson & Johnson, 1994).

Group norms, including those about the use of group decision rules, may change with changing circumstances or may be so persistent that they are maintained even as group membership changes, with older members transmitting the norm to a new generation of members. In the present study, we examined the extent to which norms regarding the use of group decision rules were maintained or changed as groups experienced turnover in their membership.

The Transmission of Group Norms

Evidence about how norms are perpetuated or altered with changes in group membership is scattered and largely anecdotal (Van Maanen & Schein, 1979). Jacobs and Campbell (1961) are usually credited with developing the standard paradigm for laboratory research on the generational transmission of group norms. They made use of the autokinetic illusion, which is the tendency for a person in a completely darkened room to perceive a stationary pinpoint of light as moving. Each group of participants in their study made a series of judgments about the distance that the pinpoint of light appeared to move. Confederates established an artificially inflated group norm regarding the distance judgments. Following each series of judgments, the most senior member of the group was dismissed and replaced by a new member. The newly constituted group represented a new generation in the laboratory culture.

Jacobs and Campbell (1961) found that the confederates' inflated judgments significantly increased the

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estimates of the naive participants. Once the confederates were replaced, the arbitrary norm was passed from one generation of naive participants to another. The norm eroded, however, tending to disappear five or six generations after replacement of the last confederate.

The generational paradigm is well suited to studying the development and persistence of group norms. Unfortunately, most studies using the procedure have been limited to norms regarding perceptual judgments, which may not be very involving to participants. Few studies (Insko, Gilmore, Drenan, & Lipsitz, 1983; Insko et al., 1982, Insko et al., 1980; Weick & Gilfillan, 1971) have applied the generational paradigm to other issues. In the present experiment, we used the paradigm to examine perpetuation of a norm regarding the appropriate decision rule to be used by a group.

Type of Group Decision Rule

Various factors may determine whether the use of a group decision rule is maintained or changed. For example, the nature of the decision rule itself may affect the likelihood that a group will continue its use. Some rules may have effects that make their use more desirable and more likely than the use of other rules, across many different situations.

Miller (1989) has summarized a number of effects that may arise from the use of group decision rules and has suggested that these effects are related to two features of the rules: One feature is *strictness*, which refers to the extent to which group members must agree with one another to make a decision (Hastie, Penrod, & Pennington, 1983). For example, more members are required to agree with each other to reach a decision under majority rule than under dictatorial rule. The other feature is the *distribution of power*, which refers to the relative power that group members have in making decisions. Some rules are more egalitarian than others; they distribute power more equally among members. For example, under majority rule each member has equal power, whereas under a dictatorship rule one member of the group has all of the power.[1]

The use of stricter and more egalitarian group decision rules may offer various advantages (Miller, 1989): Relatively strict rules are more likely to result in compromise decisions that consider minority viewpoints (Brinberg & Pondy, 1971; Harnett, 1967; Miller, 1985), and such compromises may lead to better group performance (Holloman & Hendrick, 1972). Under stricter decision rules, members are more likely to change their preferences toward greater agreement with each other (Hastie et al., 1983; Kaplan & Miller, 1987) and with the final group decision (Tjosvold & Field, 1983) and more likely to be satisfied with the decision (Kaplan & Miller, 1987; Kerr et al., 1976; Nemeth, 1977). Stricter decision rules also generate lengthier discussions (Davis, Kerr, Atkin, Holt, & Meek, 1975; Foss, 1981; Kerr et al., 1976; Saks, 1977), increase participation by members of minority factions (Hastie et al., 1983), and lead members to view discussions as more thorough and adequate (Green & Taber, 1980; Hastie et al., 1983; Kaplan & Miller, 1987; Nemeth, 1977). In addition, stricter and more egalitarian rules generate group decisions that are perceived as fairer and that are more representative of members' opinions (Kaplan & Miller, 1987; Miller, Jackson, Mueller, & Schersching, 1987).

The work reviewed by Miller (1989) involves situations in which groups are explicitly assigned, or formally adopt, a group decision rule. This decision rule is ordinarily applied to the preferences that group members hold after discussing the alternatives. The work on *social decision schemes* (SDSs) by Davis and his colleagues (e.g., Davis, 1969, 1973; Davis, Holt, Spitzer, & Stasser, 1981; Kirchler & Davis, 1986; Nagao & Davis, 1980; Stasser & Davis, 1981; Stasser, Kerr, & Davis, 1980) is concerned with situations in which groups implicitly or informally adopt a group decision rule, even though there may be no specific statement or recognition of the rule. Typically, in this research several SDSs are compared to see which, if applied to group members' initial preferences, would best account for group decisions. Davis (1969) cites the League of Women Voters, who do not vote in local meetings but may behave as though they do. They may, in effect, make decisions according to majority rule, even without explicitly voting.

Davis and his coworkers have found that under many conditions, groups use relatively egalitarian SDSs, especially majority rule. For example, Davis, Bates, and Nealey (1971) found that majority rule was more predictive of group performance than were hierarchically based rules. Laughlin and Ellis (1986) reviewed SDS research and suggested that majority rule schemes are often used when groups perform tasks that lack demonstrably correct answers. Groups may even prefer to use majority rule rather than other egalitarian rules such as unanimity. For example, Davis et al. (1975) found that some groups assigned a unanimity decision rule reported that they actually used a majority rule. One apparent advantage of majority rule, even when compared with unanimity rule, is the expectation of reduced intragroup conflicts (Gero, 1985).

Recently, we showed that the preference for relatively egalitarian decision rules may be moderated somewhat by gender (Nielsen & Miller, 1992). We found that women felt a bit more positive toward more egalitarian decision rules and a bit less positive toward less egalitarian rules than did men. Nevertheless, we also found that whereas the preference for using egalitarian rules was weaker for men, it held for both men and women. For

reasons discussed later, we used only women as participants in the present study.

In summary, the use of stricter and more egalitarian group decision rules has several advantages. Perhaps as a result, a decision rule such as majority rule may be normatively preferred to other rules that are less strict and less egalitarian. Groups may be more likely, across a wide range of situations, to adopt such a rule and to persist in its use.

Performance Feedback

The decision rule that a group uses may also depend on how well the group performs. Feedback about performance provides the group an opportunity to modify its behavior and thereby improve performance (Brehmer, 1980). Of course, receiving feedback about poor performance does not ensure that the group will make the necessary corrections. For example, Ziller (1965) reported that groups that experience failure, and whose composition is then changed by replacing some older members with new ones, often dissociate the poor performance from themselves. Nevertheless, unsuccessful groups are probably more likely to change than are successful ones. Ziller and Behringer (1960) found that the influence of knowledgeable newcomers on a group was affected by the group's previous success. Groups that had failed at a task were more strongly influenced by an expert newcomer than were groups that had succeeded.

Moreland and Levine (1989) have noted that as newcomers are socialized into a group, *assimilation* and *accommodation* occur. Assimilation refers to changes in the behavior or attitudes of the newcomer to conform with the expectations and norms of the group, whereas accommodation refers to changes introduced in the group as a result of the newcomer's membership. Moreland and Levine suggest that, on one hand, when a group experiences success and its members are satisfied with their performance, the potential risks of admitting a newcomer may seem to outweigh the potential benefits. The group may, therefore, be less willing to engage in accommodation and may demand more assimilation. On the other hand, when a group experiences failure, it tends to be more open to change because the potential benefits outweigh the risks to the group. The group may also be more accommodating of a newcomer and may require less assimilation (Fromkin, Klimoski, & Flanagan, 1972; Insko et al., 1980; Moreland, 1985; Zander, 1976; Ziller, 1965; Ziller & Behringer, 1960).

In summary, if a group continually makes decisions that are successful, then it may be inclined to continue functioning as it has been. For instance, it may maintain the use of whatever group decision rule it is presently employing. If a group finds that its decisions are consistently incorrect or inadequate, however, then the group may be more likely to change in an effort to improve performance. Whether the decision rule alone would be singled out for change is an open question, but certainly the decision rule seems more likely to change under conditions of failure than under conditions of success.

Design and Predictions

The present study examined how type of group decision rule and feedback about group performance affect the extent to which use of the decision rule is maintained as groups undergo turnover in their membership. The study also examined group members' perceptions of the decision-making process.

Confederates were employed to establish a norm regarding the decision rule that groups initially used—either a majority rule or a seniority-based dictatorial rule. Groups worked at a decision task that involved selecting fictitious job applicants according to their suitability for various positions. Each group received feedback about its performance on each of a series of such decisions. Half of the groups in each decision rule condition received feedback that their decisions were the best course of action according to experts (success), and half received feedback that their decisions were contrary to expert recommendations (failure). Periodically, the most senior member of the group was removed and replaced by a new member.

Type of group decision rule and performance feedback were hypothesized to affect transmission of the group norm regarding use of the decision rule. We hypothesized that groups receiving success feedback would tend to persist in using whatever decision rule they were already using, although there would be some difference between majority and seniority rules in this regard.

As already noted, majority rule is relatively egalitarian and strict and has several advantages. It is also a rule that is often used in Western society, in which there is a feeling that everyone should have some say in the final decision (Hogarth, 1977). Nevertheless, the use of a less egalitarian, more autocratic, form of decision making is by no means unknown. For example, a single person may be given decision-making power in groups undergoing a crisis (cf. Hamblin, 1958) or in groups experiencing competition or conflict with one another (Worchel, Andreoli, & Folger, 1975). In work groups, decisions are frequently made by a single, relatively senior, member. The use of such a seniority-based dictatorial procedure may be likely when production is a concern and when proficiency in production is related to experience (cf. Insko et al., 1983; Insko et al., 1982, as well as the discussion by Insko et al., 1980, of several reasons why a seniority rule, rather than some other rule, might be adopted). Thus, as long as a group is successful, there

should be some tendency to regard either the majority or seniority decision rule as effective and to continue using it. Given the various advantages of majority rule and its pervasiveness in our society, however, this tendency should probably be somewhat stronger for majority rule than for seniority rule.

We further hypothesized that groups receiving failure feedback would tend to change the group norm and adopt a different rule for making decisions and that this tendency would be much stronger for groups beginning with the seniority-based dictatorship rule than for groups beginning with majority rule. A principal advantage of using a dictatorial, as opposed to a majority, decision rule resides in its perceived effectiveness or efficiency (Nielsen & Miller, 1992). With repeated failure, this advantage is lost, and continued use of dictatorship should become especially unlikely compared with the use of majority rule, which at least retains the other advantages already noted (cf. Miller, 1989). Even if the use of a dictatorial procedure were maintained despite repeated failure, the use of seniority as a basis for choosing the dictator should decline. Hamblin (1958) demonstrated that groups may replace their leader during a crisis if the present leader has no obvious solution to the crisis. In addition, Insko et al. (1983, 1980) found that the use of seniority leadership was less likely in groups that were less successful.

With regard to participants' perceptions of the decision-making process, no published research has examined the simultaneous effects of group decision rule and performance feedback on such perceptions. This aspect of the study was, therefore, treated as exploratory, and we proposed no specific hypotheses.

METHOD

Participants

Participants were 260 women students enrolled in introductory psychology classes. Women were used largely for convenience: More of them were available, and experience suggested that they were slightly more likely than men to show up for scheduled experimental sessions—critical considerations with the generational paradigm. Even so, there were an additional 92 participants whose data could not be used because other members of their groups failed to appear for the scheduled sessions, thus breaking the sequence of generations.

Materials

Instructions indicated the study was concerned with employment decisions that must be made by personnel managers. Nine job descriptions were used, each accompanied by the résumés of four fictitious applicants. Each job description indicated the various tasks involved in performing the job, as well as the type of training, skills, experience, and education required. Each résumé briefly described the educational and employment background of an applicant.

Questionnaires were administered after each decision, after each generation (set of three decisions), and after participants exited the group. The questionnaire following each decision asked participants which alternative their group had chosen, how certain they were that this choice was correct, and what their own individual choice was. The questionnaire that followed completion of a generation asked participants to consider all three decisions their group had just reached and to respond to various items on 7-point Likert-type scales. Several items were slight revisions of those in Nielsen and Miller (1992), in which we found that perceptions of group decision making were characterized by three factors: Climate, Confidence, and Convenience.

The questionnaire given upon departure from the group asked participants about the method that the group had used to reach decisions and about how many times someone had suggested changing the method. (As described below, the decision rule and any changes in it were also assessed by raters. Participants' responses about the number of times change was suggested were consistent with raters' judgments of change, so only the raters' judgments are reported.)

Participants were fully debriefed by letter following the completion of all data collection.

Procedure

Each participant received instructions and completed an informed consent statement. She then joined a group, consisting of herself and two other members, that made a series of three decisions. Each decision involved choosing which of four applicants would be best for a job. The group was given up to 7 min to choose among the job applicants. After all three decisions had been reached, a new participant replaced the member who had been in the group the longest time, and a new series of decisions was made.

Each group was assigned to one of the four cells of the 2 (initial group decision rule) × 2 (performance feedback) factorial design. Assignment was random, with the constraint that there were 10 groups per cell.

Participants were asked first to make individual decisions, then a group decision. After each group decision, they received feedback regarding the supposed consensus of experts as to the best choice among the job candidates. Participants in the success-feedback condition were always informed that their group decisions were correct, whereas those in the failure-feedback condition were always informed that their group decisions were incorrect. To make performance especially salient, a record of each group's success or failure was posted for

all members to see. To establish a track record and lead the initial participant to believe that she was entering an ongoing group, the experiment began with four generations supposedly having been run and with each of the first 12 decisions posted as being correct or incorrect. For groups receiving success feedback, the record indicated that all decisions except Numbers 2 and 7 had been successful, whereas for failure feedback, it showed that all decisions except Numbers 2 and 7 had been unsuccessful.

To establish the decision rule norm, confederates posed as participants during the first two generations. The first generation began with confederates in the senior and middle positions and the true participant in the newcomer position. The decision rule manipulation was introduced by the middle group member, who explained to the participant that previous decisions had been made by having group members vote for their individual preferences and choosing the majority preference (majority rule) or by having the person who had been in the group the longest make the choice (seniority rule).

Upon completion of the first generation, the senior group member was excused from the group, the remaining confederate moved to the senior position, the original participant moved to the middle position, and a new, naive participant was brought in. This time the remaining confederate explained the group decision rule, and the group began its decision making. The process of rotating the senior member out of the group and bringing a completely naive newcomer into the group continued for each generation of the experiment. Groups made decisions for a total of 10 generations or until the group decision rule was changed, whichever occurred first.[2]

From the third generation onward, the group consisted solely of actual participants, with one exception: The participant entering the group for the ninth generation (if the group continued until then) was a confederate. This confederate indicated to the others that she thought the group should make its decisions using a different decision method. Regardless of the decision rule the group might be using, the confederate claimed that the way the group had been making decisions did not seem right and that some other method might be better. She did not, however, indicate what that method might be.

This additional confederate was used to prompt group members to make known any preference they might have for changing the group decision rule. It seemed possible that some member or members might prefer a different decision procedure but might not voice this preference because they did not believe that anyone else was in favor of change. If provided with some social support, however, they might be willing to speak up (cf. Janis, 1982; Schanck, 1932).

RESULTS

Manipulation Checks

Performance feedback. The questionnaire that was administered at the completion of each generation included two items that assessed the adequacy of the performance manipulation. The first item asked how confident participants were that their group's decisions were correct, and the second asked how well they thought the group had performed. For each item, a 2 (initial decision rule: majority vs. seniority) × 2 (performance feedback: success vs. failure) × 2 (generation: first vs. last) ANOVA was performed.[3]

Each analysis yielded a significant effect only for performance feedback. Participants in the success condition were more confident ($M = 6.04$, $SD = 1.14$) about the correctness of their group decisions than were those in the failure condition ($M = 3.89$, $SD = 1.13$), $F(1, 25) = 49.33$, $p < .0001$. Participants in the success condition also believed their group had performed better ($M = 5.84$, $SD = 1.99$) than did those in the failure condition ($M = 3.42$, $SD = 2.00$), $F(1, 25) = 20.13$, $p < .0001$. On the basis of these results, the performance feedback manipulation was regarded as successful.

Initial decision rule. To assess the manipulation of initial decision rule, the first participant to enter each group was asked the method whereby the group had made decisions: majority rule, unanimity rule, having a leader choose, or some other method. In the majority-rule condition, 80% of the participants indicated majority rule, 15% unanimity rule, and 5% some other method. In the seniority-rule condition, 60% indicated by leader, 30% majority rule, and 10% unanimity rule.[4] The perceived decision-making method differed significantly between the two conditions, $\chi^2(3) = 11.75$, $p < .01$. Manipulation of the initial group decision rule was therefore considered successful.

Maintenance of the Group Decision Rule

One or two raters present during all group discussions recorded the decision rule used by each group for each decision. These judgments were used to determine whether the rule originally inculcated by the confederates changed and, if so, during what generation the change occurred. Interrater agreement was established as follows: During pilot testing, both raters independently assessed the same groups making decisions. Interrater agreement regarding the rule was 100%. Both raters also independently assessed another 53 decisions during the course of the experiment. Interrater agreement for these instances was also 100%. On this basis, interrater agreement was deemed acceptable. The remaining decisions were rated by only one of the two raters.

A 2 (initial decision rule) × 2 (performance feedback) ANOVA was conducted on the number of generations that use of the initial decision rule was maintained. There was a significant effect only for type of rule, $F(1, 36) = 1{,}128.99$, $p < .0001$. Majority rule was maintained a mean of 9.95 ($SD = 0.22$) generations, and seniority rule was maintained a mean of 2.15 ($SD = 0.99$) generations. In only one instance—when the confederate entered for the ninth generation and suggested a change—did majority rule change. Seniority rule always changed no later than the sixth generation and always changed to majority rule.

The change away from seniority rule often occurred during the third generation (the first generation after all confederates had left the group). Interestingly, the suggestion for changing from seniority rule was usually made by the senior member of the group, rather than the other members. This was true in all 10 cases in the success condition, and in 6 of 10 cases in the failure condition. (In a seventh case, the change resulted from a discussion between the middle and senior members, and it was not possible to determine who was more responsible for the suggestion).

Questionnaire Responses

Climate, confidence, and difficulty. Subjects' responses to the questionnaire administered at the end of each generation were first analyzed using principal components factor analysis. The analysis yielded three factors, the first two of which were similar to those found by Gero (1985) and Nielsen and Miller (1992): Climate was composed of items about being understood and listened to, having influence, participating, commitment to the decision, group conflict and cooperation, fairness and representativeness of the decision rule, and ability of the group to work effectively in the future. Confidence consisted of items about how confident participants were of their own and of the group's decisions, and how well the group performed. The third factor, labeled Difficulty, consisted of items regarding the frustration that participants experienced and the perceived difficulty of decision making.[5]

Ratings were generated for each factor by averaging, for each of the participants, the ratings on the items comprising the factor. Because average ratings rather than factor scores were used, correlations were computed between the ratings. Climate ratings correlated positively with confidence ratings, $r = .54$, $p < .01$. Difficulty ratings correlated negatively with both climate, $r = -.38$, $p < .01$, and confidence ratings, $r = -.26$, $p < .01$.

Climate, confidence, and difficulty ratings of the first participant to enter the group were analyzed in separate 2 (decision rule) × 2 (performance feedback) × 3 (member seniority) ANOVAs, in which the last factor refers to the first participant's ratings as the newcomer, middle member, and senior member of the group. The ANOVA for climate yielded a significant effect for feedback, $F(1, 35) = 5.59$, $p < .03$. Success feedback produced a more desirable climate ($M = 5.58$, $SD = 1.01$) than did failure feedback ($M = 4.93$, $SD = 1.22$).

There was also a significant effect for seniority, $F(2, 70) = 11.49$, $p < .001$, which was qualified by a significant Seniority × Decision Rule interaction, $F(2, 70) = 11.00$, $p < .001$ (see Table 1). Participants reported a more favorable climate when in the senior position than when in the newcomer or middle position. This effect was due, however, to the relatively low climate ratings made by participants when in the newcomer and middle position under seniority rule. Participants gave higher climate ratings in all positions under majority rule, and in the senior position under seniority rule. Of course, the first participants to enter the group reached the senior position only in the third generation, and most groups (18 of 20) switched from seniority to majority rule before or during the third generation. Thus nearly all participants in the senior position in the seniority-rule condition had actually made one or more group decisions using majority rule prior to giving their ratings. A possible interpretation of the interaction effect, then, is that it is due to the tendency for participants to give higher climate ratings under majority rule.

The ANOVA for confidence showed a significant effect only for feedback, $F(1, 35) = 36.37$, $p < .001$. Participants in the success-feedback condition placed greater confidence in their decision making ($M = 5.93$, $SD = 0.99$) than did participants in the failure-feedback condition ($M = 4.04$, $SD = 1.23$).

The ANOVA for difficulty revealed a significant effect for seniority, $F(2, 70) = 5.09$, $p < .05$. Decision making as a newcomer was considered less difficult ($M = 2.63$, $SD = 1.22$) than decision making in the middle or senior position ($M = 3.15$, $SD = 1.27$, and $M = 3.20$, $SD = 1.39$, respectively). The effect for performance feedback approached significance, $F(1, 35) = 3.03$, $p < .10$, with decision making seen as less difficult under success feedback ($M = 2.72$, $SD = 1.24$) than under failure feedback ($M = 3.28$, $SD = 1.34$).

Newcomers' feelings toward other members. Two questionnaire items assessed the feelings of the newcomer toward the other group members—one toward the middle member and the other toward the senior member. A separate 2 (decision rule) × 2 (performance feedback) × 2 (generation) ANOVA was performed for the evaluation of each target. No statistically significant effects were found for evaluations of the middle group member. The ANOVA for evaluations of the senior group member, however, yielded significant effects for decision rule and performance feedback. These effects were qualified

TABLE 1: Effects of Seniority and Decision Rule on Perceived Climate

	Decision Rule	
Seniority	*Majority*	*Seniority*
Newcomer	5.46_a (0.90)	4.69_b (1.46)
Middle	5.48_a (0.91)	4.51_b (1.51)
Senior	5.48_a (0.90)	5.84_a (0.75)

NOTE: Mean ratings could range from 1 to 7; higher ratings indicate more positive evaluations. Means with differing subscripts differ significantly, $p < .01$. Standard deviations are in parentheses.

TABLE 2: Effects of Decision Rule and Feedback on Evaluations of the Senior Group Member

	Feedback	
Decision Rule	*Success*	*Failure*
Seniority	6.05_a (1.10)	4.60_b (1.94)
Majority	6.20_a (1.33)	6.17_a (0.88)

NOTE: Mean ratings could range from 1 to 7; higher ratings indicate more positive evaluations. Means with differing subscripts differ significantly, $p < .01$. Standard deviations are in parentheses.

by a Decision Rule × Performance Feedback interaction, $F(1, 36) = 6.92$, $p < .01$. As Table 2 indicates, the combination of seniority rule and failure feedback generated relatively unfavorable evaluations of the senior group member.

A possible explanation for this asymmetry in evaluation of the senior leader after success or failure is the following: Under seniority rule, as long as the group was successful, the senior member might have tended to endorse majority preferences, agreeing with one or both of the other group members. Success might then have been seen as due to good group decision making rather than the leadership of the senior member. If the group was consistently unsuccessful, however, the senior member might have been tempted to express greater independence from the judgments of the others, and this disagreement with them could have caused the lower evaluations of the senior member. This explanation is consistent with the findings of Miller and Anderson (1979) and Miller et al. (1987) that dictators who made decisions that deviated from the opinions of the majority of group members were rejected by others, whereas dictators who made decisions favored by the majority were not.[6]

We tested this explanation in the following way: Participants' opinions regarding the best applicant were examined to see how frequently the senior member agreed with one or both of the other group members. Agreement between the senior member and the others occurred 63% of the time. Frequency of agreement was not, however, significantly related to the group decision rule or performance feedback. This appears to exclude an explanation of the asymmetry in evaluation of the senior leader in terms of agreement between the senior member and others.

DISCUSSION

We hypothesized that groups would persist less in using seniority rule than in using majority rule. This hypothesis was strongly supported. The use of seniority rule changed in every instance, whereas the use of majority rule changed only once. We further hypothesized that failure feedback would lead groups to change the decision rule more quickly than would success feedback. This hypothesis received no support. Finally, we hypothesized that decision rule and performance feedback would interact, so that the maintenance of seniority rule would be more affected by feedback than would the maintenance of majority rule. There was no support for this hypothesis either.

It seems clear that participants regarded majority rule as more desirable or appropriate than seniority rule. Majority rule was perpetuated in the face of unremitting failure feedback, and even when a confederate suggested making decisions by some other method. Furthermore, when groups using seniority rule changed the decision rule, as they invariably did, they always changed to majority rule.

Somewhat surprisingly, it was the senior member of the group who usually proposed changing the seniority decision rule. One possibility is that when they reached the senior position, members did not want to continue the use of seniority rule because they did not want responsibility for making decisions for the entire group.[7] The climate ratings, however, do not seem consistent with this. If responsibility were aversive, then those in the senior position under seniority rule might have been expected to find the climate especially unpleasant. Yet, the first participants entering the group under seniority rule perceived the group climate as relatively unfavorable when in the newcomer and middle positions—at a time when seniority rule was still in effect but they were not responsible for the decision. And when in the senior position—during which time the rule usually changed to majority rule, at their suggestion—these participants viewed the climate as more favorable.

Of course, the climate index is not a measure of satisfaction with one's decision-making responsibility, and the data on climate offer only indirect evidence regarding the motives of senior leaders who wanted to change the rule. Nevertheless, analyses of the individual items making up the index, including items closer to the concept in question (e.g., perceived fairness of the decision rule), generally yielded the same pattern of results

as the overall index. Thus, although a responsibility-aversion explanation cannot be ruled out, the results are perhaps more consistent with the notion that participants viewed the seniority rule as inappropriate or undesirable and preferred to change the rule once they were in an obvious position to do so.

The fact that participants always changed from seniority rule to majority rule, even when they received success feedback, and did not change from majority rule, even when they received failure feedback and even though the failure feedback affected their perceptions of the decision-making process, underscores the strength of the preference for majority rule. An interesting question is the extent to which this result is generalizable. We note three ways in which generalizability may be limited.

First, all of our participants were women. As noted earlier, there is some evidence that women have a slightly more positive view of egalitarian decision rules such as majority rule and a less positive view of nonegalitarian rules such as seniority-based dictatorship than do men (Nielsen & Miller, 1992). This seems consistent with women being more socioemotionally oriented than are men. A replication of the present study using men might prove informative; perhaps men would be more likely to persist in the use of seniority rule.

Second, most of our college student participants were probably very familiar with majority rule but probably had little experience with making group decisions using any other procedure. Relatively few of them were accustomed to working in business or other settings in which nonegalitarian decision rules are often used. Typically, they had been exposed to the decision-making norms of society at large but not to the norms of business organizations and the world of work. Individuals who have functioned in supervisory and/or subordinate roles in actual work groups or who are otherwise familiar with a seniority rule might be more likely to maintain use of the seniority rule. Similarly, the use of a decision rule more egalitarian than seniority rule but less familiar to most people than majority rule—for example, a sum-of-the-ranks rule—might tend to erode despite its relatively egalitarian nature.

Third, our participants may not have been sufficiently concerned about performing well. Although their perceptions of the group decision-making process were clearly affected by performance feedback, participants received no tangible gains for being successful, nor were they faced with suffering any serious losses for failure. Perhaps if group performance were associated with more significant outcomes, it would have a stronger effect on perpetuation of the decision rule. Larger rewards for success and/or punishments for failure might make groups more inclined to abandon majority rule when it is associated with failure or to retain seniority rule when it is associated with success.

Participants' reactions to the decision-making process in the present study resembled those of participants in studies by Gero (1985) and Nielsen and Miller (1992), with a Climate and a Confidence factor emerging from the factor analyses in all three studies. As already noted, we found that both climate and confidence were significantly influenced by performance feedback, with success producing a more favorable climate and more confidence than failure. Climate was also affected by decision rule; majority rule generated a more desirable climate than seniority rule. This finding is consistent with the results of Nielsen and Miller (1992), in which participants expected decision making under majority rule to produce a more desirable climate than decision making under seniority rule.

Turning to the newcomers' evaluations of the other group members, the senior member was evaluated least favorably when the group used seniority rule and received failure feedback. At the same time, seniority rule and success feedback did not lead to evaluations of the senior group member that were particularly favorable; such evaluations did not differ from evaluations of the senior member under majority rule, for either success or failure feedback.

A possible explanation for this asymmetry in evaluations is that group members may be self-serving in how they attribute responsibility for group outcomes (cf. Schlenker, Weigold, & Hallam, 1990). When the group is successful, members may take credit, attributing the success to their own contributions as much as those of the senior member. When the group fails, they may reject blame, attributing the failure to the senior member.

Summary

Majority rule was clearly preferred over seniority rule. Majority rule was readily perpetuated, whereas seniority rule always changed, and always to majority rule. Performance feedback strongly influenced perceptions of the decision process and evaluations about the individual making decisions under seniority rule. It had no effect, however, on perpetuation of the group decision rule. The fact that failure feedback did not cause groups to change their use of majority rule underscores the strength of the majority rule norm. Further research is required to determine to what extent the present results are generalizable to other subject populations and circumstances.

NOTES

1. We wish to thank an anonymous reviewer for noting that it is questionable whether the distribution of power dimension is well

defined conceptually. It is not always clear where certain decision rules—for example, a unanimity rule, an averaging rule, and a random choice rule—fall along this dimension. For present purposes, however, the important point is that many rules, including particularly dictatorship and majority rule, can be ordered in a reasonable way in terms of how they distribute power.

2. Although a generation involved three job descriptions and a group lasted for up to 10 generations, only nine job descriptions were necessary because no participant was in the group for more than three generations (nine decisions), so the job descriptions could be recycled.

3. All reported analyses used the group as unit of analysis. Because, as will be seen shortly, the seniority decision rule was maintained for so few generations, analyses examining the effects of generations were limited to first- versus last-generation contrasts. The first generation referred to first-generation responses of the first participant to enter the group. The last generation referred, when groups began with seniority rule, to responses of the newcomer during the generation in which the group changed from seniority to majority rule—that is, during the last generation of the group. When groups began with majority rule, last generation referred to responses of the newcomer during the 8th generation. As will also be seen, all but one group that began with majority rule persisted in its use. The 8th generation was chosen for analysis because responses in the 10th generation could have been affected by the confederate who entered at the 9th generation.

4. Regarding the 30% in the seniority-rule condition who indicated that majority rule best described the method of decision making, it is important to note that participants responded to this item only after taking part in the first three generations of their group. By this time, almost all groups in the seniority-rule condition (18 of 20) had changed to the use of majority rule for at least one decision.

5. The principal components analysis, which is inappropriate for repeated measures (Comrey, 1973; Gorsuch, 1983), was limited to the responses that subjects gave following their first generation in the group. At each iteration, items loading greater than .50 on any component were retained. Items failing to meet this criterion were excluded from succeeding iterations. Three factors with eigenvalues greater than 1.00 emerged. Items regarding the thoroughness of decision making and satisfaction with the group decisions each loaded above the .50 criterion on two different factors, and an item regarding how much subjects believed they had learned about personnel selection failed to reach the .50 criterion on any factor. The Climate, Confidence, and Difficulty factors had coefficient alphas of .88, .81, and .43, respectively.

6. We are grateful to an anonymous reviewer for offering this explanation.

7. We are indebted to an anonymous reviewer for suggesting this responsibility-aversion interpretation.

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