

Organizational Citizenship Behavior and the Quantity and Quality of Work Group Performance

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Despite the widespread interest in the topic of organizational citizenship behaviors (OCBs), little empirical research has tested the fundamental assumption that these forms of behavior improve the effectiveness of work groups or organizations in which they are exhibited. In the present study, the effects of OCBs on the quantity and quality of the performance of 218 people working in 40 machine crews in a paper mill located in the Northeastern United States were examined. The results indicate that helping behavior and sportsmanship had significant effects on performance quantity and that helping behavior had a significant impact on performance quality. However, civic virtue had no effect on either performance measure.

In recent years, there has been an increasing interest in the topic of organizational citizenship behaviors (OCBs). Much of this research (Ball, Trevino, & Sims, 1994; Bateman & Organ, 1983; George, 1990; George & Bettenhausen, 1990; Moorman, 1991; Munene, 1995; Organ & Konovsky, 1989; Podsakoff, MacKenzie, Moorman, & Fetter, 1990; Podsakoff, Niehoff, MacKenzie, & Williams, 1993; Schnake, 1991; Smith, Organ, & Near, 1983; Williams & Anderson, 1991) has focused on identifying the potential antecedents of OCBs, apparently under the assumption that these forms of behavior are functional to the organization. For example, Organ (1988) defined OCBs as "behavior(s) of a discretionary nature that are not part of the employee's formal role requirements, but nevertheless promote the effective functioning of the organization" (p. 4). Similar statements regarding the importance of organizational citizenship behavior, or other forms of prosocial organizational behavior, to organizational effectiveness and success have also been provided by Smith et al. (1983), Brief and Motowidlo (1986), Karambayya (1989), George and Bettenhausen (1990), Schnake (1991), and Borman and Motowidlo (1993).

Despite the intuitive plausibility of this assumption, little empirical research has been conducted to address

this issue. Indeed, as noted by several researchers specializing in this area, the basis for predicting a relationship between OCBs and performance is "typically logical and conceptual rather than empirical" (Borman & Motowidlo, 1993, p. 88) and "rests more on its plausibility than direct empirical support" (Organ & Konovsky, 1989, p. 157). What little empirical support there is comes primarily from two studies (Karambayya, 1989; Podsakoff & MacKenzie, 1994). In the first study, Karambayya (1989) examined the relationships between work unit performance and satisfaction and unit members' citizenship behaviors in a sample of 18 intact work groups, comprised primarily of white-collar and professional employees from 12 different organizations. Karambayya found that members of work units that were rated as having higher levels of performance and satisfaction were generally found to display higher levels of citizenship behavior than were members of work units that exhibited lower levels of performance. In the second study, Podsakoff and MacKenzie (1994) examined the relationships between OCBs and organizational performance in a sample of 116 agencies in a major insurance company. Consistent with their expectations, they found that citizenship behaviors accounted for approximately 17% of the variance in agency-level performance.

However, in spite of these relatively encouraging findings, there are some limitations to the studies reported by both Karambayya (1989) and Podsakoff and MacKenzie (1994). For example, the unit performance measures used by Karambayya (1989) were subjective ratings provided by key informants in each of 12 different organizations. Although such ratings may be related to quantitative measures of organizational performance, they are generally considered to be susceptible to perceptual biases of the

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raters (cf. Bagozzi, Yi, & Phillips, 1991). In addition, because it appears from Karambayya's description that the organizations she sampled may have differed in terms of their products or services, we do not know whether the measurement metric used by all of the raters was the same in these different organizations.

Although Podsakoff and MacKenzie (1994) used objective measures to assess insurance agency performance, their findings were not as clearcut as expected, and left some potential for doubt regarding the relationship between various forms of citizenship behavior and organizational (or work group) success. More specifically, they found that although some forms of citizenship behavior (e.g., sportsmanship and civic virtue) were positively related to agency performance, other forms of citizenship (e.g., helping behavior) were negatively related to this criterion variable. They speculated that there may have been several reasons why helping behavior had an unintended negative relationship with unit-level performance. First, although an inexperienced agent may sell more with the help of an experienced agent, this will only increase overall unit performance if the increase in the inexperienced agent's sales productivity is able to offset the corresponding decrease in the experienced agent's sales caused by his or her taking time out to help the inexperienced agent. Second, it is also possible that helping behavior decreases unit performance simply because many of the things intended to be helpful are not really helpful. This may occur because the person attempting to help is giving bad advice or the behavior intended to be helpful is actually harmful. Still another possibility is that helping behavior has a negative impact on agency performance because of the high level of turnover in the insurance industry. Studies in this industry (cf. Life Insurance Marketing Research Association, 1983; Seligman & Schulman, 1986) have found that approximately 45% of insurance agents quit their jobs in their first year; over 80% quit their jobs within 5 years. Thus, it is possible that many of the agents receiving help may leave the industry before the benefits of that help are fully realized at the agency level.

The purpose of the present research is to improve our understanding of the effects of OCBs on work group performance. In contrast to the work of Karambayya (1989), the research reported herein was conducted in work groups in the same organization with quantitative measures of success that are the same for all groups. Using work units from the same organization allows the researcher to control for differences that might be attributable to the product, service, industry, or the nature of the work performed. Using the same quantitative measures across all of the work groups guarantees that the same metric is used to assess their performance. In contrast to the research reported by Podsakoff and MacKenzie

(1994), our principal interest in the present study was to examine the relationships between citizenship behaviors and work-group performance rather than between citizenship behaviors and organizational unit-level performance. The sample consisted of blue-collar employees in work crews in the paper products industry. Both production quantity and quality served as the measures of performance.

Background and Propositions

Organ (1988, 1990) identified a number of conceptually distinct dimensions of citizenship behavior, including altruism, courtesy, cheerleading, peacekeeping, sportsmanship, civic virtue, and conscientiousness. However, recent empirical research (e.g., MacKenzie, Podsakoff, & Fetter, 1991, 1993; Podsakoff & MacKenzie, 1994) indicates that managers often have difficulty recognizing some of these fine distinctions and tend to lump altruism, courtesy, cheerleading, and peacekeeping into a single helping behavior dimension. According to Organ (1988), *sportsmanship* is a willingness on the part of an employee to tolerate less than ideal circumstances without "complaining . . . railing against real or imagined slights, and making federal cases out of small potatoes" (p. 11); *civic virtue* is behavior indicating that an employee responsibly participates in, and is concerned about, the life of the company. *Helping* behavior is the broadest and most complex construct and is also the one with the deepest roots in the research literature.

Conceptually, helping behavior is a second-order latent construct, consisting of Organ's (1988, 1990) altruism, courtesy, peacekeeping, and some aspects of his cheerleading dimensions. The first three of these dimensions clearly involve helping others with or preventing the occurrence of work-related problems. In addition, cheerleading can also be viewed as helping behavior when an employee encourages a coworker who is discouraged about his or her accomplishments or professional development. Thus, all four of these forms of citizenship involve aspects of helping behavior.

There are several possible reasons why helping, sportsmanship, and civic virtue might be positively related to work group or organizational effectiveness (Borman & Motowidlo, 1993; George & Bettenhausen, 1990; Karambayya, 1989; Organ, 1988, 1990; Podsakoff & MacKenzie, 1994; Smith et al., 1983). Generally speaking, citizenship behaviors may enhance organizational performance because they "lubricate" the social machinery of the organization, reduce friction, and increase efficiency (Borman & Motowidlo, 1993; Smith et al., 1983). Indeed, it has been noted that OCBs may increase organizational performance because they (a) reduce the need to devote scarce resources to purely maintenance functions (Organ,

1988); (b) free these resources up for more productive purposes (Borman & Motowidlo, 1993; Organ, 1988); (c) enhance coworker or managerial productivity (MacKenzie, Podsakoff, & Fetter, 1991, 1993; Organ, 1988; Podsakoff & MacKenzie, 1994); (d) serve as an effective means of coordinating activities between team members and across work groups (Karambayya, 1989; Smith et al., 1989); and (e) enhance the organization's ability to attract and retain the best people by making it a more attractive place to work (George & Bettenhausen, 1990; Organ, 1988). It is expected that helping behavior, sportsmanship, and civic virtue will each influence work group effectiveness in one or more of these ways.

For example, helping behavior may be expected to be positively related to work group effectiveness for several reasons. First, when experienced employees help less experienced ones solve work related problems, find more efficient ways of performing their jobs, or teach them various "tricks of the trade," it is likely to enhance both the quantity and the quality of the less experienced employee's performance. Related to this, the more employees help each other with work-related problems, the less time a manager needs to devote to these activities; thus, freeing up the manager for more productive activities. Finally, we expect that high levels of helping behavior would increase group cohesiveness, make the organization a more attractive place to work, reduce voluntary turnover, and thereby enhance organizational productivity (George & Bettenhausen, 1990).

Similarly, sportsmanship is also expected to be positively related to work group performance. The more willing employees are to be "good sports" and go along with necessary changes in their work environment, the less time and energy a manager wastes in getting their cooperation. Thus, sportsmanship allows managers to devote a greater proportion of their time to productive activities like planning, scheduling, problem solving, and organizational analysis. In addition, a lack of sportsmanship is likely to have detrimental effects on group cohesiveness and make the atmosphere in the workplace less attractive to coworkers. This might be expected to reduce the organization's or work group's ability to attract or retain the most productive workers.

Civic virtue is also expected to be positively related to work group and/or organizational performance in several ways. Civic virtue involves making constructive suggestions about how the work group can improve its effectiveness, and this may either free up resources or make coworkers more effective, depending on the nature of the suggestion. Also, because meetings are a way that organizations attempt to coordinate activities between team members and across groups, civic virtue in the form of attending and actively participating in those meetings may contribute to work group performance. Thus, we hypothe-

sized that organizational citizenship behaviors, in the form of helping behavior, sportsmanship, and civic virtue, would be positively related to the quantity and quality of work group performance.

Method

Sample

Data for this study were obtained from 218 members of 40 (100%) work crews in a paper mill producing bond and catalog paper located in the Northeastern portion of the United States. This is an important context for examining this issue because, as noted by Dipboye and Flanagan (1979), not enough research in field settings focuses on blue-collar workers. In addition, examining this issue in this context, in a sense brings OCB research back "full circle" to the setting that Organ (1988, pp. 1-4) first used to illustrate the concept of organizational citizenship behavior in his book.

The work crews in the paper mill are comprised of 4 to 6 workers, with an average of 5.25 workers per crew. Compensation for each crew member is based on a combination of (a) hourly wages and (b) gain sharing based on the quantity and quality of the paper that each crew produces. During the past 3 years, gain sharing (group compensation) averaged 2% to 5% per crew. Because the eight machines in the mill vary in terms of their output potential (which directly affects the crews' gain sharing potential), crews rotate across the machines every few weeks so that no crew has an advantage by having a smoother running machine.

To enhance participation and to follow union regulations, OCB data were gathered by two union stewards. Crew members were provided with questionnaires at work and were permitted to complete them on company time and turn them into one of the stewards in sealed envelopes that were given directly to the researchers. Respondents were assured that the questionnaire was for research purposes only and that their responses would remain completely confidential. The 218 crew members involved in the study represent almost 97% of the total number of 225 employees working on the paper machines. The majority (96%) of the crew workers were men, and their average age was around 39 years. Approximately 77% of the workers had a high school diploma, about 11% had attended some college, and slightly over 1% had obtained a college degree. The remaining 11% had not completed high school. The average amount of tenure in the company was 18.3 years, and the workers had served on their crews for approximately 6.03 years. The average salary per worker was approximately \$42,246 (including overtime).

Measures

The measures of helping behavior, sportsmanship, and civic virtue were based on the conceptual work of Organ (1988, 1990), and the empirical research of MacKenzie, Podsakoff, and Fetter (1991, 1993), Podsakoff and MacKenzie (1994), and Podsakoff et al. (1990). Unlike most OCB research, the citizenship behavior measures were acquired from work group members themselves rather than from their supervisors. In addi-

tion, the crew itself served as the referent of the OCB measures because the goal of the study was to examine the relationship between citizenship behaviors and work crew performance, rather than individual or organizational performance. This was important because in order to examine the relationship between OCBs and work unit performance, the OCBs needed to be aggregated at the same level as the criterion measure—which in this case was work crew performance. Crew members' ratings of their crews' citizenship behaviors were obtained on a 7-point Likert-type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Approximately 4 months after the OCBs were measured, work crew performance was assessed by two measures taken from company records. One was based on quantity and the other was based on quality. The measure of quantity was the amount of paper produced as a percentage of total machine capacity for the year. The measure of quality was the percentage of paper produced that was either rejected by the mill's quality control personnel or the customer. These two measures are the actual ones used by the company in evaluating the work crews and determining the team component of their pay.

Analytical Procedure

In order to examine the aggregate effects of OCBs on work group performance, crew members' assessments of their crews' helping behavior, civic virtue, and sportsmanship were aggregated by averaging the citizenship behaviors across crew members at the work group level. Following this, the two measures of work crew performance (production quantity and product quality) were regressed on the aggregate-level measures of OCBs to test the hypothesized relationships.

The aggregation of the individual OCB ratings at the unit level does, of course, raise the possibility of misspecification (Rousseau, 1985). However, there are several reasons why it is not only justified but essential in this case. First, in his discussion of citizenship behaviors, Organ (1988) argued:

Our requirement of OCB is that it represent actions of individuals that in the aggregate improve the functioning of the organization [or work group]. In the aggregate is a significant qualifier here. We refer to summing across time for a single person and also summing across persons in the group, department, organization. Most OCB actions, taken singly, would not make a dent in the overall performance of the organization. . . . But that is the nature of OCB—any single occurrence of it usually is modest or trivial. (p. 8)

This suggests that the aggregation process used in this study is necessary to test Organ's predictions about the effects of OCBs on the work crew performance. Second, it is important to note that the referent in the OCB measures used in this study was the work crew, rather than the individual crew member, because the company itself aggregates the data at this level of analysis when evaluating the performance of work crews in order to determine the profit-sharing component for each team. Third, an analysis of variance (ANOVA) test indicated that there was significantly greater variance between the work crews than within them for all of the OCB measures (all $ps < .001$), and

that the grouping factor accounted for an average of 58% of the variance in these measures (60% of the variance in helping, 54% of the variance in sportsmanship, and 60% of the variance in civic virtue). Thus, we believe that it is appropriate to aggregate the data at the work crew level for both conceptual and empirical reasons.

Results

Factor Analysis

Even though multiple measures of each work crew's citizenship behavior were available, confirmatory factor analysis was not used in this study because the sample size ($N = 40$ work crews) was too small to meet the minimum sample size requirements for structural equation modeling procedures. However, the factor structure was examined with principal-components factor analysis with varimax rotation. This ensured that all of the items loaded on their hypothesized factors and did not have large cross-loadings with nonhypothesized factors. The results of this analysis are reported in Table 1. Table 1 reports the factor loadings of all of the OCB items. As expected, all of the items had substantial loadings on their hypothesized factors (greater than .70). In addition, most of the cross-loadings were well below Ford, MacCallum, and Tait's (1986) suggested minimum factor loading of .40. Five items had cross-loadings greater than .40, but four of them were retained because (a) the loading on the hypothesized factor was almost twice the size of the cross-loading; (b) in none of the four cases did the cross-loaded factor account for as much as 25% of the variance in the item; and (c) we wanted to ensure that the conceptual domain of the construct was adequately tapped. The item that was dropped ("Members of my machine crew encourage each other when someone is down") loaded on the helping behavior construct as expected (.73), but its cross loading on sportsmanship was also very high (-.57). Although deciding which items to retain is admittedly a subjective process, a subsequent analysis in which all of the items that possessed cross-loadings above .40 were omitted demonstrated that dropping these items did not have any impact on the pattern of effects or the nature of the conclusions reached.

The intercorrelations among the constructs are reported in Table 2. Also reported in this table are the means, standard deviations, and internal consistency reliabilities (coefficient alphas) for the measures used in this study. Taken together, the entries in the table indicate that all of the OCB constructs easily meet Nunnally's (1978) recommended level of .70 for newly developed scales.

Hypothesis Testing

To test the hypothesized relationships between OCBs and work crew performance, we regressed the quantity and

Table 1
Principal-Components Factor Analysis of Organizational Citizenship Behaviors With Varimax Rotation

Members of my machine crew:	Helping	Civic virtue	Sportsmanship
Help each other out if someone falls behind in his/her work.	.89	.24	-.22
Willingly share their expertise with other members of the crew.	.85	.13	-.37
Try to act like peacemakers when other crew members have disagreements.	.82	.43	-.01
Take steps to try to prevent problems with other crew members.	.80	.49	.09
Willingly give of their time to help crew members who have work-related problems.	.82	.23	-.34
"Touch base" with other crew members before initiating actions that might affect them.	.77	.48	-.03
Encourage each other when someone is down.	.73	.13	-.57
Provide constructive suggestions about how the crew can improve its effectiveness.	.34	.89	-.22
Are willing to risk disapproval to express their beliefs about what's best for the crew.	.33	.86	-.28
Attend and actively participate in team meetings.	.31	.81	-.38
Always focus on what is wrong with our situation, rather than the positive side. ^a	.01	-.16	.90
Consume a lot of time complaining about trivial matters. ^a	-.29	-.14	.80
Always find fault with what other crew members are doing. ^a	-.20	-.42	.79
Eigenvalue	8.12	1.92	1.24
Percentage of variance	62.40	14.70	9.50
Cumulative percentage of variance	62.40	77.20	86.70

Note. Boldface indicates hypothesized factor loadings.
^aReverse scored.

quality of work crew output on the crew-level measures of OCBs. The results of these analyses are reported in Table 3. The data reported in this table indicate that both sportsmanship (standardized $\beta = .393$, $p < .05$) and helping behavior (standardized $\beta = .397$, $p < .05$) had significant positive relationships with the quantity of output and accounted for about a quarter of the variance (25.7%) in this criterion variable. The data also indicate that helping behavior was negatively related (standardized $\beta = -.424$, $p < .05$) to the percentage of paper produced that was rejected. It accounted for almost 17% (16.7%) of the variance in this criterion variable. Civic virtue was not found to be related to either the quantity or quality of output, and sportsmanship was not related to the quality of output.

Discussion

The data provide general support for the hypothesis that OCBs are related to work-group performance, although OCBs tended to predict the quantity of output somewhat better than the quality of output. Over one quarter of the

variance (25.7%) in machine crew quantity and almost one fifth of the variance (16.7%) in machine crew quality was accounted for by the OCBs measured in this study. Both helping behavior and sportsmanship were positively related to the quantity of work crew performance. Helping behavior was also related to the quality of work crew performance. The implication is that machine crews that help each other by giving time to crew members who have work-related problems, sharing their expertise with each other, taking steps to try to prevent problems with each other, and touching base with each other before taking actions that might affect other crew members are more productive, both in terms of quantity and quality, than work crews that do not exhibit such helping behavior. In addition, those machine crews that exhibit good sportsmanship, by not always finding fault with what other crew members are doing, focusing on what is wrong with the situation, or complaining about trivial matters, are more productive than do those crews that do not exhibit sportsmanship behaviors. Civic virtue had no relationships with either production quantity or quality.

Table 2
Work Crew Means, Standard Deviations, Reliabilities, and Intercorrelations

Variable	M	SD	Helping	Civic virtue	Sportsmanship	Quantity (% of maximum production)	Quality (% of paper rejected)
Helping	4.99	1.02	(.95)				
Civic virtue	5.40	1.11	.69**	(.96)			
Sportsmanship	5.09	0.98	.46**	.54**	(.88)		
Quantity	0.85	0.08	.36*	.17	.40*	(—)	
Quality	0.07	0.03	-.40*	-.26	-.20	-.40*	(—)

Note. Cronbach alpha reliabilities are shown in parentheses.
* $p < .05$. ** $p < .01$.

Table 3
*Ordinary Least Squares Regression Parameter Estimates for
 Work Crew OCBs on Quantity and Quality*

OCB	Quantity produced		Product quality	
	Unstandardized estimate	Standardized estimate	Unstandardized estimate	Standardized estimate
Civic virtue	-.021	.0143	-.318	.001
Sportsmanship	.030*	.0147	.393	-.001
Helping	.029*	.0134	.397	-.011*
Variance explained (R^2)	25.7%		16.7%	

Note. OCB = organizational citizenship behavior.

* $p < .05$.

Although it is not clear why sportsmanship was related to product quantity but not to quality, one might speculate about the possibilities. For example, it is possible that groups that are low in sportsmanship because they "consume a lot of time complaining about trivial matters" have less time available for producing paper. This reduction in time may force a tradeoff between the quantity of paper produced and the quality of paper produced. The data suggests that the crews opted to maintain the quality level and diminish the quantity produced. Alternatively, it is possible that groups that always focus on what is wrong with their situation and always find fault with what other crew members are doing become demoralized and do not work as hard as groups that exhibit good sportsmanship. This lack of motivation may have more of an effect on how hard a group works (which affects the quantity of paper produced) than on the manner in which it performs its tasks (which would affect the quality of the paper produced). Although this is clearly speculative on our part, it suggests that future research might be beneficial.

The lack of relationship between civic virtue and performance also deserves some comment. There are a couple of potential reasons for this finding. The most obvious is that the theory is simply wrong and that civic virtue is not related to work unit performance, at least in this particular context. This might be true because the measures of civic virtue do not take into account the quality of the suggestions or the nature of the participation provided by the work group members. For example, it is possible that many of the suggestions intended to be constructive are not or that some of the beliefs about what is "best for crew" are wrongheaded. This suggests that work crews could be high on civic virtue (i.e., on making suggestions believed to be constructive, participating in meetings, etc.), but that this behavior might not translate into any positive effect on the crews' performance. Alternatively, it is possible that the effects of civic virtue show up only in the long run. There are no theoretical reasons why the time lags between the various forms of OCB and work

group performance would all be the same. Thus, perhaps future research should investigate the impact of the quality of the civic virtue behavior and the time lag on the nature of the relationship between civic virtue and performance.

On a more global level, the overall pattern of results is inconsistent with those reported by Podsakoff and MacKenzie (1994) in two respects. In their sample of insurance agencies, they found that (a) helping behavior was negatively related to agency effectiveness and (b) civic virtue was positively related to this criterion variable. There are a number of reasons why this may have occurred. One relates to the nature of the samples in the two studies. For example, in the life insurance sample studied by Podsakoff and MacKenzie (1994), turnover was extremely high (45% in their first year of employment and over 80% within the first 5 years), and the average tenure of the agents with the company was only 5.29 years. This led Podsakoff and MacKenzie (1994) to speculate that although inexperienced agents may sell more with the help of experienced agents, many of the inexperienced agents may not stay with the company very long and the increase in their sales productivity that results from the help that they receive from the experienced agents may not offset the corresponding decrease in the experienced agent's sales caused by him or her taking time out to help the inexperienced agent. In contrast, the average tenure of the crew members in the present sample was over 18 years. The amount of time they had worked on their present crews was in excess of 6 years. As a result, it is likely that helping behavior provided by one crew member for another would actually pay off in terms of increased productivity.

Another potential reason for the differences in the findings relates to the compensation systems in the two samples. In the insurance sales sample, agents were compensated on the basis of their individual sales performance. Indeed, no part of their pay was related to their agency's performance. Under such individualistic compensation systems, agents might be less willing to provide help to

their peers or might be less concerned with the quality of their suggestions because there are no personal consequences for them. We do not mean to suggest that experienced agents would purposely deceive inexperienced agents, although this clearly might happen, but they simply might not be as willing to provide useful information under these kinds of compensation systems. On the other hand, despite the fact that the vast majority of the compensation received by machine crew members in the present sample was determined by their job category and tenure in the company, a portion (approximately 3% or \$1,400) of crew members' pay was determined by the performance of the whole machine crew. Under these more cooperative reward contingencies, when a portion of one's pay is determined by group effort, OCBs might be expected to be directed at helping and supporting one's peers.

Related to this, Organ (1988) noted that the technological requirements of jobs that people perform may determine the impact of OCBs. Specifically, Organ (1988) noted:

Using Thompson's (1967) taxonomy, one would expect OCB to have more importance in connection with intensive than with mediating or long-linked technologies, because intensive technologies give rise to mutual dependence among members and require spontaneous give-and-take, accommodating gestures among the parties in order to achieve effective coordination of their respective efforts. In the interim, one would think that OCB is important whenever teamwork is important. (p. 109)

Similarly, one would expect OCBs to be more critical to organizational and work group success when long-linked technologies, as opposed to mediating technologies, are used. Unlike the mediating technologies used in the insurance industry, which require virtually no cooperative effort or mutual dependence among the agents, the long-linked technologies used in the paper industry require what Thompson (1967) has called serial interdependence among the crew members. This type of interdependence demands a considerable amount of joint or cooperative effort by the work group to accomplish the task. Thus, differences in the relationship obtained between helping behavior and work unit performance in the two studies may in part reflect differences in the nature of the dependency relationships required in the two different types of jobs included in the two studies.

Another possible reason for the differences observed in the present study and those of Podsakoff and MacKenzie (1994) with respect to the relationship between helping behavior and work group success may be related to the opportunity of raters to observe the helping behaviors in the two environments. In the Podsakoff and MacKenzie (1994) study, the ratings of helping behavior were done by agency managers who worked in the agency office. Consequently, they were primarily able to observe helping

behavior that occurred in the agency office itself. This raises the possibility that the negative relationship between helping behavior and agency effectiveness may have resulted from the fact that agents in less successful agencies may "hang around" the agency office more often with nothing to do than agents who work in more successful agencies, thus allowing the managers to have more opportunities to observe their helping behavior. Indeed, one might expect agents in more successful agencies to spend more time out of the agencies making calls on potential clients than agents in less successful agencies. If this is accurate, it is possible that the observations of helping behavior were systematically biased because they were more readily observed in poor performing agencies than successful agencies. On the other hand, in the present study, the machine crew members themselves supplied the OCB ratings; thus their ability to observe helping behavior was not systematically biased, as it may have been in the Podsakoff and MacKenzie (1994) study. As a result, the differences in the relationships between helping behavior and work group performance in the present study and that obtained in Podsakoff and MacKenzie (1994) might be the result of the differential opportunity to observe these classes of behavior by the raters used in the two studies.

Taken together, the above discussion suggests that the discrepancy between the findings of Podsakoff and MacKenzie (1994) and the present study might be due to differences in (a) the levels of turnover in the two samples; (b) the compensation systems used in the two companies; (c) the nature of the technology and tasks the people in the samples performed; (d) the amount of teamwork required in the job; and (e) biases in the rater's ability to observe the citizenship behaviors. Therefore, future research designed to explore the relationship between OCBs and organizational effectiveness could benefit from examining organizational characteristics (i.e., the level of turnover and the nature of the compensation system), task and technological requirements (i.e., the nature of the technology and tasks that people perform, the amount of teamwork required across jobs), and methodological factors (i.e., biases in the rater's ability to observe the OCBs).

Of course, there are some limitations to this study. For example, it is important to note that our interpretation of the results obtained in the present study has proceeded with the assumption that OCBs are the cause, not the consequence, of work crew productivity. However, because the data are cross-sectional, it is difficult to determine whether OCBs cause unit performance to increase or whether unit performance causes crew members to report higher levels of OCBs. Indeed, Staw (1975) made a similar point in his study of group cohesiveness and group performance. Staw found that groups who were told that their performance was high rated themselves as more co-

hesive than groups who were told their performance was low, even though the bogus performance feedback the groups received was completely unrelated to actual group performance. In a similar manner, work crews that perform well may be inclined to report that their crew engages in more citizenship behavior because they implicitly assume that citizenship behavior relates to performance. Although such an interpretation of the results would clearly contradict the fundamental assumption of all OCB research conducted to the present time, it would be an interesting avenue for further investigation using Staw's methodology.

Another interesting avenue for future research would be to examine explicitly the mediators of the relationship between OCBs and work crew performance. Several potential mechanisms have been mentioned above but were not tested in this study. It is not clear whether OCBs enhance organizational performance because they (a) reduce the need to devote scarce resources to purely maintenance functions; (b) free these resources up for more productive purposes; (c) enhance coworker or managerial productivity; (d) serve as a means of coordinating activities between team members and across work groups; or (e) enhance the organization's ability to attract and retain the best people by making it a more attractive place to work. These are all interesting possibilities that should be investigated in future research. Indeed, now that empirical evidence that OCBs are related to unit performance is beginning to accumulate from studies like the present one, it is critical for the field to gain a better understanding of why and under what conditions this is true.

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