

Attributions of the “Causes” of Group Performance as an Alternative Explanation of the Relationship Between Organizational Citizenship Behavior and Organizational Performance

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The purpose of this study was to examine the possibility that feedback regarding team performance may influence team members' reports of organizational citizenship behaviors. Ninety-five teams of business students ($N = 412$) participated in a labor-scheduling simulation over a local area network. Teams were provided with false negative, false positive, or neutral feedback regarding their performance. Results support the hypothesis that the perception of 2 forms of organizational citizenship behavior (helping behavior and civic virtue) in work groups may, in part, be a function of the nature of the performance feedback that group members receive. However, negative feedback appears to play a more critical role than positive feedback in this attributional process. Possible reasons for these findings, as well as their implications, are discussed.

The topic of organizational citizenship behaviors (OCBs) has received a great deal of attention during the past 15 years (e.g., Allen & Rush, 1998; Bateman & Organ, 1983; Chen, Hui, & Sego, 1998; MacKenzie, Podsakoff, & Fetter, 1991; Organ, 1988, 1997; Smith, Organ, & Near, 1983). Much of this interest seems to be based on the assumption that OCBs enhance organizational effectiveness (e.g., Organ, 1988; Podsakoff, Ahearne, & MacKenzie, 1997; Podsakoff & MacKenzie, 1994, 1997; Walz & Niehoff, 1996). Indeed, this assumption was an explicit part of Organ's (1988) definition of OCB as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes effective functioning of the organization” (p. 4).

Although empirical evidence designed to test the assumption that OCBs enhance organizational effectiveness is just now beginning to emerge, the research that has been reported is fairly encouraging. For example, Podsakoff and MacKenzie (1994) found that OCBs accounted for 17% of the variance in sales productivity in a sample of 116 insurance agents, although they did find that some forms of OCB tended to help whereas others tended to hinder organizational success. More favorable results were reported by Podsakoff et al. (1997) in a sample consisting of 40 paper mill work crews. They found that OCBs accounted for 25% of the variance in the quantity of paper produced and almost 17% of the variance in the paper quality produced by these crews. Finally, in a sample of food service employees, Walz and Niehoff (1996) reported that OCBs accounted for 15% of the variance in

operating efficiency, 37% of the variance in customer complaints, 39% of the variance in customer satisfaction, and 20% of the variance in the quality of employee performance. Thus, when taken together, the emerging evidence seems to provide support for the assumption that OCBs are correlated with organizational (unit) success.

However, despite these generally encouraging findings, it is important to note that all of the studies that have been reported to date have been correlational—not experimental—in nature. This is not to say that all of the studies cited above have been cross-sectional. Indeed, in the study reported by Podsakoff and MacKenzie (1994) and in the one reported by Podsakoff et al. (1997), a time lag of about 4 months occurred between the collection of the OCB measures and the collection of the measures of organizational productivity. However, it is difficult to know what participants in these studies knew about their groups' productivity during the collection of OCB data. Thus, even though the aforementioned studies have established that OCBs are related to team or unit effectiveness, they have not unequivocally established which of these variables is the cause and which of these variables is the effect in these relationships.

Staw (1975) was perhaps the first to argue that groups that receive positive feedback regarding their performance might attribute their performance to factors that are consistent with group members' implicit theories of the causes of performance. Consistent with this expectation, he found that groups that received positive feedback reported that they were more cohesive and liked their teammates more than groups that received negative feedback—even though the feedback was unrelated to the actual levels of performance of the groups. Although the primary focus of Staw's study was on the attributions of group processes such as cohesiveness, motivation, and communication following positive feedback, it is possible that groups that receive such feedback also attribute their performance to OCBs. Indeed, in discussing the general findings of the relationships between OCBs and group

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performance, Podsakoff and MacKenzie (1997) noted the possibility that

high performing groups might report that they engage in a great deal of citizenship behavior not because they really do, but because their implicit theories of performance suggest that high performing groups help each other, are good sports, and exhibit civic virtue. (pp. 145–146)

Therefore, the primary purpose of the present study was to examine the possibility that (a) OCBs are related to group performance because group members have implicit theories regarding the relationships between OCBs and group performance and (b) groups that receive positive feedback regarding their performance may, at least in part, attribute their performance to OCBs. The possibility that group members could attribute their performance to behavior is important because even though Staw (1975) and others (Downey, Chacko, & McElroy, 1979; Guzzo, Wagner, Macguire, Herr, & Hawley, 1986; McElroy & Downey, 1982) have demonstrated that false feedback does influence group members' attributions of *attitudes* toward other group members (e.g., group cohesiveness), no study to date has shown that such feedback influences group members' perceptions of group *behaviors*, such as OCBs.

Background and Hypotheses

Staw (1975) argued that people may have implicit theories regarding the characteristics of groups that make them successful and that when groups do succeed, these implicit theories are called on to explain the groups' success. From this perspective, the causal sequence between group performance and group members' attributions of group characteristics is as shown in Figure 1.

To test this hypothesis, Staw (1975) manipulated the performance feedback provided to groups participating in a financial puzzle task. He provided groups with both qualitative and quantitative performance feedback and found that groups receiving positive feedback described themselves as more cohesive, more enjoyable to work with, higher in quality and quantity of communication, higher in total influence, and marginally higher in openness to change than groups receiving negative feedback. Similar findings have been reported by Downey et al. (1979), McElroy and Downey (1982), and Guzzo et al. (1986). Thus, it would appear that performance feedback does lead to the attribution of at least some group characteristics, including group cohesiveness. Although no study has been conducted to determine the plausibility of Podsakoff and MacKenzie's (1997) suggestion that groups receiving positive performance feedback may attribute their performance to OCBs, there are at least three reasons for this expectation.

First, recent research (e.g., Allen & Rush, 1998; MacKenzie, Podsakoff, & Fetter, 1991, 1993; Motowidlo & Van Scotter, 1994; Podsakoff & MacKenzie, 1994; Van Dyne & LePine, 1998; Van

Scotter & Motowidlo, 1996; Werner, 1994) has indicated that in addition to in-role aspects of performance, managers generally include OCBs in their evaluations of the overall contributions of an employee to the organization. For example, MacKenzie et al. (1991, 1993) found that supervisors made a distinction between measures of in-role performance and OCBs and that at least part of the systematic variance in managers' ratings of performance was due to OCBs. Similar results have been reported by Motowidlo and Van Scotter (1994), Van Dyne and LePine (1998), and Werner (1994). These findings suggest that citizenship behaviors are part of managers' prototypes of a "good" employee. It is interesting that research has also demonstrated that these types of facilitative behaviors are often demonstrated within the context of effective work teams (e.g., Podsakoff et al., 1997; Podsakoff & MacKenzie, 1994; Walz & Niehoff, 1995). Thus, it is possible that managers as well as team members develop implicit theories or prototypes of "good" teams that include both high performance levels and OCBs and that these prototypes are called on by team members when they receive feedback that indicates that their team is performing effectively. In a similar vein, if managers or team members develop implicit theories of "bad" or ineffective teams that do not include OCBs, one would expect that team members who receive negative feedback regarding the group's effectiveness would be less likely to rate their team as exhibiting high levels of citizenship behaviors.

Second, the results from a recent meta-analytic study reported by Podsakoff, MacKenzie, and Bommer (1996) indicate that employees' perceptions of group cohesiveness are positively correlated with their perceptions of OCBs. Given this finding, it is possible that groups high in cohesiveness tend to demonstrate more citizenship behaviors than groups low in cohesiveness and/or that groups that demonstrate more citizenship behaviors tend to be more cohesive than groups that do not demonstrate OCBs. In contrast, it is also possible that groups given high performance feedback tend to attribute their performance both to cohesiveness (e.g., Staw, 1975) and to OCBs because these two factors are perceived by group members to covary with each other.

Finally, consistent with speculation by DeNisi and Pritchard (1978), it may be the case that high (or low) performance feedback generates positive (negative) affect that becomes "generalized to the entire situation" (e.g., DeNisi & Pritchard, 1978, p. 360), facilitating social judgments that are positive (negative) in nature (e.g., Isen & Daubman, 1984). This generalization of affect, would, in turn, lead to higher (lower) ratings of OCB, which are themselves positive (negative) in nature. Indeed, it is possible that within a positive feedback context, the idea of "OCB" is simply more accessible to individuals than "not OCB," which is, by its nature, less positive (e.g., Higgins, 1996). This line of conjecture is, in part, supported by Guzzo et al. (1986), who argued that "affect generalization may coexist with the operation of implicit theories to influence evaluations

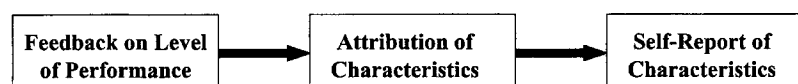


Figure 1. Causal sequence of events.

of groups [such that] evaluations of group processes and outcomes could be shaped by both forces" (p. 293). Thus, we proposed the following hypotheses:

Hypothesis 1: Positive feedback will result in higher reported levels of OCB than negative feedback.

Hypothesis 2: Positive feedback will result in higher reported levels of OCB than neutral feedback.

Hypothesis 3: Neutral feedback will result in higher reported levels of OCB than negative feedback.

Method

Subjects

Four hundred and twelve undergraduate students enrolled in the business school of a large midwestern university served as subjects in this study. The average age of the subjects was 21.1 years, and 54% were male. Participants had an average of 1.01 years of full-time work experience and 3.8 years of part-time work experience. Informed consent was obtained from all subjects, and each subject was debriefed at the end of his or her experimental session.

Procedure

Subjects participated in the study in a behavioral laboratory in the business school. Once subjects arrived at the lab, they were randomly assigned to one of five 5-person teams to complete the task. Each team was exposed to one experimental condition. Ninety-five teams participated in the study, for a total of 19 teams per experimental condition. Each team had a computer terminal to which it was assigned. Once all of the teams had been assigned to their computer, the instructions were read to them, any questions they had were answered, and the subjects were told to begin the task. The teams worked at the task for 1 hr. Performance incentives in the form of a \$50 cash prize were provided to participants in the 5-team groups "competing" on the task. After the competition, all participants completed a posttask survey, and exit interviews were conducted to assess the effectiveness of the local area network environment.

Experimental Task

A group decision support system environment, using a commercially available spreadsheet program that allowed for the real-time monitoring and recording of group actions and objective task performance, was used. The team task was to develop a 1-week schedule of job assignments for a maximum of 30 employees of a service firm while trying to maximize three measures of performance. The first of these measures, employee morale, represented the percentage of the employees working for the service firm who were satisfied with their job assignment schedule. This component of the task was set at 100% at the beginning of the simulation and was designed to decrease when the employees were assigned to shifts that conflicted with their "desired" shift assignments. The second measure of performance, service, represented the amount of shift coverage, given forecasted demand. This component was set at 7% at the beginning of the exercise and was designed to increase as shifts with high-demand forecasts were filled and to remain constant when shifts remained uncovered. The final measure of performance, profit, represented the profit margin generated by the scheduling team. This performance component was set at 10% at the beginning of the exercise and was designed to decrease as the number of employees scheduled to various shifts increased but to increase as the service component rose. The exact nature of the linear relationship between the morale, service, and profit components was never revealed explicitly to participants. However, equally scaled performance output for these three criteria, as well as overall team performance, was updated on

the computer terminals with every decision made by the team on the computer. The group decision support system was designed such that no single action could affect one of the three criteria without altering the others.

Experimental Manipulations

Each team had direct access to its own real-time performance on the scheduling task by means of the computer terminal. However, the experimental scenario was explained to subjects in such a way that it was the relative performance of the teams competing in each group that was established as the criterion for posttask rankings and feedback. Participants were given instructions indicating that the decisions made by their teams affected not only their own team's task environment but also the environment of the teams against which they were competing. Therefore, it was possible to manipulate performance feedback by using relative rank as well as indicators of quantitative and qualitative performance.

After the completion of the simulation, each team was given false performance feedback regarding its relative quantitative performance in comparison with each of the other four teams "competing" in that group, as well as qualitative feedback regarding the team's relative performance. To ensure that the feedback manipulations had their intended effect, we generally modeled them after manipulations that had proven to be effective in prior research (cf. Downey et al., 1979; Guzzo et al., 1986; McElroy & Downey, 1982; Staw, 1975) and conducted a pilot study to test them. The results of the pilot study indicated that the feedback manipulations produced the intended effects on the OCB ratings.

In the lowest performance feedback condition, participants were told that they "performed the worst, with estimated earnings of \$27,568." In the next-to-lowest performance feedback condition, participants were told that they were "next to the bottom, with estimated earnings of \$32,741." In the middle feedback condition, participants were told that they were "in the middle of the pack, with an estimated \$37,214 in earnings." In the next-to-highest performance feedback condition, participants were told that they "placed second in estimated earnings at \$43,087." Finally, in the highest performance feedback condition, participants were told that they "finished first, with estimated earnings of \$48,260."

Dependent Variables

Three types of citizenship behavior (helping behavior, civic virtue, and sportsmanship) were chosen as dependent variables in this study. These specific OCBs were chosen because they (a) are based on the conceptual work of Organ (1988); (b) have been shown in previous research (cf. Podsakoff et al., 1997; Podsakoff & MacKenzie, 1994) to be related to group performance; and (c) were, in principle, observable in the group setting used in this study. Conceptually speaking, the *helping-behavior* dimension is the broadest based construct and generally involves helping others with, or preventing the occurrence of, work-related problems. Examples of helping-behavior items included in this study were "How frequently did your team members help each other out if/when someone fell behind in his/her part of the simulation task?" "How frequently did your teammates try to act like peacemakers when other team members had disagreements?" "How frequently did your teammates take steps to try to prevent problems with other team members from occurring?" and "How frequently did your teammates 'touch base' with the other team members before initiating actions that might have affected them?" *Civic virtue* is defined as behavior that indicates that a person responsibly participates in, or is concerned about, the life of the organization. Examples of civic virtue items used in this study included "How frequently did your teammates provide constructive suggestions about how the team could improve its effectiveness on the scheduling simulation?" and "In your opinion, how willing were your teammates to risk the disapproval of other team members by expressing their beliefs about what was best for your team during the

computer simulation?" Finally, *sportsmanship* is defined as the willingness on the part of people to put up with minor inconveniences and tolerate less than ideal circumstances and was measured in this study with items such as "How frequently did your teammates focus on what was wrong with the present situation rather than the positive side?" and "How frequently did your teammates find fault with what other team members were doing during the task-simulation?" (Both items were reverse coded.) Subjects were asked to respond regarding the frequency with which teammates demonstrated the set of behaviors measured by the scale items on a 1 (*very infrequently*) to 7 (*very frequently*) scale. In addition, a sample of subjects (22%) was asked two posttask interview questions designed to assess perceptions of competition fairness and local area network effectiveness on a dichotomous 1 (*yes*) or 0 (*no*) scale.

Results

Manipulation Checks

To determine the extent to which the subjects viewed the false performance feedback they received as consistent with their actual performance, two exit interview questions were asked of a random sample of 90 (22%) of the subjects. These questions were (a) "Was the competition fair?" and (b) "Was the local area network you competed on effective?" Eighty-three of 90 subjects responded positively to the first question, $\chi^2(1, N = 90) = 64.18, p < .001$, whereas 78 of 90 subjects responded positively to the second question, $\chi^2(1, N = 90) = 48.40, p < .001$. These results indicate that the majority of the subjects interviewed reported that the competition was fair and that the local area network was effective, thus providing support for the integrity of the primary feedback manipulations.

Confirmatory Factor Analysis

Confirmatory factor analysis was conducted on the team-level data to ensure that the hypothesized three-factor solution (Helping, Sportsmanship, and Civic Virtue) for the OCB scales was warranted. The results indicated that the three-factor solution fit the data very well and significantly better than either a one-factor solution, $\Delta\chi^2(3, N = 95) = 148.06, p < .001$, or a two-factor solution, in which both helping behavior and civic virtue were forced to load on one factor, $\Delta\chi^2(2, N = 95) = 44.52, p < .001$. The normed fit index for the model was .97, the goodness-of-fit index was .98, the comparative fit index was .99, and the root-mean-square error of approximation was .09, all of which are indicative of an acceptable fit of the data to the model.

Test for Appropriateness of Data Aggregation

Although Organ (1988) argued that the impact of OCBs primarily occurs as a result of their demonstration across individuals, and the participants in the present study were asked to make ratings at the level of the group rather than individuals in the group, intra-class correlation coefficients—ICC(1) and ICC(2) (Bliese, 2000)—were examined to determine the appropriateness of aggregating the data at the group level. This analysis indicated that 36% of the variance in helping behavior and 52% of the variance in civic virtue was accounted for by group membership, ICC(1). In addition, both helping behavior (0.74) and civic virtue (0.84) had acceptable levels of reliability, ICC(2). However, such was not the case for sportsmanship. Indeed, sportsmanship had a negative value (−0.22) for ICC(1) and a negative value (−8.20) for ICC(2). As noted by Bliese, negative values for ICC(1) and ICC(2) suggest that the variance in the construct of interest is best accounted for by individual, rather than group, differences. Therefore, aggregating the sportsmanship measure was not justified in this study, and this variable was dropped from further analyses (a point to which we return later in our discussion).

Construct Means, Standard Deviations, Reliabilities, and Intercorrelations

The means, standard deviations, and latent-variable intercorrelations for the study are reported in Table 1. Also indicated in Table 1 are two indices of construct reliability: (a) Cronbach's alpha, which is a measure of internal consistency, and (b) Fornell and Larcker's (1981) $\rho_{vc(\eta)}$, which is a measure of the average variance extracted from the items in each construct. Evidence for the reliability of the constructs is indicated by the fact that the internal consistency reliability for both helping ($\alpha = .83$) and civic virtue ($\alpha = .74$) met Nunnally and Bernstein's (1994) recommended alpha level of .70 and the $\rho_{vc(\eta)}$ indices were all greater than Fornell and Larcker's recommended level of .50. Evidence of the discriminant validity comes from the fact that all of the intercorrelations between helping and civic virtue were significantly ($p < .05$) less than 1.00 and the shared variance between any two constructs (i.e., the square of their intercorrelation) was always less than the average variance explained in the items by the construct, that is, the $\rho_{vc(\eta)}$ of the construct.

Table 1
Means, Standard Deviations, Internal Consistency Reliabilities, and Latent-Variable Intercorrelations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Actual performance	10.89	24.85	—			
2. Civic virtue	5.04	0.73	.13	(.74/.79)		
3. Helping	4.61	0.67	−.01	.82**	(.83/.75)	
4. Feedback (rank)	3.00	1.42	−.01	.42**	.35*	—

Note. Reliability estimates appear in parentheses along the diagonal. The first entry inside the parentheses is Cronbach's index of internal consistency reliability (α), and the second entry is Fornell and Larcker's (1981) rho. Reliability estimates were not calculated for either actual performance or feedback (rank).

* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

Hypotheses Tests for the Effects of False Performance Feedback

The means, standard deviations, and ranges of helping behavior and civic virtue across the five feedback conditions are presented in Table 2, and these means are plotted by feedback condition in Figure 2. As one can see in Figure 2, team members' perceptions of both helping and civic virtue tended to increase as the level of false performance feedback received by subjects went from negative, through neutral, to positive levels.

Results from the one-way multivariate analysis of variance examining the effect of performance feedback on OCBs indicated a highly significant multivariate effect of feedback rank, Hotelling's approximate $F(8, 176) = 3.25, p < .005$. Univariate analyses of variance were executed to examine the effect of feedback level on the OCB subscales. Consistent with the visual data reported in Figure 2, the one-way analyses of variance indicated a significant effect of feedback level for both helping, $F(4, 90) = 3.85, p < .01, \eta^2 = .14$, and civic virtue, $F(4, 90) = 6.39, p < .001, \eta^2 = .22$. One-tailed planned comparisons were conducted to identify the mean differences driving the significant omnibus effects.

Hypothesis 1 predicted that positive feedback would result in higher reported levels of OCBs than negative feedback. With respect to this hypothesis, comparisons of the highest and lowest feedback conditions represent the most liberal test. Comparisons involving the highest and next-to-lowest feedback conditions and comparisons involving the next-to-highest and lowest feedback conditions represent a more conservative test of the first hypothesis. Finally, comparisons involving the next-to-highest and next-to-lowest feedback conditions constitute the most conservative test of the first hypothesis.

Hypothesis 2 predicted that positive feedback would result in higher reported levels of OCBs than neutral feedback. Comparisons involving the highest and middle feedback conditions constitute the most liberal test of this hypothesis, whereas comparisons involving the next-to-highest and middle feedback conditions constitute a more conservative test of this hypothesis. Finally, Hypothesis 3 predicted that neutral feedback would result in higher reported levels of OCBs than negative feedback. Comparisons

involving the middle and lowest feedback conditions constitute the most liberal test of the hypothesis, whereas comparisons involving the middle and next-to-lowest feedback conditions constitute a more conservative test of this hypothesis.

Table 3 reports the results of the planned comparisons designed to test each of the hypotheses discussed above. As indicated in Table 3, generally strong support was found for Hypothesis 1 in the case of both helping behavior and civic virtue. Significant differences in group members' reports of helping were found between the highest and lowest feedback conditions, $t(1, 36) = 2.98, p < .01$, and between the highest and next-to-lowest feedback conditions, $t(1, 36) = 3.16, p < .01$. Significant differences in group members' reports of helping were also found between the next-to-highest and lowest feedback conditions, $t(1, 36) = 1.83, p < .05$, and between the next-to-highest and next-to-lowest feedback conditions, $t(1, 36) = 2.08, p < .05$. Significant differences in group members' reports of civic virtue were found between the highest performance feedback condition and the lowest, $t(1, 36) = 3.85, p < .01$, and next-to-lowest, $t(1, 36) = 4.32, p < .01$, feedback conditions. Significant differences in group members' reports of civic virtue were also found between the next-to-highest and lowest feedback conditions, $t(1, 36) = 1.87, p < .05$, and between the next-to-highest and next-to-lowest feedback conditions, $t(1, 36) = 2.51, p < .01$.

With the exception of the significant difference between the highest feedback condition and the middle feedback condition in the case of civic virtue, $t(1, 36) = 2.10, p < .05$, little support was found for Hypothesis 2. None of the other comparisons between the highest and middle feedback conditions or between the next-to-highest and middle feedback conditions were significant in the case of helping behavior. These findings seem to suggest that subjects had a substantially more difficult time discriminating between positive and neutral feedback than between positive and negative feedback.

Finally, Table 3 indicates strong support for Hypothesis 3 for both helping behavior and civic virtue. Significant differences in group members' reports of helping behavior were found between the middle performance feedback condition and both the lowest,

Table 2
Means, Standard Deviations, and Range of Organizational Citizenship Behavior by Level of Feedback

Feedback level and behavior	Minimum	Maximum	<i>M</i>	<i>SD</i>
Highest performance feedback				
Helping	3.97	5.80	4.96	0.51
Civic virtue	4.44	6.75	5.54	0.58
Next-to-highest performance feedback				
Helping	3.50	5.74	4.74	0.55
Civic virtue	3.75	6.92	5.18	0.70
Middle performance feedback				
Helping	3.50	5.59	4.73	0.57
Civic virtue	3.70	6.17	5.16	0.53
Next-to-lowest performance feedback				
Helping	2.97	6.52	4.28	0.78
Civic virtue	2.90	6.50	4.56	0.79
Lowest performance feedback				
Helping	3.36	5.86	4.35	0.72
Civic virtue	3.63	5.55	4.76	0.65

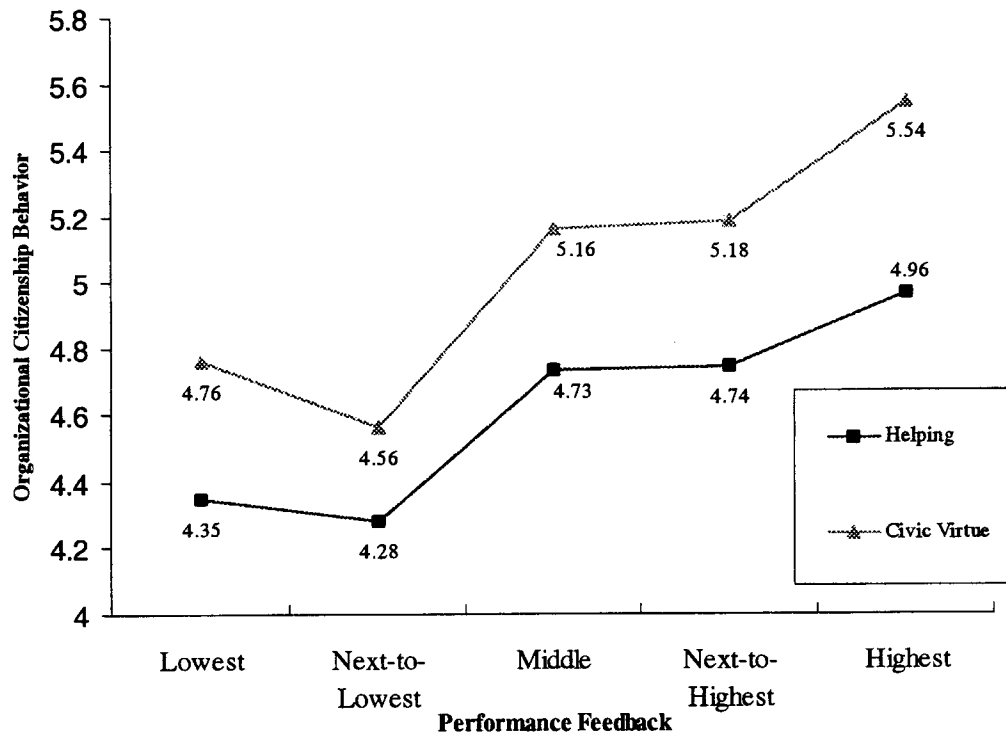


Figure 2. Organizational citizenship behavior means by level of performance feedback.

$t(1, 36) = 1.79, p < .05$, and next-to-lowest, $t(1, 36) = 2.04, p < .05$, feedback conditions. Significant differences in group members' reports of civic virtue were also found between the middle performance feedback condition and the lowest, $t(1, 36) = 2.04, p < .05$, and next-to-lowest, $t(1, 36) = 2.71, p < .01$, feedback conditions. (Virtually the same results were obtained for all of the above analyses when the helping-behavior and civic virtue dimensions were combined into one "overall" OCB construct.)

Although the results of our study generally supported our hypotheses, it is possible that these results were produced by the fact

that the greater the discrepancy between the actual level of the group's performance and the level of feedback they received, the less fair subjects would perceive the competition to be, the less effective they would perceive the area network to be, and the more likely they would be to look for attributional explanations of these differences. To test these possibilities, we conducted two additional analyses. In the first analysis, we identified those subjects who performed at high versus low levels in the highest and next-to-highest feedback conditions as well as the lowest and next-to-lowest feedback conditions and then examined the propor-

Table 3
Results of Planned Comparisons for Organizational Citizenship Behavior

Comparison	Helping			Civic virtue		
	Supported?	$t(1, 36)$	p	Supported?	$t(1, 36)$	p
Hypothesis 1						
Highest vs. lowest	Yes	2.98	<.01	Yes	3.85	<.01
Highest vs. next to lowest	Yes	3.16	<.01	Yes	4.32	<.01
Next to highest vs. lowest	Yes	1.83	<.05	Yes	1.87	<.05
Next to highest vs. next to lowest	Yes	2.08	<.05	Yes	2.51	<.01
Hypothesis 2						
Highest vs. middle	No	1.29	<.10	Yes	2.10	<.05
Next to highest vs. middle	No	0.02	.97	No	0.08	.93
Hypothesis 3						
Middle vs. lowest	Yes	1.79	<.05	Yes	2.04	<.05
Middle vs. next to lowest	Yes	2.04	<.05	Yes	2.71	<.01

tion of subjects across these cells to see if there were any systematic differences in the subjects' perceptions of the fairness of the competition and the effectiveness of the network on which they worked. This analysis indicated that there were no significant differences in the proportion of subjects that perceived the competition to be fair or the effectiveness of the network across these different feedback conditions.

In the second analysis, we conducted a 2×2 multivariate analysis of variance (and follow-up analyses of variance when appropriate), with feedback condition and performance level (high vs. low) serving as the independent variables and OCB ratings as the dependent variables. In this analysis, we were primarily interested in the interaction effect between feedback condition and performance level because this interaction would indicate whether the level of a group's performance produced different effects at different levels of feedback. The results of this analysis indicated that feedback condition did not significantly interact with level of performance to influence OCB ratings. Therefore, it does not appear that differential attributions produced by the discrepancies between the actual level of performance and the feedback received can be used as a potential explanation of the results in our study.

Discussion

Several major conclusions can be drawn from this study. First, the results show that (a) members of groups that receive positive feedback generally report their groups to be significantly more helpful and exhibit more civic virtue than groups that receive negative feedback and (b) these differences show up across a fairly wide range of positive and negative feedback levels. Moreover, differences in the perceptions of helping behavior and civic virtue were also found for groups that received neutral as opposed to negative feedback. More specifically, group members who received neutral feedback perceived their groups to exhibit more helping behavior and civic virtue than groups that received negative feedback. Thus, those groups that received either positive or neutral feedback generally perceived their teammates to be more helpful to members of the group who fell behind in their work, tried to take steps to prevent problems from occurring, and/or tried to act as peacemakers when other teammates had disagreements more so than those groups that received negative feedback. In a similar manner, those groups that received positive or neutral feedback reported that members of their group were likely to provide constructive suggestions and/or risk the disapproval of their teammates by expressing what they considered was best for the team more so than groups that received negative feedback. These findings are generally consistent with Podsakoff and MacKenzie's (1997) suggestion that the relationship between OCB and performance that has been reported in some recent studies may, in part, be determined by the implicit theories that groups have regarding the relationships between these variables.

It is interesting that, unlike both helping behavior and civic virtue, the variance in subjects' ratings of sportsmanship was found to be determined by individual, as opposed to group, differences. Although we do not know why this was the case, one possibility has to do with the specific nature of the OCBs measured in this study and the context in which the present research took place. Both helping behavior and civic virtue are generally described in terms of those activities or behaviors that team members

can perform to make their team or organization more effective. For example, people who exhibit helping behavior are described as those who willingly share their expertise with others, who take steps to try to prevent problems from occurring, and who act like peacemakers to teammates who are having disagreements. In a similar manner, people who exhibit civic virtue are described as those who provide constructive suggestions on what the group might do to improve its performance and/or those who are willing to risk disapproval to express what they think is best for the team. Thus, these two forms of OCB represent constructive activities that people can perform to improve their team's effectiveness. Sportsmanship, in contrast, is concerned with the avoidance of complaints, consumption of time dealing with trivial non-task-related matters, and/or finding fault with the behaviors of teammates. It may be that there is simply more agreement across subjects' attributions of active demonstrations of behavior than there is across subjects' attributions of the avoidance of behaviors. Indeed, this issue is worthy of further study because previous research has focused almost exclusively on the effects that feedback has on subjects' perceptions of the presence of adaptive intragroup processes such as cohesiveness, rather than on the effect that performance feedback has on subjects' perceptions of the absence of specific forms of group behavior.

In contrast, it is possible that the reason that subjects' ratings of sportsmanship may have been determined more by individual differences than by group membership may have to do with the nature of the sportsmanship measure itself. The sportsmanship dimension was the only one on which subjects were asked to rate their peers on negatively worded items, which were then reverse coded to make the measure consistent with the construct. Perhaps the negative wording of the items caused some difficulties for some of the subjects of this study, either because they found it more uncomfortable to rate someone on negatively worded attributes than positively worded attributes or because they did not feel that they had spent enough time working with their teammates to rate them on these (negative) behaviors. In any case, it may be worthwhile in future research to have subjects rate the sportsmanship of their peers on positively worded measures to determine if the nature of the wording of this scale influences the nature of the results obtained.

The findings of this study also suggest that negative feedback produces qualitatively different effects than positive feedback. This finding can be most easily seen by contrasting the effects of the positive and negative feedback conditions with that of neutral feedback. As noted in Table 3, although all four of the comparisons between negative feedback and neutral feedback were significant in the case of helping behavior and civic virtue, only one of the four comparisons between positive feedback and neutral feedback was significant on these same criterion variables. Thus, it seems that subjects had a more difficult time discriminating between positive feedback and neutral feedback than they did between negative feedback and neutral feedback. These asymmetrical effects produced by positive and negative feedback are similar to the results reported by Guzzo et al. (1986) in their first study. They found that although observers' evaluations of group processes made under positive feedback conditions were similar to those evaluations made under no-feedback conditions, observers' evaluations of group processes made under negative feedback conditions did differ significantly from those made under no-

feedback conditions. This finding led them to conclude that “implicit theories operate differently according to the tone of feedback and that implicit theories may bias informants’ reports only when informants are exposed to negative feedback about the group” (Guzzo et al., 1986, p. 287).

Although it is not completely clear why negative feedback should prove critical to the operation of implicit theories, whereas positive feedback does not, Kahneman and Tversky (1984) noted that negative events tend to be weighted more heavily than positive events in judgment tasks. Moreover, there is also evidence that negative events may elicit more causal attributions than positive events (cf. Peeters & Czapinski, 1990; Taylor, 1991) and that attributional activity directed toward negative events may be more extreme in nature than that directed toward positive events (Kanouse & Hanson, 1972). This tendency to weight negative information more heavily than positive information during the evaluation process, when taken in concert with the tendency of negative events to elicit more (and more extreme) causal attributions, could help account for the asymmetrical effects that negative (as opposed to positive) feedback has on group members’ implicit performance theories. More specifically, prior research (cf. Kahneman & Tversky, 1984; Peeters & Czapinski, 1990; Taylor, 1991) would suggest that participants in the negative feedback condition would (a) focus more attention on the feedback and (b) be more likely to use causal reasoning to explain the feedback than those participants receiving positive or neutral feedback. Nevertheless, because this was the first study designed to examine the potential impact of performance feedback on group members’ attributions of OCBs, future research should take a closer look at this issue.

Of course, there are some limitations to the findings of this study. One limitation is that the manipulation checks used in this study were somewhat tangentially related to the feedback that subjects actually received. Thus, one might question whether the manipulation checks actually assessed what they were supposed to assess. The reason why these specific measures were chosen is that we were trying to balance our concern about the potential “contamination” of the subjects in the study by subjects who had already participated in it with getting an adequate manipulation check. However, to try to ensure that the feedback manipulations had their intended effect, we modeled our feedback after manipulations that had proven effective in previous research (DeNisi & Pritchard, 1978; Downey et al., 1979; Guzzo et al., 1986; McElroy & Downey, 1982; Staw, 1975), and we conducted a pilot study to test the manipulations that we used. Although the number of subjects on each team and the number of total teams were small, tests at the individual level of analysis generally mirrored the results of the present study, suggesting that the feedback manipulations produced the intended effects on the OCB ratings. Thus, given that we modeled our manipulations after previous research, and that our pilot study had provided preliminary evidence that the feedback manipulations did indeed have the effects we intended them to have, we hoped that the less explicit manipulation checks we used would be adequate.

Another limitation is the laboratory setting in which the study was conducted. However, given that the primary goal of this study was to examine the plausibility that at least some part of the observed relationship between citizenship behaviors and group and/or organizational performance might be due to the attributions of groups that received positive feedback, we felt it was appropri-

ate to sacrifice some concerns for external validity in favor of the control afforded by the laboratory setting.

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Received February 21, 2000

Revision received January 15, 2001

Accepted January 18, 2001 ■