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Rob Foels, James E. Driskell, Brian Mullen and Eduardo Salas

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# THE EFFECTS OF DEMOCRATIC LEADERSHIP ON GROUP MEMBER SATISFACTION

## An Integration

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*Previous research highlights one of the paradoxes of different leadership styles: Group members may be more satisfied with democratic leadership, or group members may be more satisfied with autocratic leadership. A meta-analytic integration of research evidence addressing this paradox revealed that there was, in general, a significant, small tendency for groups experiencing democratic leadership to be more satisfied than groups experiencing autocratic leadership. However, these effects were moderated by several variables, including the reality of the groups, the size of the groups, the gender composition of the groups, and the potency of leadership style. These moderating variables may be important given the recent push toward adoption of democratic decision making in organizations. The discussion considers theoretical accounts for these effects of leadership style on member satisfaction.*

**Groups need to get things done**, and the group leader can be instrumental in helping the group to accomplish its goals. But groups also need to get along, and the leader can help the group maintain some level of satisfaction. The relationship between group member satis-

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faction and democratic versus autocratic leadership style, as originally proposed by Lewin, Lippit, and White (1939), has remained a consistent research topic over the years. Some of this research appears to support the idea that group members are more satisfied with democratic leadership than with autocratic leadership (e.g., Kushell & Newton, 1986). However, other research indicates that group members are more satisfied with autocratic leadership than with democratic leadership (e.g., Berkowitz, 1953). The purpose of the current effort is to integrate the evidence regarding this paradox and to consider a plausible resolution that specifies the conditions under which a democratic leader elicits satisfaction from group members.

#### **THE PARADOX OF LEADERSHIP STYLE AND MEMBER SATISFACTION**

On one hand, there is reason to believe that group members will be more satisfied in a group when they are part of the decision-making process. This perspective is summarized by Lao-tse's (c. 550 BC) assertion:

A leader is best when people barely know he exists, not so good when people obey and proclaim him, worst when they despise him. . . . But of a good leader, who talks little when his work is done, his aim fulfilled, they will all say: "We did this ourselves."

Some social psychological research supports this idea. For example, in a laboratory study with undergraduate participants, Kushell and Newton (1986) had participants complete the NASA Moon Landing Exercise, which involves ranking the importance of items needed after crash-landing on the moon. Results showed that the group members were more satisfied when the group was democratic. Members have also been found to be more satisfied with democratic leaders in other studies (e.g., Foa, 1957).

On the other hand, there is reason to believe that group members will be more satisfied in a group when they have a strong leader who directs their group. This perspective was summarized in 1785 by William Paley, who asserted:

One very common error misleads the opinion of mankind, that authority is pleasant and submission is painful. In the general course of human affairs the very reverse of this is nearer to the truth: Command is anxiety, obedience is ease.

Some social psychological research supports this idea as well. For example, Page and McGinnies (1959) had adults view a film and then discuss the film in groups led by either a directive, autocratic leader or a nondirective, democratic leader. Results showed that group members were more satisfied when the leadership was autocratic than when it was democratic. Greater satisfaction with autocratic leaders has also been demonstrated in studies by Berkowitz (1953) and Meade (1967, 1985).

Given the conflicting nature of previous studies, a clear summary of the effects of democratic leadership on member satisfaction cannot be formulated from a narrative reading of previous research. However, the sources that introduce psychology students to the leadership literature suggest that the evidence is consistent and clear in support of democratic leadership. For example, in Myers' popular social psychology text, one reads that many experiments show that "a democratic style—one that delegates authority, [and] welcomes input from team members . . . is good for morale" (1996, p. 329). Research that supports autocratic leadership as more satisfactory is not mentioned. Industrial and organizational psychology texts also distill this complex research into a simple summary, stating that people like democratic leadership, whereas they are less satisfied with autocratic styles (Jewell, 1998). Simple summary statements can also be found in sport psychology texts (e.g., Russell, 1993).

The inclusion of leadership style in psychology texts from various disciplines suggests that scholars believe that leadership is an important area of study. However, the confusion regarding the effects of democratic leadership on satisfaction should not be ignored either when introducing this literature to students or within the literature itself. For the sake of disciplines that rely on leadership research, as well as for the resolution of this long-standing paradox, it is imperative to clarify the effects of democratic leadership on member satisfaction. It is therefore not surprising that a preliminary

effort to meta-analytically integrate this research domain has been conducted. For example, Gastil (1994) reported a mean effect size of  $\bar{r} = .23$ . This estimate of a small magnitude of effect is not surprising in light of the just-mentioned contradictions.

However, this estimate of  $\bar{r}$  needs to be interpreted with caution for several reasons. First, Gastil (1994) included tests of the effects of leadership style on member productivity (e.g., Meade, 1967) in his analyses of the effects of leadership style on member satisfaction.<sup>1</sup> Moreover, there are multiple instances of Gastil's reporting an effect size in his meta-analytic database (1994, Table 2, p. 392-394) that in no way correspond to the statistics reported in the original studies (e.g., Rosenbaum & Rosenbaum, 1971; Shaw, 1955). For these reasons, Gastil's estimate of  $\bar{r} = .23$  needs to be interpreted with extreme caution.

Given the importance of clarifying the effects of democratic leadership on satisfaction, as outlined above, and given the potentially misleading results of earlier meta-analytic integrations, a clear resolution of this issue is warranted. We believe that several issues relevant to the study of group dynamics may play a part in the satisfaction that group members experience with different leadership styles. Before examining these issues, an overall understanding of what the weight of available evidence suggests regarding democratic leadership and satisfaction is necessary. Therefore, the first goal of the current study was to determine whether group members' satisfaction is higher with democratic leadership or with autocratic leadership.

#### A POSSIBLE RESOLUTION

The paradox of whether group members are more satisfied with democratic leadership or autocratic leadership might find its resolution in an interaction between group characteristics and leadership style. That is, group members' satisfaction may increase as a result of democratic leadership in some groups or situations, whereas group members' satisfaction may increase as a result of autocratic leadership in other groups or situations. To evaluate the veracity of this possible resolution, four potentially important aspects of the

group and the group leader need to be examined: reality of the group, group size, gender composition of the group, and potency of leadership style.

*Group reality.* A long-standing issue in the study of groups is the possible difference between the study of real groups in natural environments versus the study of artificial groups in laboratories. Studying artificial groups in laboratory settings is often argued to allow greater experimental control, allowing researchers to make causal inferences about the phenomenon being studied. However, this increased control may come at the expense of realism and the ability to generalize beyond the laboratory setting. There are two plausible alternatives regarding the effects of group reality on group dynamics. On one hand, the increased experimental control in laboratory studies may exaggerate the strength of the group phenomena being studied. For example, Webster (1994) argued that results from artificial groups might be stronger than results from real groups because of the exacting conditions in the laboratory that are unlikely to exist in other contexts. However, Shaw (1981) discussed the possibility that the results from artificial groups might be weaker than results from real groups because of the potency of variables when studied outside the laboratory. In the context of the paradox of leadership style and member satisfaction, group reality may play a part because the literature includes studies with both real groups (e.g., Meade, 1967) and artificial groups (e.g., Kuschell & Newton, 1986). Therefore, the second goal of the current study was to determine whether the effects of leadership style on group members' satisfaction is moderated by group reality.

*Group size.* One aspect of group dynamics that has been well established is that as group size increases, the groups become less cohesive and individuals are less satisfied (e.g., Indik, 1965; Katz, 1949; Slater, 1958). In a meta-analytic integration of research on how groups and leadership interact to affect members' satisfaction, Mullen, Symons, Hu, and Salas (1989) found that members may also become less satisfied with a group leader as the size of the group increases. This suggests that the conflicting evidence regard-

ing leadership style and member satisfaction may be a product of the size of the group. Therefore, the third goal of the present effort was to determine whether the effects of leadership style on group members' satisfaction is moderated by group size.

*Gender.* The effects of leadership style on member satisfaction may be based in part on the gender of the group members. Research that has addressed this question directly shows that women are less satisfied with autocratic leaders than men are (Kushell & Newton, 1986), and that the difference in satisfaction between an autocratic and democratic leader is larger for women than for men (Stitt, Schmidt, Price, & Kipnis, 1983). These findings have been discussed as a result of socialization processes in which women are raised to be more relationship oriented, whereas men are raised to be more competitively oriented (e.g., Stein & Bailey, 1973). Consequently, men may find autocratic leadership more satisfying because it fits their expectations for appropriate behavior, whereas women may find democratic leadership more satisfying because autocratic behavior is not seen as appropriate (Kushell & Newton, 1986). Therefore, the fourth goal of the present effort was to determine whether the effects of leadership style on group members' satisfaction is moderated by the gender composition of the group.

*Potency of leadership style.* Perhaps part of the paradoxical effects of leadership style on satisfaction can be explained by the operationalization of democratic or autocratic behavior. There is a wide range in the potency of the operationalizations of democratic or autocratic leadership across studies, such that some groups performed with relatively moderate levels of autocratic or democratic leader behavior, whereas others performed with relatively extreme levels. For example, in Hendrix and McNichols (1982), the autocratic leader was described as overcontrolling work and overemphasizing task accomplishment. Contrast this relatively moderate instruction with that of Shaw (1955), wherein the leader was instructed to give orders, never accept suggestions uncritically, and, in general, make it clear that he was the boss. The conflicting evidence for leadership style and member satisfaction may be due in

part to these variations in the potency of democratic and autocratic leadership. Therefore, the fifth goal of the present effort was to determine whether the effects of leadership style on group members' satisfaction is moderated by the potency of leadership style.

### A META-ANALYTIC INTEGRATION

In an effort to resolve the paradoxical effects of leadership style on member satisfaction, a meta-analytic integration (Mullen, 1989; Mullen & Rosenthal, 1985; Rosenthal, 1991) was conducted. The current effort was undertaken to determine the conditions under which democratic leadership increases satisfaction and the conditions under which autocratic leadership increases satisfaction. The specific goals of this effort were: (a) to provide a precise summary of the significance, the strength, and the direction of the effects of democratic leadership and satisfaction; (b) to examine the possible moderation of this effect by the reality of the group; (c) to examine the possible moderation of this effect by the size of the group; (d) to examine the possible moderation of this effect by the gender composition of the group; and, (e) to examine the possible moderation of this effect by the potency of operationalization of leadership style.

### PROCEDURE

Using all of the standard literature-search techniques, an exhaustive search was conducted for studies testing the effect of democratic leadership on member satisfaction. Specifically, online computer searches were conducted using the keywords *democratic*, *autocratic*, *leadership*, and *satisfaction*. These computer searches were supplemented by ancestry-approach and descendancy-approach searches (see Mullen, 1989, for a discussion of literature-search techniques). Any studies that were available as of May 2000 were eligible for inclusion in this integration.

Studies were included if they met the following criteria: Participants in the studies had to be adolescents or adults not sampled



from abnormal populations, and studies had to report or allow the precise reconstruction of a comparison between member satisfaction in groups with democratic leadership and member satisfaction in groups with autocratic leadership. Studies were not included if authors referred to satisfaction and/or leadership style in the abstract without reference to a specific, actual group (e.g., Sudolsky & Nathan, 1971). Studies were also not included if the participants were selected and grouped based on a personality characteristic (e.g., Haythorn, Couch, Haefner, Langham, & Carter, 1956). The effect of these criteria for inclusion was to focus on the effects of interacting in a group, in studies that were optimally homogeneous in methodological terms. Hypothesis tests were coded as having a positive direction of effect if democratic leadership increased member satisfaction, and as having a negative direction of effect if autocratic leadership increased member satisfaction.

These selection criteria rendered a total of 19 studies (Berkowitz, 1953; Bevan, Albert, Loiseaux, Mayfield, & Wright, 1958; Day & Hamblin, 1964; Denhardt, 1970; Foa, 1957; Hendrix & McNichols, 1982; Kuschell & Newton, 1986; Lyle, 1961; Meade, 1967, 1985; Morse & Reimer, 1956; Page & McGinnies, 1959; Roberts, Miles, & Blankenship, 1968; Rosenbaum & Rosenbaum, 1971; Schliesman, 1987; Scontrino, 1972; Shaw, 1955; Snadowsky, 1974; Stitt et al., 1983). These 19 papers yielded 72 separate tests of the effects of democratic leadership on member satisfaction, representing the responses of 3,854 participants.<sup>2</sup>

In addition to the requisite statistical information, each hypothesis test was independently coded by two judges for reality, group size, gender composition, and potency of leadership. Reality, group size, and gender composition were coded with perfect agreement. Ratings of the potency of leadership style were made on a metric from 0 to 90, with low numbers indicating a potent operationalization of autocratic leadership and high numbers indicating a potent operationalization of democratic leadership. The independent ratings of the two judges resulted in an interjudge agreement of  $r = .875$ , with a Spearman rank  $r = .933$ . Given this high degree of interrater agreement, the potency of a given operationalization of leadership style was defined as the arithmetic mean of the two judges' ratings.

Note that each hypothesis test involved a comparison between a relatively autocratic leadership style and a relatively democratic leadership style. Therefore, each hypothesis test can be characterized by the overall potency of the operationalization of leadership style (defined as the difference between the mean of judges' ratings of relative democratic style and the mean of judges' ratings of relative autocratic style). This indication of overall potency was largest for hypothesis tests that compared extremely autocratic leadership styles with extremely democratic styles. The hypothesis tests included in this meta-analysis, along with the corresponding statistical information and predictors for each hypothesis test, are presented in Table 1.

## RESULTS

*General effect.* Overall, there was a significant,  $Z = 9.688$ ,  $p = 4.96\text{E-}20$ , tendency for democratic leadership to elicit more satisfaction than autocratic leadership, though this effect was small,  $\bar{Z}_{\text{Fisher}} = 0.138$ ,  $\bar{r} = .137$ . The fail-safe number associated with these effects,  $N_{\text{fs}(p=.05)} = 2,917.5$ , indicates that more than 2,917 studies averaging null results would be needed before the combined probability reported above of  $p = 4.96\text{E-}20$  to the "just significant"  $p = .05$ . This  $N_{\text{fs}(p=.05)} = 2,917.5$  exceeds Rosenthal's (1991) benchmark of " $5k + 10$ ", ( $5[72] + 10 = 370$ ), indicating that these results appear robust to future disconfirmations.<sup>3</sup> It should be noted that this significant, albeit small, effect is considerably weaker than the average effect reported by Gastil (1994) of  $\bar{r} = .23$ .

*Reality.* The basic effect presented above was clearly moderated by group reality. In both types of groups, members were significantly more satisfied with democratic leadership than with autocratic leadership, but contrary to typical group dynamics phenomena, the effect of democratic leadership on satisfaction is stronger for artificial groups,  $Z = 9.420$ ,  $p = 2.99\text{E-}19$ ,  $\bar{Z}_{\text{Fisher}} = 0.212$ ,  $\bar{r} = .209$ , than for real groups  $Z = 5.628$ ,  $p = 1.04\text{E-}8$ ,  $\bar{Z}_{\text{Fisher}} = 0.089$ ,  $\bar{r} =$

(text continues on p. 688)

**TABLE 1: Studies Included in Meta-Analysis**

<i>Study</i>	<i>Statistic</i>	<i>N</i>	<i>DOE<sup>a</sup></i>	$\bar{Z}_{\text{Fisher}}$	<i>Reality<sup>b</sup></i>	<i>Group Size<sup>c</sup></i>	<i>Gender<sup>d</sup></i>	<i>Potency<sup>e</sup></i>
Berkowitz (1953)	$r(71) = .29$	648	—	-.30	1	9.0	—	1.5
	$r(71) = -.04$	648	—	-.04	1	9.0	—	1.5
Bevan, Albert, Loiseaux, Mayfield, & Wright (1958)	$t(40) = 1.593$	44	+	.25	0	12.0	63.6	49.5
Day & Hamblin (1964)	$t(20) = 0.341$	48	+	.08	0	4.0	0.0	47.0
	$t(20) = 0.788$	48	+	.18	0	4.0	0.0	47.0
Denhardt (1970)	$\chi^2(1) = 14.588$	59	+	.55	1	29.5	—	64.0
Foa (1957)	$F(1,313) = 0.443$	317	+	.04	1	17.6	100.0	58.0
	$F(1,313) = 7.223$	317	+	.15	1	17.6	100.0	58.0
Hendrix & McNichols (1982)	$t(151) = 1.690$	941	—	-.14	1	8.4	86.0	5.5
	$t(151) = 3.852$	848	+	.31	1	8.4	86.0	25.0
	$t(151) = 5.594$	907	+	.44	1	8.4	86.0	30.5
Kushell & Newton (1986)	$t(135) = 2.647$	143	+	.23	0	7.0	57.1	58.0
	$t(135) = 2.715$	143	+	.23	0	7.0	42.9	58.0
	$t(135) = 3.046$	143	+	.26	0	7.0	57.1	58.0
	$t(135) = 3.375$	143	+	.29	0	7.0	42.9	58.0
	$t(135) = 3.152$	143	+	.27	0	7.0	57.1	58.0
	$t(135) = 3.117$	143	+	.27	0	7.0	42.9	58.0
	$t(135) = 3.165$	143	+	.27	0	7.0	57.1	58.0
	$t(135) = 3.517$	143	+	.30	0	7.0	42.9	58.0
	$t(135) = 1.938$	143	+	.17	0	7.0	57.1	58.0
	$t(135) = 1.046$	143	+	.09	0	7.0	42.9	58.0
	$t(135) = 5.608$	143	+	.47	0	7.0	57.1	58.0
	$t(135) = 4.711$	143	+	.40	0	7.0	42.9	58.0

(continued)

TABLE 1 Continued

<i>Study</i>	<i>Statistic</i>	<i>N</i>	<i>DOE<sup>a</sup></i>	$\bar{Z}_{\text{Fisher}}$	<i>Reality<sup>b</sup></i>	<i>Group Size<sup>c</sup></i>	<i>Gender<sup>d</sup></i>	<i>Potency<sup>e</sup></i>
Lyle (1961)	$\chi^2(1) = 0.221$	48	+	.07	0	4.0	—	13.5
	$\chi^2(1) = 0.258$	48	—	-.07	0	4.0	—	13.5
Meade (1967)	$\chi^2(1) = 3.935$	48	—	-.29	1	6.0	100.0	44.5
	$\chi^2(1) = 14.727$	48	—	-.62	1	6.0	100.0	44.5
Meade (1985)	$\chi^2(1) = 16.00$	48	+	.66	1	6.0	100.0	45.5
	$\chi^2(1) = 16.67$	48	+	.68	1	6.0	100.0	45.5
	$\chi^2(1) = 0.67$	48	+	.12	1	6.0	100.0	45.5
	$\chi^2(1) = 0.67$	48	+	.12	1	6.0	100.0	45.5
	$\chi^2(1) = 10.66$	48	—	-.51	1	6.0	100.0	45.5
	$\chi^2(1) = 10.66$	48	—	-.51	1	6.0	100.0	45.5
	$\chi^2(1) = 16.67$	48	—	-.68	1	6.0	100.0	45.5
	$\chi^2(1) = 13.50$	48	—	-.59	1	6.0	100.0	45.5
	$t(205) = 1.982$	207	+	.14	1	4.2	0.0	34.0
	$t(192) = 2.977$	194	+	.21	1	4.2	0.0	34.0
Morse & Reimer (1956)	$t(202) = 3.642$	204	+	.25	1	4.2	0.0	34.0
	$t(199) = 1.735$	201	+	.12	1	4.2	0.0	34.0
	$\chi^2(1) = 7.923$	64	—	-0.37	0	11.0	0.0	38.5
Page & McGinnies (1959) Roberts, Miles, & Blankenship (1968)	$t(372) = 2.593$	141	+	.13	1	67.8	—	24.0
	$t(372) = 1.843$	98	+	.10	1	67.8	—	24.0
	$t(372) = 2.955$	129	+	.15	1	67.8	—	53.5
	$t(372) = 4.890$	120	+	.25	1	67.8	—	53.5
	$t(372) = 2.354$	158	+	.12	1	67.8	—	24.0
	$t(372) = -0.487$	144	—	-0.03	1	67.8	—	29.5
	$t(372) = 2.613$	135	+	.14	1	67.8	—	29.5
	$t(372) = 1.598$	115	+	.08	1	67.8	—	24.0
	$t(372) = -0.620$	101	—	-.03	1	67.8	—	29.5

	$t(372) = 2.337$	92	+	.12	1	67.8	—	29.5
	$t(372) = 2.741$	146	+	.14	1	67.8	—	53.5
	$t(372) = 4.785$	135	+	.25	1	67.8	—	53.5
Rosenbaum & Rosenbaum (1971)	$t(18) = 0.406$	60	+	.10	0	4.0	100.0	67.5
Schliesman (1987)	$r(38) = 0.347$	40	+	.36	1	40.0	100.0	50.5
Scontrino (1972)	$t(18) = 2.266$	30	—	-.73	0	5.0	55.0	57.5
	$t(18) = 1.297$	30	+	.44	0	5.0	55.0	57.5
	$t(18) = 3.263$	30	—	-.99	0	5.0	55.0	57.5
	$t(18) = 0.745$	30	+	.26	0	5.0	55.0	57.5
	$t(18) = 2.085$	30	—	-.68	0	5.0	55.0	57.5
	$t(18) = 1.431$	30	+	.49	0	5.0	55.0	57.5
	$t(18) = 1.250$	30	—	-.43	0	5.0	55.0	57.5
	$t(18) = 0.011$	30	—	-.00	0	5.0	55.0	57.5
Shaw (1955)	$t(42) = 1.807$	192	+	.28	0	4.0	100.0	69.0
Snadowsky (1974)	$t(72) = 1.138$	160	+	.13	0	4.0	100.0	67.0
	$t(72) = 1.309$	160	+	.15	0	4.0	100.0	67.0
	$t(72) = 1.100$	160	+	.13	0	4.0	100.0	67.0
	$t(72) = 1.036$	160	+	.12	0	4.0	100.0	67.0
	$t(72) = 1.010$	160	+	.12	0	4.0	100.0	67.0
	$t(72) = 0.599$	160	+	.07	0	4.0	100.0	67.0
	$t(72) = 1.202$	160	+	.14	0	4.0	100.0	67.0
Stitt, Schmidt, Price, & Kipnis (1983)	$F(1,105) = 5.77$	678	+	.23	0	6.0	—	88.5
	$F(1,105) = 20.41$	678	+	.43	0	6.0	—	88.5

a. Direction of Effect: + = democratic leadership increases satisfaction, — = democratic leadership decreases satisfaction.

b. 0 = artificial group, 1 = real group.

c. Averaged across conditions.

d. Percentage of sample that is male.

e. Larger numbers indicate relatively strong operationalization of difference between autocratic and democratic leadership.

.089. The focused comparison of effects for these two types of groups revealed a marginally significant difference,  $Z = 1.589$ ,  $p = .0561$ .

*Group size.* The basic effect of member satisfaction was moderated by group size, with democratic leadership becoming more satisfactory as the size of the group increased. This was true in both artificial groups,  $\bar{r} = .116$ ,  $Z = 1.180$ ,  $p = .0376$ , and in real groups,  $\bar{r} = .211$ ,  $Z = 4.100$ ,  $p = .00002$  (see Figure 1).

*Gender.* For the 53 tests that reported the gender composition of the groups, gender composition was found to moderate the basic effect between democratic leadership and member satisfaction. In artificial groups, members became more satisfied with democratic leadership as the group became more predominantly male,  $r = .100$ ,  $Z = 1.704$ ,  $p = .0442$ . In real groups this pattern was reversed, with members becoming less satisfied with democratic leadership as the group became more predominantly male,  $r = -.236$ ,  $Z = 4.813$ ,  $p = 7.689\text{E-}7$ . Despite the reversal of effects, a test of these differences showed that this is not a significant interaction,  $r = -.063$ ,  $Z = 1.306$ ,  $p = .0957$  (see Figure 2).

*Potency of operationalization.* The basic effect of group member satisfaction was moderated by the potency of the operationalizations of leadership style, with democratic leadership being more satisfactory as the potency of the operationalizations of leadership style increased. This was true in artificial groups,  $r = .207$ ,  $Z = 3.342$ ,  $p = .0004$ , as well as in real groups,  $r = .130$ ,  $Z = 3.120$ ,  $p = .0009$ . These results suggest that members are more satisfied with democratic leadership than with autocratic leadership, and that this effect becomes larger as the relative difference between a democratic and an autocratic leader increases (see Figure 3).

*Ancillary analyses.* In a set of supplementary analyses, it was noted that group reality was confounded with the potency of operationalization of leadership style. The potency of leadership style in

(text continues on p. 692)

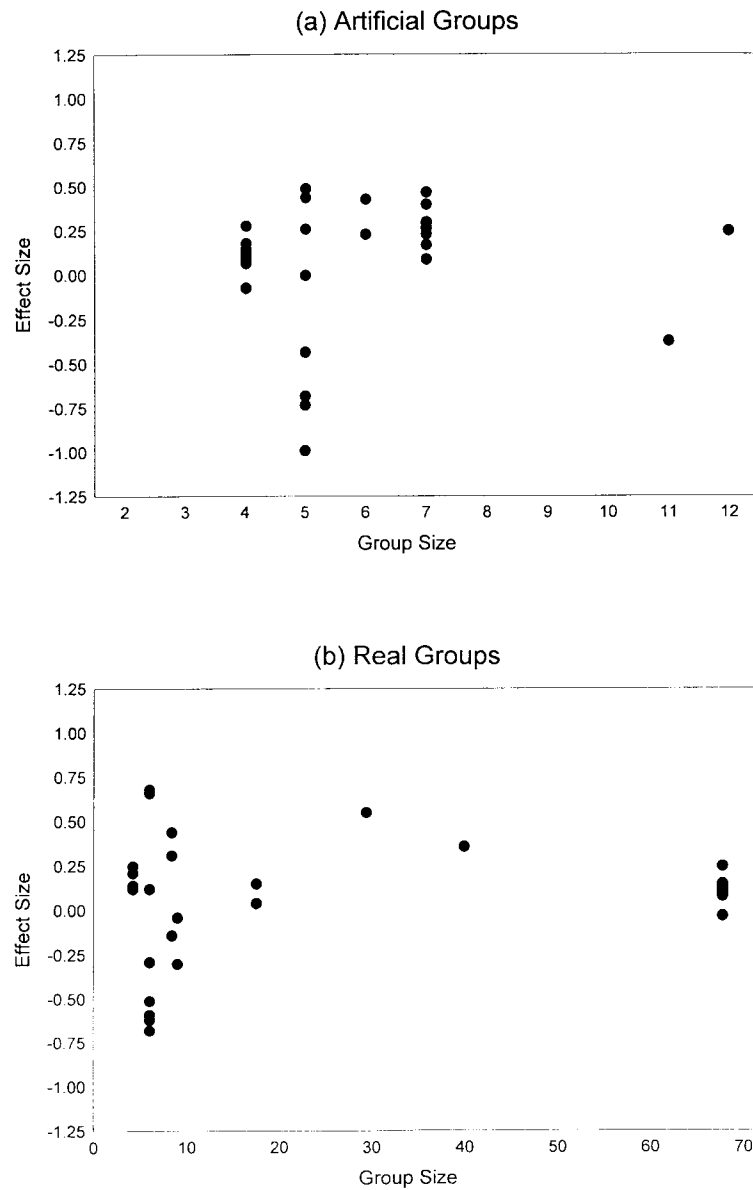


Figure 1: Group Size and Member Satisfaction

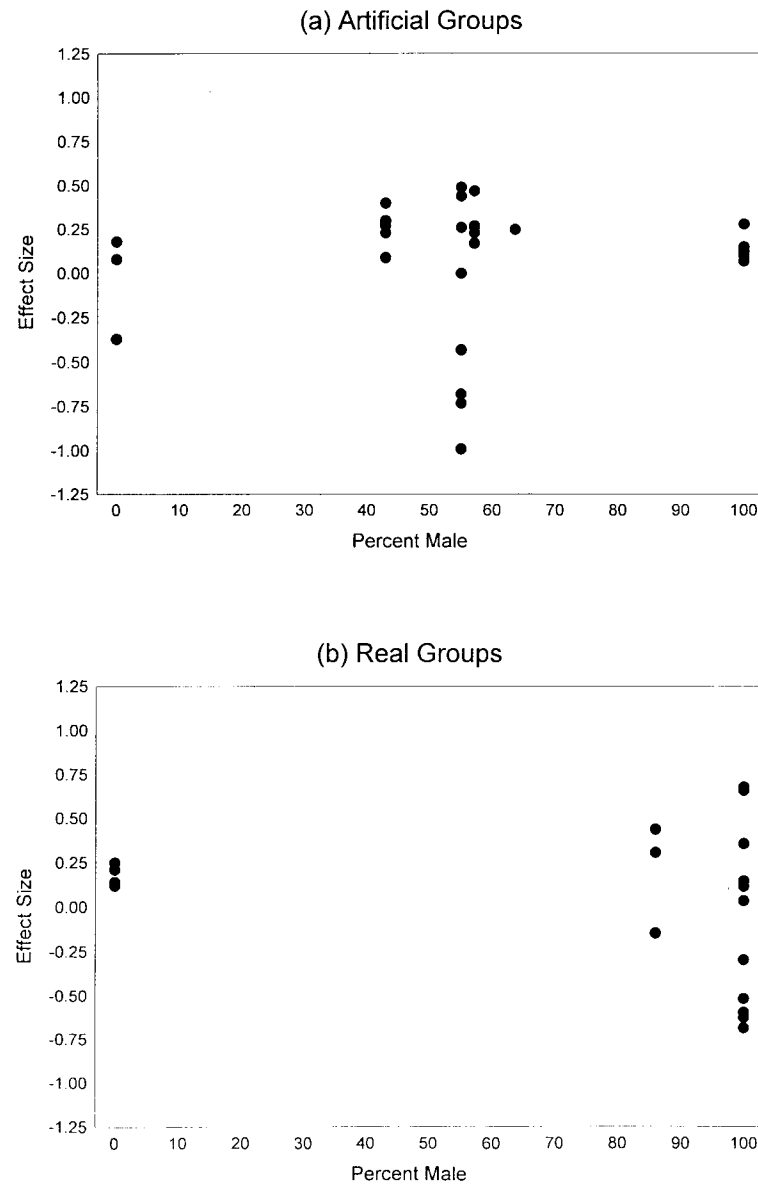
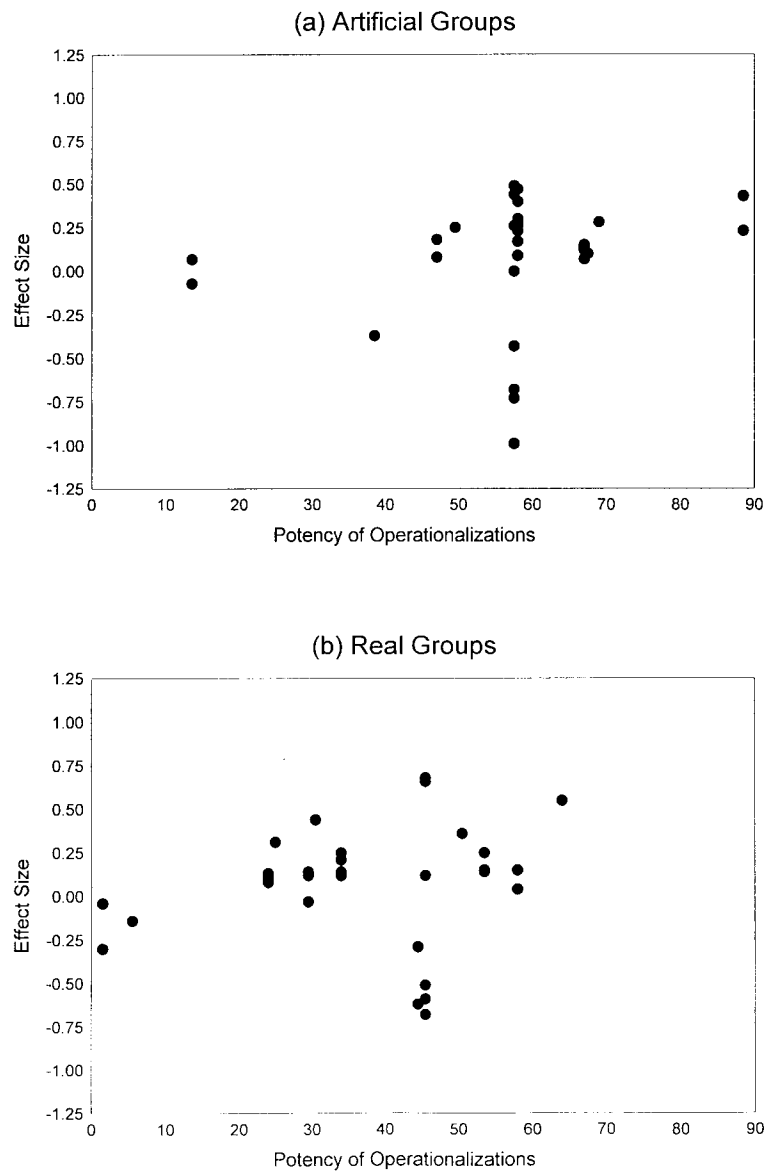


Figure 2: Gender Composition and Member Satisfaction





**Figure 3: Potency of Operationalization and Member Satisfaction**

artificial groups ( $M = 58.04$  out of 90; see Methods section) was significantly stronger than the potency of leadership style in real groups ( $M = 37.47$ ),  $F(1, 70) = 34.38$ ,  $p = 7.39\text{E-}8$ . In an effort to examine the relative contributions of reality and leadership potency, hypothesis tests were dichotomized at the midpoint of potency (45 out of 90) and then compared across group reality. In real groups, there was no difference in satisfaction with democratic leadership when leadership potency was strong,  $\bar{r} = .106$ , versus when it was weak,  $\bar{r} = .084$ ,  $Z = 0.946$ ,  $p = .1721$ . In artificial groups, members were more satisfied with democratic leadership when the leadership operationalization was strong,  $\bar{r} = .220$ , than when it was weak,  $\bar{r} = -.148$ ,  $Z = 2.842$ ,  $p = .0022$ . However, it should be noted that most of the hypothesis tests in artificial groups involved relatively strong operationalizations of leadership style. Of the 37 hypothesis tests involving artificial groups, only three included weak operationalizations (i.e., below the midpoint of 45). Thus, the large number of hypothesis tests that involved artificial groups with strong potency may explain why the effects of democratic leadership were stronger in artificial groups. In fact, when leadership operationalization was weak, satisfaction with democratic leadership was higher in real groups,  $\bar{r} = .084$ , than in artificial groups,  $\bar{r} = -.148$ ,  $Z = 1.916$ ,  $p = .0077$ .

## DISCUSSION

The patterns revealed in this integration are consistent with Lewin et al.'s (1939) initial suggestions regarding leadership and show that in fact, democratic leadership results in more satisfied group members than autocratic leadership. This finding is highly significant and very robust, suggesting that Paley was wrong in his assertion that "obedience is ease." It appears that people in groups do not prefer to be subjected to domineering or manipulative leadership but instead are more satisfied when they are allowed to participate in group decisions. The basic result demonstrates that simple textbook summaries (e.g., Myers, 1996) are accurate when such summaries assert that democratic leadership is more satisfactory for group members. However, the effect of leadership style on mem-

ber satisfaction is relatively weak ( $\bar{r} = .137$ ), and this basic finding is qualified by several results as discussed below.

First, the effect of leadership style is stronger in artificial groups than in real groups, a result that is contrary to the typical result of group reality. For example, the effects of brainstorming on group performance have been shown to be weaker in artificial groups than in real groups (Mullen, Johnson, & Salas, 1991), and the effects of participation on leadership emergence have also been found to be weaker in artificial than in real groups (Mullen, Salas, & Driskell, 1989; see Mullen, Driskell, & Salas, 1998, for a summary of real vs. artificial groups). In the current study, effects obtained in artificial groups were instead stronger than effects obtained in real groups. This finding should be interpreted with caution, however. The operationalization of leadership style was stronger in laboratory studies than in real settings. The differences discovered for group reality may therefore be an artifact of potency of operationalization, rather than a difference due to the type of group. These caveats do not change the results of group reality when potency of operationalization was weaker. In those studies that fit this criterion, the effect of leadership style on satisfaction was smaller in artificial groups than in real groups, corresponding to the findings of Mullen et al. (1998). These findings, therefore, should not be interpreted as evidence against the utility of laboratory studies of democratic leadership. However, our findings do suggest that more attention be given to the potency of leadership operationalizations in studies using artificial groups.

Second, the effect of leadership style on satisfaction becomes stronger as groups become larger. This makes sense given that group cohesion decreases as group size increases (Indik, 1965; Katz, 1949; Slater, 1958). As group size increases, there may be more opportunity for democratic leadership to exert its effect on member satisfaction. When a group is small and therefore relatively more cohesive, satisfaction may already be at a high level (at least higher than in large groups). Changing leadership style from autocratic to democratic in small groups may not result in a noticeable increase in satisfaction, due to a ceiling effect. However, when the group is large and therefore relatively less cohesive, changing to democratic

leadership may have a noticeable impact on members' satisfaction. This is not to say that small groups do not prefer democratic leadership, but rather that any movement in satisfaction is more likely to be noticed as the size of the group increases.

Third, the effect of leadership style on satisfaction becomes stronger as the gender composition of the group becomes more predominantly male. There is an intriguing relationship between gender composition and group reality. In real groups, members became less satisfied with democratic leadership as the gender composition of the group became more predominantly male. This result is expected, given that women are less satisfied than men with autocratic leadership (Kushell & Newton, 1986). In groups that were predominantly female, women's preference for democratic leadership led to satisfaction with a democratic leader. In groups that were predominantly male, men's preference for autocratic leadership led to less satisfaction with a democratic leader. This explanation does not carry over into artificial groups, however. In artificial groups, members became more satisfied with democratic leadership as the gender composition of the group became more predominantly male. This finding is unexpected and difficult to explain with past research findings.

It should be noted that the stronger potency of leadership style in artificial groups does not explain the gender composition results. In fact, if potency were driving this gender result, then we would see even less satisfaction in artificial groups, not more. The difference must therefore be due to aspects of gender composition. The literature that examines the gender composition of a group and leadership focuses mostly on which gender is more likely to emerge as the leader (e.g., Walker, Ilardi, McMahon, & Fennell, 1996) and the stereotypes regarding gender and leadership (e.g., Kolb, 1997). Studies that examine the effects of gender composition on group dynamics are rare (Rogelberg & Rumery, 1996), and most of this work is on group performance (see Wood, 1987). Although some studies have examined gender composition and work satisfaction (see Tolbert, Graham, & Andrews, 1999, for a review), there is a dearth of evidence regarding the effects of mixed-gender groups on member satisfaction due to leadership.

An explanation for the satisfaction with democratic leadership in predominantly male artificial groups may rely on work regarding stereotypes in heterogeneous groups. Researchers have theorized that heterogeneous groups experience more negative affect due to the increased cognitive efforts required to overcome stereotypes and biases (Devine, 1989), referred to as the *cost of interaction* (Shaw & Barrett-Power, 1998). As groups become more homogeneous, increased satisfaction could therefore be expected, because the cost of interaction decreases. This cost of interaction hypothesis could explain satisfaction with democratic leadership in homogeneous (predominantly male), artificial groups.

The reversal of effects in real groups may be due to different types of participants in real and artificial groups. The participants in artificial groups are typically college students, who may have more liberal views on appropriate leadership behavior. Therefore, democratic leadership may be preferred, especially as the cost of interaction decreased. In real groups, however, men may have learned "appropriate" leadership through socialization (Hutchinson, Valentino, & Kirkner, 1998). Hutchinson et al. (1998) suggest that because most leaders are men, most leadership styles are task-oriented as opposed to relationship-oriented. In real settings, then, men may become more accustomed to task orientation and become more satisfied with this more autocratic type of leadership. Therefore, as leadership style becomes more democratic in real groups, men become less satisfied. As the group becomes more predominantly male, this dissatisfaction overwhelms any benefit due to the reduction in the cost of interaction.

This group-composition discussion is tentative and based more on supposition than on data. What we can say with certainty is that satisfaction as a function of the gender composition of groups is an area of research that has not been adequately explored. Given the increasing number of women in the workforce (Powell, 1999), this may be an important area to consider.

Fourth, the more potent the operationalization of leadership style, the more likely the group members will be satisfied with democratic leadership. This finding may explain some of the variability in the leadership/satisfaction literature, because there was a wide

range in potency of operationalizations in the studies we reviewed. Additionally, this variable may complicate an understanding of the effects of democratic leadership, because few studies have examined weak potency operationalizations in artificial groups (only three in our database). Although the study of democratic leadership has existed for 60 years, it appears that the potency of leadership manipulations has been largely ignored. Failing to take the strength of leadership operationalizations into account may have important consequences, however, for the study of leadership and satisfaction. Researchers should pay more attention to this variable in future studies.

The qualifications to the basic finding that democratic leadership is more satisfactory indicate that one should use caution when applying this research to real-world settings. For example, the findings presented here suggest that in instances where a real group is composed of predominantly men, the basic tendency to be more satisfied with democratic leadership is diminished. Ignoring gender composition could potentially lead an organization to institute a costly leadership change that will not increase worker satisfaction if the work group is predominantly male. Additionally, although leader gender does not affect subordinate satisfaction (Kushell & Newton, 1986; Stitt et al., 1983), leader gender can influence leader effectiveness depending on leadership style (Watson, 1998). The interplay between gender, leadership, and satisfaction therefore needs more attention.

The current meta-analytic effort has served one of the broad and indirect goals of any meta-analysis, to provide a useful compass heading for primary-level researchers regarding the gaps in our nomological net (Mullen, 1989). Subsequent research on the effects of democratic leadership and satisfaction should certainly begin to explore in more detail the issues raised here. For example, what is the effect of more potent leadership manipulations with real groups? The gender composition of groups and the association between leadership and satisfaction should also be examined more closely, especially given the changing dynamics of the workforce. The rise in the number of women working in corporate America means that there will be more gender diversity in work groups (Jackson, 1992).

This diversity may affect the type of leadership style that is most preferred by work groups as these groups continue to become less predominantly male.

With the popular notion that organizations should be instituting more democratic decision making (Stewart, 1998), it is important to consider the implications of these results. On one hand, our results show that the actual level of change in satisfaction will be small, and perhaps not even noticeable to the naked eye. In fact, the variance accounted for is less than 2% ( $r = .137$ ,  $r^2 = .019$ ). If an organization institutes a policy change regarding leadership style based on a sampling of laboratory studies, the organization may be disappointed to find a very weak effect on worker satisfaction in their real-world setting. On the other hand, mitigating factors discovered in the current effort might lead to an encouraging view. If the real-world organization is large and historically characterized by an extremely autocratic leadership style, it is more likely that the satisfaction of the workers will increase noticeably with the introduction of democratic leadership.

For example, in the current meta-analytic integration, there were  $k = 5$  hypothesis tests that matched these criteria. That is, there were five hypothesis tests involving real groups with large group size (greater than 30) using relatively potent operationalizations of leadership style (potency greater than 45 out of a possible 90; see Methods section). The leadership style-satisfaction effect for these five hypothesis tests was significant,  $Z = 7.733$ ,  $p = 2.37\text{E-}14$ , and stronger,  $\bar{r} = .204$ , than the basic effect. This indicates that under the right constellation of circumstances, the introduction of democratic leadership can lead to an increase in group member satisfaction. It should be recognized that even under these specific conditions, the average leadership style-satisfaction effect of  $\bar{r} = .204$  is still relatively small (and still smaller than Gastil's [1994] more sanguine overall estimate of  $\bar{r} = .23$ ). It should also be recognized that these circumstances identify the situation in which a shift from democratic leadership to autocratic leadership would result in the most dramatic decrease in group member satisfaction.

Democratic leadership is endorsed by both the psychological literature (e.g., Bass, 1990) and mainstream media (e.g., Stewart,

1998) as being more satisfactory. Although we do find evidence to support this idea, the effect is quite small and subject to several qualifications. With the changes taking place in organizations, including more female employees and managers (Powell, 1999), increased informal team leadership (Neubert, 1999), and more cross-cultural interactions (Jackson, 1992), it may be important to continue to study how different leadership styles affect group members' satisfaction. Future studies must be sure to take these important variables into account, because this study suggests that satisfaction with leadership is a very complex phenomenon.

## NOTES

1. Although Meade (1967) does include tests of satisfaction (and is therefore included in our database), he also has separate tests of productivity. Unfortunately, Gastil's effort includes these tests of productivity within his satisfaction database.

2. The included studies reported varying numbers of hypothesis tests ranging from 1 per study (e.g., Denhardt, 1970) to 15 per study (e.g., Roberts et al., 1968). In the meta-analysis reported below, each hypothesis test was treated as an independent observation. This assumption of independence is patently false. For example, each of the 15 hypothesis tests included in Roberts et al. (1968) was derived from the same participant population at the same time. However, without making this assumption of nonindependence, one would be forced to select the "best" hypothesis test from a study such as Roberts et al. (1968) or to pool the results from the reported hypothesis tests into a single test. In the current context, these alternatives seem even more arbitrary and capricious than the current assumption of independence. The effects of this assumption of independence are examined later.

3. As indicated in Note 2, the assumption that each of the 72 hypothesis tests represented an independent observation is false. However, it can be seen that such an assumption does not seem to render a distorted summary of this research domain. Consider the results of a supplementary meta-analysis of wholly independent effects in which multiple hypothesis tests obtained from a single study were combined into a single test. This heavy-handed solution precludes the examination of the effects of type of situation, but it does eliminate the problem of nonindependence. This produced 19 distinct, wholly independent hypothesis tests, one from each includable study. The results of this supplemental meta-analysis revealed the same patterns reported above: For the  $k = 19$  hypothesis tests, there was a significant,  $Z = 4.25$ ,  $p = .00001$ , small,  $\bar{Z}_{\text{Fisher}} = 0.132$ ,  $\bar{r} = .131$ , effect. These results indicate that the degree of distortion engendered by the assumption of independence of the original 72 hypothesis tests is (at worst) tolerable.



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