Utility of OCB: Organizational Citizenship Behavior and Group Performance in a Resource Allocation Framework
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What is This?
Building on recent developments in resource allocation theory as applied to organizational citizenship behavior (OCB), the authors examine task interdependence as a contingency factor in the utility of group members’ OCBs for group performance. In a lagged field study, members of 46 work groups in six organizations rated their groups’ task interdependence, and group leaders rated groups’ OCBs. After six months, customers rated each group’s performance. OCB correlated positively with the performance of task-interdependent groups but had a neutral to negative association with the performance of task-independent groups. Consistent with this group-level resource allocation framework, the moderating role of task interdependence varied by dimensions of OCB: helping, civic virtue, and sportsmanship. The authors discuss the practical and theoretical implications of decisions about allocating a key resource—time—to OCB in work groups.

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Organ (1997) defined *organizational citizenship behavior* (OCB) as “contributions to the maintenance and enhancement of the social and psychological context that support task performance” (p. 91). Over the past decade, the definition has sharpened—to refer to specific forms of beneficial, extrarole behavior, especially helping coworkers (Podsakoff, MacKenzie, Paine, & Bachrach, 2000)—while empirical research has clarified the nature and antecedents of OCB (Organ, Podsakoff, & MacKenzie, 2006; Podsakoff et al., 2000). Implicit to this research has been the premise that OCB improves work group performance (Bateman & Organ, 1983). Yet while more than 400 published studies since 1983 have focused on OCB, fewer than 3% have addressed the utility of OCB for group performance (Nielsen, Hrivnak, & Shaw, 2009; Organ et al., 2006). Even fewer have examined contingency factors in this relationship (Organ, 1988; Podsakoff, Ahearne, & MacKenzie, 1997), despite growing evidence of divergent relationships between OCB and group performance outcomes (Bachrach, Powell, Collins, & Richey, 2006; Naumann & Bennett, 2002; Podsakoff & MacKenzie, 1994; Podsakoff et al., 2000). For example, research has reported relationships between OCB and team performance ranging from $r = -.36$ in bank branches (Naumann & Bennett, 2002) to $r = +.57$ in military units (Ehrhart, Bliese, & Thomas, 2006). These findings are consistent with laboratory results reported by Bachrach et al. (2006), of nonmonotonic relationships between helping behavior and group performance.

Inconsistent findings regarding relationships of OCB and group performance may reflect contingency factors, such as task interdependence, which influence the degree to which group performance calls for coordinated interactions among members (Guzzo & Shea, 1992). Contingency factors can shape the task context and may be fundamental to understanding the relationship between OCB and performance (Organ, 1988; Organ et al., 2006). OCBs may detract from group performance in task-independent groups by diverting team members’ time from their independent task work (Bergeron, 2007; Hockey, 1997). In the present study, we sought to test hypotheses regarding conditions under which OCB has its putative group-level performance benefits, building on recent ideas from resource-based theory applied to OCB, and research speaking to conditions under which OCB may detract from group-level performance.

Advances in resource allocation theory have extended this framework beyond the individual allocation of attention in performing tasks (Gopher, 1986; Hockey, 1997), to individual allocation of time, to task activities versus citizenship behavior (Bergeron, 2007). We extend this analysis to group performance, which earlier research has linked to OCB (Podsakoff et al., 2000; Podsakoff et al., 1997). We focus on a key factor in whether OCB may foster or hinder group performance: task interdependence, defined as the extent to which successful group performance depends on intermember coordination (Campion, Medsker, & Higgs, 1993; Saavedra, Earley, & Van Dyne, 1993).

Task interdependence reflects interrelated roles, technology requirements, and work constraints (Van der Vegt & Van de Vliert, 2005). Citizenship is “more important in jobs where people work in groups, need to coordinate their activities, or are interdependent with each
other than in jobs where people work independently or as individual contributors” (Organ et al., 2006: 193). When group members rely on one another to complete their tasks, OCBs become integrated into work processes (Organ, 1988). Instead of detracting from task work, employees who perform OCBs in task-interdependent groups may improve their groups’ processes. When work requires ongoing coordination, OCBs represent appropriate investments of resources likely to improve group performance. Independent tasks, by definition, do not require coordination. In brief, our team-level resource allocation framework suggests that devoting resources, such as time, to OCBs boosts group performance when it aids intermember teamwork in groups with interdependent tasks and detracts from group performance when it diverts resources from individual task work in groups with independent tasks.

In addition to extending the resource allocation framework to OCB and group performance (building on Bergeron, 2007), our study builds on current knowledge in at least four ways. First, we identify mechanisms for adverse effects of OCB under conditions of task independence. We use these mechanisms to develop and test hypotheses concerning task interdependence versus independence as a contingency factor in the relationship between OCB and group performance. Bachrach et al. (2006) argued that in task-independent groups in a laboratory setting, helping behavior (a dimension of OCB) might be interpreted as encroaching on personal control of independent tasks, potentially diminishing members’ motivation and hurting group performance. Neither the constraints of Bachrach et al.’s laboratory operationalization nor their conceptual framing around perceptions of control and motivation can account for the role of time allocation on the relative impacts of various dimensions of OCB under conditions of task independence. Second, we examine three separate dimensions of citizenship, for which our framework predicts differential relationships with group performance. The Bachrach et al. study tested a single dimension of OCB in a lab study where these kinds of nuanced predictions were untestable. Third, we study multiple types of work groups, in actual work settings, managing competing priorities in several types of organizations, in several industries—all of which add external validity to our results. Fourth, we test our hypotheses with a time-lagged research design, with delayed measurement of group performance, in order to capture effects that develop over time (Organ, 1988), unlike cross-sectional research designs in some prior research. In brief, our group-level resource allocation framework provides a theoretical basis for understanding the role of task interdependence as a contingency factor in the OCB-to-group performance relationship, and our research design allows us to provide realistic, empirical tests of our hypotheses.

Background and Hypotheses

We define group-level OCB as the normative level of citizenship performed within a group (Ehrhart & Naumann, 2004). Group-level OCB represents group members’ shared expectations about citizenship behavior and potentially regulates social interaction and influences social identity (Ehrhart et al., 2006), making it distinct from individual-level OCB. For example, a team member may demonstrate a key OCB, helping behavior, at the individual level by assisting a new member in learning how to perform a required team task. At the group level, OCB manifests as shared, normative expectations held by all or most members that one or
more members of the team will take the time to help their new colleague “learn the ropes.” Individual-level OCB occurs, for example, in isolated incidents of helping, whereas group-level OCB represents a pattern of norms consistently reinforced by members’ shared expectations and behavior.

**Organizational Citizenship Behavior and Group Performance**

Relatively little empirical research directly substantiates the proposition that OCBs enhance group performance (Organ et al., 2006; Podsakoff et al., 2000). Even so, prior research and theory have identified several mechanisms through which OCB may benefit performance at both the individual and group levels.

**Individual performance and interpersonal dynamics of OCB.** Organ (1988) notes that OCBs provide social facilitation and reduce social friction and that by enabling group members to focus on their tasks more than on interpersonal relationships or conflicts OCBs potentially increase individual performance efficiencies (e.g., Borman & Motowidlo, 1997; Smith, Organ, & Near, 1983). OCBs also can enhance individual performance by building coordination skills (e.g., Smith et al., 1983), for example when seasoned employees help less experienced employees learn to synchronize their work with other members. Resource allocation theory (Bergeron, 2007), however, suggests that, given a fixed amount of work time, individuals who allocate time to OCB will have “lower career outcomes” (p. 1086), a paradoxical, adverse effect of OCB.

**Group performance and group dynamics of OCB.** Organ (1988) notes that citizenship behaviors may improve group performance through a process of social lubrication or facilitation, reducing social friction between members and increasing performance efficiencies (e.g., Borman & Motowidlo, 1997; Smith et al., 1983). Social facilitation also reduces the need for members to spend time on relationship maintenance (Organ, 1988) and allows for enhanced coordination between group members (e.g., Smith et al., 1983). Second, OCB helps make the performance of group members predictable, which should reduce process variability and enhance group performance, allowing more time for activities like scheduling and planning. OCBs can facilitate social processes in groups, reduce friction among members, create predictable levels of performance, and allow managers to allocate more time to productive activities.

Particularly if OCBs become normative, they may also foster group cohesion, an established predictor of group performance (Mullen & Cooper, 1994; Sundstrom, McIntyre, Halhfill, & Richards, 2000). Group OCBs might also lighten the group leader’s workload, for instance, if the team takes responsibility for training new members, making some OCBs into substitutes for leadership (Kerr & Jermier, 1978; Podsakoff & MacKenzie, 1995; Podsakoff, MacKenzie, & Bommer, 1996). As members perform OCBs that serve leadership functions, teams also may gain collective efficacy, another significant predictor of group effectiveness (Kozlowski & Ilgen, 2006). These dynamics reflect individual allocation of resources, especially time, to OCBs, which in turn affects evaluations of performance, based either on specific behaviors or on work outcomes (Bergeron, 2007).
Central to the current discussion, the positive relationship between OCB and group performance is a conclusion underlying the resource allocation framework we employ (Bergeron, 2007). The first empirical examination of an application of the resource allocation framework would be incomplete without a test of this basic idea. Thus, we propose the following:

_Hypothesis 1:_ Organizational citizenship behavior correlates positively with group performance.

**Task Interdependence Versus Task Independence and Citizenship Behavior Within Groups**

Scholars have proposed that the role of OCB in a group’s performance depends on features of its task (e.g., Johns, 2006), especially the degree to which its members are task interdependent. For example, Organ (1988) argued that citizenship plays a key role in the performance of interdependent tasks: “One would expect OCB to have more importance in connection with intensive . . . technologies, because . . . mutual dependencies among members . . . require spontaneous give-and-take . . . in order to achieve effective coordination” (p. 109). A group’s task imposes constraints on performance (Evans, Johansson, & Carrere, 1994; Hattrup & Jackson, 1996; Johns, 2006; Saavedra et al., 1993; Sundstrom, DeMeuse, & Futrell, 1990; Van der Vegt & Van de Vliert, 2005). Task interdependence requires inter-member coordination (Campion et al., 1993; Kiggundu, 1983; Saavedra et al., 1993), reciprocal interactions between members (Van der Vegt & Van de Vliert, 2005), connectedness of work activities (Morgeson & Humphrey, 2006), workload sharing (McIntyre & Salas, 1995), mutual adjustment (Smith et al., 1983), and task-related communication (Guzzo & Shea, 1992). Task interdependence also affects group role expectations (Dierdorff & Morgeson, 2007), perceived responsibilities (Pearce & Gregersen, 1991), and social norms (Organ et al., 2006).

**OCB and Dynamics of Performance Benefits in Task-Interdependent Groups**

Relationships among OCB, task interdependence, and group performance have received increasing attention in the literature (Van der Vegt, Van de Vliert, & Oosterhof, 2003), mainly focused on the positive effects of OCB on performance in groups with interdependent tasks. The proposed, underlying mechanisms are the same as for the performance benefits of OCB in work groups in general: enhanced interpersonal relationships, improved individual task and coordination skills, and associated group process improvements. However, task interdependence may create three specific conditions that magnify the mechanisms through which OCBs benefit group performance.

The first condition involves _role ambiguity._ Bergeron (2007) suggests that role ambiguity moderates the relationship between OCB and performance, such that OCB is more positively related to performance at higher levels of role ambiguity. As Bergeron notes, “The weight given to OCB will vary, as will the value of OCB for any given job . . . [such that] . . . OCB contributes more . . . in ambiguous than in non-ambiguous jobs” (p. 1087). Extending this to the group level, task-interdependent work is inherently more ambiguous than task-independent work where group members’ roles and job expectations are clearer and more explicit. In
contrast, task-interdependent work is functionally more complex and ambiguous due to inherent requirements for coordination and reciprocal interactions between members. Within this context, group members’ role expectations depend on and incorporate multiple interactions with other members, further reinforcing the differential benefit of OCB in task-interdependent groups.

The second condition involves coordination requirements, necessary for synchronizing members’ work (Guzzo & Shea, 1992). Group members with task-interdependent work interact more, and require more coordination, than groups whose members have independent tasks (Wageman, 1995). In task-interdependent contexts, allocating time to OCB should facilitate the cooperation needed for effective group performance (e.g., Guzzo & Shea, 1992). Also, in view of inherent operational constraints that tie the activities of one member to another, process variability is likely to be more strongly tied to performance in task-interdependent groups. Unpredictable task performance within groups where members must coordinate their efforts could have devastating consequences. Thus, citizenship behaviors aid coordination and ease process variability in task-interdependent groups and thereby boost performance.

A final condition includes shared workload management for effective division of work (Organ, 1988; Organ et al., 2006; Podsakoff et al., 1997). Group members must distribute group tasks efficiently to perform effectively. Citizenship behavior facilitates the degree to which group members understand role requirements, which enhances workload management and thus group performance. In sum, task interdependence may create conditions that magnify the group dynamics through which OCBs ultimately boost performance: cohesion, substitutes for leadership, and group efficacy.

From the perspective of a group-level resource allocation framework, when members of a group with interdependent tasks allocate time to OCBs, they make leveraged investments in group performance. To the extent that role ambiguity, coordination requirements, and shared workload management amplify the positive effects of OCBs, they potentially bring much greater benefits in groups with interdependent tasks versus those with independent tasks.

**Dynamics of Negative Effects of OCB on Performance in Task-Independent Groups**

Recent research suggests that OCB may have negative effects on group performance under conditions of low task interdependence (Podsakoff et al., 1997) or with independent tasks. Groups with independent tasks have clearly defined, individual roles (Guzzo & Shea, 1992), with no requirement for coordinating efforts or even interacting with other members. With independent (in Steiner’s 1972 terms, “additive”) tasks, group performance represents the sum of individuals’ performances. Task-independent groups have none of the conditions created by interdependent tasks that amplify the benefits of OCBs. Instead, OCBs may introduce two negative dynamics suggested by resource allocation theory (Bergeron, 2007) and control theory (Bachrach et al., 2006).

Resource allocation theory suggests that allocating individual resources (time and expertise) to OCB instead of individual task work detracts from individual performance and therefore group performance (Bergeron, 2007; Viswesvaran & Ones, 2000). In the context of
routine decisions about allocating time while at work (Becker, 1965; Chen, Lam, Naumann, & Schaubroeck, 2005; Drago & Garvey, 1998), allocating time to OCB necessarily subtracts from the time available for individual tasks and detracts from group performance in groups operating in independent task contexts. The impact can involve two or more group members, as in the case of a key OCB, helping behavior. For example, if a group member stops working to help another group member, the would-be helper has diverted time away from the task. The recipient, also diverted from task work, allocates time to interacting with the helper. Afterward, the recipient may remain distracted, particularly if the help involved a suggestion for working differently. In all, the group loses time and expertise diverted from individual work by two members during, and perhaps after, an instance of OCB.

A second process through which OCBs can have negative impact on group performance, derived from control theory (Liden, Wayne, & Bradway, 1997), comes from the capacity of OCB to represent de-motivating feedback. In a laboratory study of groups with interdependent and independent tasks (Bachrach et al., 2006) results suggested that helping behavior, a key OCB, in a group with independent tasks can be interpreted as encroaching on personal control, potentially diminishing members’ motivation. A resulting loss of effort may reduce group performance.

Thus, a key OCB, helping behavior, can have negative effects on performance in a group with independent tasks via four mechanisms: (1) detraction of time from the helper’s task; (2) diversion of time from the recipient’s task to interact with the would-be helper; (3) distraction of the recipient, via disturbed concentration afterwards; and (4) de-motivation, if the recipient of unsolicited help interprets it as negative feedback and loses motivation (Bachrach et al., 2006). Resource allocation theory depicts the first three as misallocations of group resources represented by the helper’s and recipient’s time. The last mechanism, from control theory, represents an unintended, adverse consequence of unsolicited help misinterpreted as feedback.

In summary, our conceptual framework clearly suggests that interdependent tasks create group dynamics that amplify the beneficial impact of OCBs, and independent tasks create conditions for mechanisms under which OCBs reduce group performance. Accordingly, we propose:

**Hypothesis 2:** Task interdependence moderates the relationship between OCB and group performance, such that this relationship is positive under high task interdependence and negative under low task interdependence.

**Dimensions of Citizenship Behavior, Task Interdependence, and Group Performance**

So far we have referred to OCBs in general terms, without emphasizing different kinds of citizenship behavior or the dimensions of OCB. Applying a group-level resource allocation framework to the separate dimensions of OCB adds another level of complexity and leads to a third hypothesis concerning the differential impact of different OCB dimensions in the contingent role of task interdependence for group performance.
Substantial evidence points to conceptually and empirically distinct dimensions of OCB (Borman & Motowidlo, 1997; Podsakoff et al., 1997; Podsakoff, MacKenzie, Moorman, & Fetter, 1990; Williams & Anderson, 1991). Although some researchers have called for consolidation of the OCB construct (Hoffman, Blair, Meriac, & Woehr, 2007; LePine, Erez, & Johnson, 2002), others see value in distinguishing the various subdimensions (Bergeron, 2007; Organ et al., 2006), as we do here.

Prior research has consistently distinguished three dimensions of OCB (Podsakoff et al., 1997). *Helping behavior* refers to active assistance of others at work and prevention of work-related problems. *Civic virtue* involves demonstration of concern about the life of the group and responsible participation in the work group’s governance, including making constructive suggestions for performance improvements and seeking performance solutions. *Sportsmanship* refers to tolerating less-than-ideal circumstances or minor workplace distractions and discomforts without complaining. A key proposition of the resource allocation approach holds that *some types of OCB take more time than others* (Bergeron, 2007). If so, two implications follow for group OCB. First, groups may maximize the benefits of normative OCBs by emphasizing the least time-consuming types of OCB. Second, because the OCBs with the highest “time costs” (Bergeron, 2007: 1090) carry the highest individual performance costs, the most time-consuming OCBs also are likely to impart the greatest, negative effects on the performance of groups with independent tasks, where OCBs detract time directly from individual task work.

*Time costs of helping behavior.* Of the three types of OCB, helping behavior potentially requires the most time, from at least one would-be helper and one recipient, possibly others. For example, helping a new coworker learn a technique could require significant time allocation away from task work by both the helper and recipient (or a longer work day for both). Evidence consistent with performance costs of helping in groups with independent tasks comes from two prior studies. Naumann and Bennett (2002) studied bank branches, which have relatively independent tasks, and found helping behavior negatively correlated with their performance ($r = -0.31$). Similarly, Podsakoff and MacKenzie (1994) conducted a field study at an insurance agency, where the work of groups of insurance agents also is relatively independent, and reported a significant, negative relationship between helping behaviors and group performance outcomes ($r = -0.51$). Insurance agents’ core task activities include making client contacts, fielding questions from clients and potential clients in-house or on the telephone, and selling new policies. An agent who takes time away from these core activities for helping behavior, for example to explain to a coworker the nuances of a policy, mediate a conflict, or offer other help, spends correspondingly less time on core task activities. Both helper and recipient (or recipients) take time away from core tasks for these interactions. Agents with greater experience, and probably greater expertise, may spend more time helping. Consequences for group performance in Podsakoff and MacKenzie’s study included loss of sales. To the extent that the insurance groups adopted helping behavior as a normative OCB, they made the practice, and its performance costs, routine. Moreover, the regular involvement of experienced group members in helping coworkers may divert time from core tasks by members with the greatest expertise, adding expertise costs.

In groups with interdependent tasks, unlike those with independent tasks, benefits of helping may outweigh time costs, because features of task interdependence amplify the positive
effects of helping: role ambiguity, coordination requirements, and shared workload management. Groups with interdependent tasks can compensate for the time investment by integrating helping behavior into members’ roles for future performance gains. Support for this idea comes from a study by Ehrhart et al. (2006) of military units with highly interdependent tasks, in which helping behavior correlated positively with group performance ($r = +.57$).

In sum, we expect helping behavior, a time-consuming OCB, to have a negative relationship with group performance in task-independent groups. In contrast, task interdependence creates group conditions that amplify the positive effects of helping, which may more than offset its costs, for a positive relationship between helping and group performance in task-interdependent groups.

**Time costs of civic virtue.** The second commonly studied dimension of OCB, civic virtue, also is time consuming (Bergeron, 2007). Responsible participation in governance takes time, for example to discuss group rules and policies. Suggesting an improvement, by itself, may take little time, but preparing to make a suggestion and following up may consume more time, as this often involves researching the problem; defining and developing metrics; collecting, recording, and analyzing data; making presentations; and getting support from coworkers. Making suggestions for improvement may call for attending outside meetings, preparing action plans, making presentations, and sending e-mails. Although an instance of civic virtue behavior might mainly divert one member’s time, it also may involve other members, representing greater time and expertise costs.

Like helping, civic virtue also may reduce performance via de-motivation—another resource cost. Suggestions for improvement, like unsolicited help, can be interpreted as negative feedback, as in Bachrach et al.’s (2006) study, with perhaps a similar, de-motivating impact.

For civic virtue, in groups with interdependent tasks, benefits to group performance may outweigh time costs because features of task interdependence amplify positive effects of civic virtue (as with helping behavior). Role ambiguity and requirements for coordination particularly may create a context in which responsible suggestions for improvement lead groups to improve their work processes and effectiveness, for instance in some military units, marketing teams, and mental health care teams. Performance gains from group process improvement depend on effectively managing possible conflict and reaching agreement on changes, via team learning (Kozlowski & Ilgen, 2006). In turn, this depends on a team climate of “psychological safety” (Edmondson, Bohmer, & Pisano, 2001), which could prevent the de-motivating feedback effect reported by Bachrach et al. (2006). The need for team learning to achieve a return on investment from civic virtue behavior makes the performance benefits slightly uncertain in task-interdependent groups.

In sum, we expect civic virtue, a time-consuming OCB, to have a negative relationship with group performance in task-independent groups. In groups with interdependent tasks, where the task context creates conditions that amplify the positive effects of civic virtue, the benefits of civic virtue may more than offset its costs in groups able to achieve process improvements via team learning, suggesting a positive relationship of civic virtue with group performance.

**Low time costs of sportsmanship.** Finally, unlike helping and civic virtue, the third heavily studied dimension of citizenship, sportsmanship, consumes little or no time. A passive
OCB, it calls for tolerating less-than-ideal circumstances, or minor workplace distractions and discomforts, without complaining (Podsakoff et al., 1997). It diverts no time from task work. In fact, whining and complaining actually take time, so this type of OCB may actually save time.

In groups with independent tasks, where roles are well defined and members spend relatively little time interacting, the lack of sportsmanship—a tendency to complain—may involve minor time costs by diverting the complainer’s time from the task. This suggests there may be a slightly positive relationship between sportsmanship behavior and group performance in task-independent groups.

In task-interdependent groups, the task context may amplify the negative effects of complaining. Intense interaction means that other members besides the complainer might get involved. Group interaction creates a potential for developing a group norm of complaining, which could contribute to resource costs from lost time, reduced effort, and even de-motivation. This points to a strong, positive relationship between sportsmanship and group performance in task-interdependent groups because of the amplified, negative impact of a lack of sportsmanship. In summary, based on different combinations of mechanisms among these three dimensions of OCB, we propose:

**Hypothesis 3:** The relationship between OCB and group performance is (a) positive when tasks are interdependent, for all 3 types of OCB; (b) slightly positive when tasks are independent, for the least time-consuming OCB (sportsmanship); and (c) strongly negative when tasks are independent, for the most time-consuming OCBs (helping, civic virtue).

**Method**

**Design and Procedures**

In a lagged field study incorporating 46 intact work groups in six organizations in the United States, employees completed questionnaires evaluating the level of task interdependence in their work groups, while leaders provided evaluations of group-level OCB. After a delay of six months, group customers provided ratings of group performance. Data collected from group members, leaders, and customers were matched. Surveys were administered to 384 group leaders, members, and customers. A total of 292 matched surveys were returned, representing a 76% response rate from the original sample.

**Recruitment.** We sought approval from the leaders of prospective, participant organizations (e.g., president) or units (e.g., director). We sent proposals detailing the purpose, methods, and likely outcomes of participation. To leaders who agreed to participate we gave detailed implementation timelines and copies of all materials for review. Before distributing materials, leaders informed group leaders, members, and customers of the project, its requirements, and its possible benefits. All had the choice of participating or declining.

**Participants.** Surveys were received from 157 group members (71%), 52 group leaders (90%), and 83 customers (79%). Groups ranged in size from 2 to 12 members ($M = 4.02, SD = 2.30$).
A majority of participants were female (57%) and had college degrees (58%)—with 20% holding a master’s degree or doctorate. Participants were 37 years of age ($SD = 9.42$), with 3.9 years of tenure in their current positions ($SD = 3.43$) and 2.8 years in their current groups ($SD = 3.00$). Leaders had more experience in their positions ($M = 4.63, SD = 4.57$, vs. $M = 3.68, SD = 5.25$) and in groups ($M = 3.38, SD = 4.80$, vs. $M = 3.08, SD = 4.72$), than did members ($p < .01$). Surveys were received from a total of 83 customers of 46 of the participating groups. Most of these customers were “internal”—working in the same organization as the group from whom they received a product and/or service—and had significant exposure to the dynamics and performance of participating groups. With 83 customers and 52 groups, we had assessments of some groups’ performance by more than one customer, including external customers (working outside of the organization, with less exposure to the groups). In order to utilize the most informed ratings of performance, we retained for analysis only performance ratings from internal customers. This yielded a single customer rating for each of 46 groups in our final analysis.

**Settings.** We sought to include groups performing a wide range of activities, from different organizations and industries, consistent with Organ’s (1988) contention that the benefits of citizenship behavior are universal. Six organizations participated, representing manufacturing, health care, and government. One health care organization employed service groups principally responsible for administering and coordinating geriatric services provided by physician groups. Internal customers included managers working for the physician groups served by the administration and coordination groups. These customers worked closely with the administration and coordination groups. Participants in another organization from the health care industry, a full-service hospital, consisted mainly of action groups (e.g., surgery, respiratory care). Internal customers for the surgery groups included postoperative care professionals responsible for patients immediately following surgery. They received detailed debriefings from multiple members of the surgery groups and maintained ongoing communication in the follow-up care required after surgery. Internal customers for the respiratory care groups included physicians responsible for patients receiving services from the respiratory care groups. These physicians worked closely with the respiratory care groups. Groups in a third health care organization provided state-sponsored community mental health services, including skills training for patients with mental disabilities. Internal customers included members of the organization who provided aftercare. Mental health service groups coordinated with these internal customers.

A manufacturing organization participating in the study employed production and service groups responsible for manufacturing games. For example, press groups operate large ink presses that apply a variety of designs to different games. Internal customers for these groups included manufacturing supervisors who received the newly printed games. They regularly communicate with the press groups about quality and scheduling. The fifth participant organization, a government regulatory agency, monitors state programs and organizations. These groups process information about state programs and report on compliance. The internal customers for these groups included managers who reviewed and evaluated the reports. The final organization, a human resources outsourcer, provides compensation and benefits services to several other companies. Groups in this organization monitored procedural compliance.
and performed technical program evaluation. Their internal customers were account executives responsible for maintaining the health of each client account. Internal customers from all six organizations were well positioned to provide performance assessments.

Our research design incorporated a six-month time lag in the collection of performance data, for two reasons. First, Organ (1988) theorized that OCB is most likely to have its principal impact on group performance over time. Because the effects of OCB on group-level performance may not be detectable in cross-sectional designs, we wanted to incorporate a time lag. Second, while we sought to collect performance data at multiple time periods, the organizations agreed to provide performance data at only a single point in time, six months following our initial data collection.

**Measures**

**Organizational citizenship behavior.** Groups’ supervisors provided ratings of citizenship on a response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). As we note above, previous research examining OCB contingency factors has included only a single dimension of OCB: helping behavior. To broaden our understanding of the role played by task interdependence, to test our resource-based arguments regarding time intensive versus non–time intensive forms of citizenship, and to capture a conceptually wider range of citizenship behavior than has been examined in previous research, we chose to measure three distinct subdimensions of OCB identified by Podsakoff et al. (1997): helping behaviors, civic virtue, and sportsmanship. These three forms of citizenship behavior were chosen because they are based on the conceptual work of Organ (1988) and are conceptually and empirically related to group performance outcomes (Podsakoff et al., 1997; Podsakoff & MacKenzie, 1994).

As we note above, the helping dimension is the broadest based construct and generally involves helping others with work-related tasks and preventing the development of work-related problems. The Podsakoff et al. (1997) measure is used to assess helping. An example of an item used to measure helping includes, “Members of this group help out other group members if someone falls behind in his/her work.” The internal reliability of the helping scale in the current study is $\alpha = .87$. Civic virtue is behavior that indicates that an employee responsibly participates in, and is concerned about, the life of the work group. Podsakoff et al.’s civic virtue scale is used to capture this dimension of citizenship behavior. An example item is, “Members of this group make suggestions about how the group can improve its effectiveness.” The internal reliability of the civic virtue scale in the current study is $\alpha = .70$. The final citizenship dimension we measured is sportsmanship, which is an employee’s willingness to tolerate less-than-ideal working conditions and circumstances without complaining. We used Podsakoff et al.’s sportsmanship measure. An example item is, “Members of this group always focus on what is wrong with the situation, rather than the positive side” (reverse scored). The reliability of the scale is $\alpha = .77$.

**Task interdependence.** Task interdependence is evaluated by group members with Wageman’s (1995) task interdependence scale, using the response format identified above.
This scale captures the degree to which members of a group rely on other members to accomplish their work. An example of an item from this measure is, “Our work is not done until everyone in the group has done his or her part.” The reliability of the scale in the current study is $\alpha = .75$.

**Group performance.** The performance of the groups in this study is evaluated by internal customers, also using the response format described above. A scale adapted from Ancona and Caldwell (1992) is used to capture group performance. An example of an item included in the scale is, “The _____ group demonstrates a level of performance that could be described as excellent.” The internal reliability of the group performance scale is $\alpha = .83$.

**Data Aggregation**

Groups comprised the level of analysis in this study, and all constructs are measured at the group level (Rousseau, 1985). We use $r_{wg}$ (e.g., James, Demaree, & Wolf, 1984) and ICC(1) and ICC(K) (LeBreton & Senter, 2008) to determine whether aggregation is justified for individual group member ratings of task interdependence. The average $r_{wg}$ for groups is .84 ($SD = .15$), and the range is .62 to .97 using a uniform or rectangular null distribution. While the median and mean $r_{wg}$ values are above the commonly accepted cutoff of .70 (George, 1990), there are some that fall below this criterion level. However, based on strong ICC values, the nature of the variable and task context, and all $r_{wg}$ values representing at least “moderate agreement” (LeBreton & Senter, 2008: 19), we decided to retain these groups in our analyses. We also calculated intraclass correlation coefficients to determine whether individual ratings were attributable to group membership, ICC(1), and the reliability of group means, ICC(K) (Bliese, 2000; LeBreton & Senter, 2008). The ICC(1) and ICC(K) for task interdependence were .40 and .75 ($p < .01$), respectively. In sum, these results provide justification for aggregating group member ratings of task interdependence.

**Results**

We conducted hierarchical moderated regression analyses (Aiken & West, 1991; Cohen & Cohen, 1983) to test relationships between OCB and group performance and the moderating role of task interdependence in that relationship. Table 1 reports coefficient alpha reliabilities, average shared variance estimates, and interconstruct correlations. Construct reliability is evaluated using Cronbach’s alpha. Fornell and Larcker’s (1981) index of the average variance in each latent factor accounted for by its indicators—$\rho_{uc(f)}$—is above .50 for all constructs, except for group performance (.42). Evidence for discriminant validity comes from the fact that the shared variance among any two constructs is less than the average variance explained in the items—$\rho_{uc(f)}$—by their intended construct. Taken together, these results provide evidence of the convergent and discriminant validity of the study constructs, including the distinctiveness of the three OCB subdimensions.
Hypothesis Tests

In the hierarchical regression analyses, we entered control variables in the first step, followed by the citizenship variables in the second step. As other scholars have done with similar data (Stewart & Barrick, 2000), we controlled for organization, position tenure, group tenure, and group size, because each of these variables may explain variance in group performance (Stewart, 2006). Our control variables accounted for 35% of the variance in group performance, although there were no significant relationships with position tenure, group tenure, or group size. These results confirm our expectation that customer performance ratings are likely to differ across the organizations from which the groups in the current study are drawn.

We tested Hypothesis 1 using change in $R^2$ associated with the three types of OCB. Helping behavior predicted group performance significantly and positively, accounting for significant incremental variance beyond the control variables ($B = 0.10, p < .05, R^2 = .37, \Delta R^2 = .02$). The same proved true for sportsmanship ($B = 0.21, p < .01, R^2 = .51, \Delta R^2 = .16$). Similarly, civic virtue showed a positive relationship ($B = 0.09, p = .07, R^2 = .37, \Delta R^2 = .02$), which proved only marginally significant. Overall, results partially supported Hypothesis 1.

To evaluate Hypothesis 2, in a moderated regression analysis of group performance, we entered the control variables in the first step, followed by the three citizenship variables and task interdependence in the second step, and the three Task Interdependence $\times$ OCB interactions in the third step. We tested the moderator hypothesis using $R^2$ changes associated with the interactions. As shown in Table 2, and as predicted in Hypothesis 2, the interactions of task interdependence with helping ($B = 0.18, p < .05, R^2 = .39, \Delta R^2 = .02$), civic virtue ($B = 0.20, p < .05, R^2 = .39, \Delta R^2 = .02$), and sportsmanship ($B = 0.18, p < .01, R^2 = .54; \Delta R^2 = .03$) all

Table 1
Means, Standard Deviations, Reliabilities, and Intercorrelations of Measured Variables

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<td>.21</td>
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<td>(.87/.53)</td>
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<td>.20</td>
<td>.08</td>
<td>.73**</td>
<td>(.70/.55)</td>
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<td>.28**</td>
<td>.04</td>
<td>.38**</td>
<td>.32*</td>
<td>(.77/.69)</td>
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<td>.06</td>
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Note: $N = 52$ for all correlations except for those with group performance ($n = 46$). For data in parentheses, diagonal entries are coefficient alpha reliability estimates and Fornell and Larcker’s (1981) rho.

*p < .05, two-tailed. **p < .01, two-tailed.
Table 2
Summary of Hierarchical Moderated Regression Analyses for Organizational Citizenship Behavior (OCB) and Group Performance

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<th>β</th>
<th>R²</th>
<th>ΔR²</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>R²</th>
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</table>

Note: N = 46. Organization is dummy coded. TINT = task interdependence; OCB-SD = OCB subdimension; OCB-SD(2) = OCB subdimension included in a single, simultaneous regression equation.

*p < .10. *p < .05. **p < .01
accounted for significant increments in variance in group performance after accounting for the associations with task interdependence and the three OCB dimensions.

Although the issue of conceptual overlap among the various subdimensions of OCB identified in the literature currently remains an unresolved question (Organ et al., 2006), recent reviews suggest that these dimensions all may represent a general category of behavior (Hoffman et al., 2007; LePine et al., 2002). Following a conservative approach, we also tested an aggregated OCB measure as a predictor of group performance, along with the interaction of the aggregated OCB measure and task interdependence. Consistent with the results from the dimension-specific tests described in the previous paragraph, the aggregated OCB was a positive, significant predictor of group performance ($B = 0.28, p < .01, R^2 = .45, ΔR^2 = .10$), consistent with Hypothesis 1. Similarly, the interaction of aggregated OCB and task interdependence predicted significant, incremental variance ($B = 0.22, p < .01, R^2 = .46, ΔR^2 = .02$). These results provided additional support for Hypothesis 2. These results are plotted in Figure 1 for high and low levels of task interdependence (Cohen & Cohen, 1983).

As predicted, in groups reporting high task interdependence, the relationship of OCB and group performance was strong and positive. In contrast, in groups reporting low task interdependence, this relationship was slightly negative for both helping and civic virtue, but not for sportsmanship. Results from slopes-difference tests revealed that the slopes in the groups with independent tasks were significantly different from zero ($p < .05$). These results supported the hypothesis that task interdependence moderates the relationship between OCB and group performance. While OCB correlated positively with group performance under high task interdependence, it had essentially no utility in groups with relatively independent tasks.

Although multicollinearity among the OCB subdimensions substantially complicates the issue of combining regressions (Andrews, Kacmar, & Harris, in press; Harris, Kacmar, Zivnuska, & Shaw, 2007), we also conducted a single regression analysis including the helping, civic virtue, and sportsmanship interactions with task interdependence in Table 2. As Andrews et al. noted, “These results may be attributable to the effects of multicollinearity.” Despite this potential concern, the results from this analysis matched those from the separate equations for one of the three types of OCB. The Sportsmanship × Task Interdependence interaction proved significant ($B = 0.18, p < .01, R^2 = .54, ΔR^2 = .03$), while the Helping Behavior × Task Interdependence ($B = 0.10, p > .05, R^2 = .51; ΔR^2 = .00$) and Civic Virtue × Task Interdependence ($B = 0.10, p > .05, R^2 = .51, ΔR^2 = .00$) interactions failed to reach significance. This may have reflected the relative, statistical prominence of the Sportsmanship × Task Interdependence interaction and its similarity to the other two.

In contrast with some indications in the field that OCB is best represented as a monolithic construct, and consistent with Bergeron’s (2007) resource allocation theory, we also were interested in exploring the differential impact of task interdependence in the relationship between group performance and OCBs requiring different amounts of time. To test Hypothesis 3, we examined the degree to which the two-way interaction coefficients differed across the three different forms of OCB. Specifically, we hypothesized that helping behavior and civic virtue would be more detrimental in task-independent groups than sportsmanship would be, due to inherent differences in the time required to demonstrate these different dimensions of OCB. To test such hypotheses, post hoc probing techniques have been suggested by several
Figure 1
Organizational Citizenship Behavior and Group Performance at High Versus low Task Interdependence
Nielsen et al./ Utility of OCB

scholars (Aiken & West, 1991; Bauer & Curran, 2005; Dawson & Richter, 2006; Jaccard & Turrisi, 2003). The primary method used has been the “pick-a-point” approach (Aiken & West, 1991), which involves computing simple slopes of $Y$ (team performance) on $X$ (OCB) at conditional values of $Z$ (task interdependence) and then testing the degree to which these slopes differ from zero. Using this approach, a close examination of the low task interdependence (−1 SD) slopes across helping behavior, civic virtue, and sportsmanship clearly demonstrated relative differences between the three OCB dimensions.

While both helping behavior and civic virtue were significantly, negatively related to group performance, sportsmanship was significantly, positively related to group performance in task-independent groups (albeit significantly less so than in task-interdependent groups, $p < .05$).

These results provided qualified support for our third hypothesis, as each of the low task-interdependence (−1 SD) slopes differed significantly from zero.

To fully test our third hypothesis, we also tested whether the interactions differed from each other by constraining each interaction term to be equal and then testing the reduction in $R^2$ compared to the unconstrained equation (J. Edwards, personal communication, April 8, 2009). We began with the unconstrained equation where $Y = \text{team performance}, X_1 = \text{helping behavior}, X_2 = \text{civic virtue}, X_3 = \text{sportsmanship},$ and $Z = \text{task interdependence}$:

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 Z + b_5 X_1 Z + b_6 X_2 Z + b_7 X_3 Z + \epsilon.$$ (1)

We then constrained the interaction coefficients to be equal to one another:

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 Z + b_5 X_1 Z + b_6 X_2 Z + b_7 X_3 Z + \epsilon.$$ (2)

This equation shortened to:

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 Z + b_5 (X_1 Z + X_2 Z + X_3 Z) + \epsilon.$$ (3)

A significant reduction in $R^2$ indicates that the interaction coefficients differ. We found marginal support for our predictions using this test, based on a reduction in $R^2(\Delta R^2 = .01, p = .08)$. Using similar logic to test our argument that specific pairs of interaction coefficients ($b_5 X_1 Z$ and $b_7 X_3 Z; b_5 X_2 Z$ and $b_7 X_3 Z$) differed, we also compared the unconstrained equation including the interaction terms for helping behavior and sportsmanship,

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 Z + b_5 X_1 Z + b_7 X_3 Z + \epsilon,$$ (1)

with a model that constrains these interaction coefficients to be equal,

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 Z + b_5 (X_1 Z + X_3 Z) + \epsilon.$$ (2)

We also found marginal support for the hypothesis ($\Delta R^2 = .01, p = .10$). We repeated this test with civic virtue and sportsmanship,
\[ Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 Z + b_5 X_2 Z + b_6 X_3 Z + \epsilon, \]  
\[ Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 Z + b_5 (X_2 Z + X_3 Z) + \epsilon, \]  

with similar results \((\Delta R^2 = .01, p = .11)\). We considered additional analyses to provide a direct test of slope differences within the context of a three-way interaction (Dawson & Richter, 2006).

The process for developing the test formula involves four steps: (1) calculate formulas for simple slopes of the relation between \(X\) (i.e., helping behavior or civic virtue) and \(Y\) (i.e., team performance) at high and low levels of \(Z\) (i.e., task interdependence) and \(W\) (i.e., civic virtue or helping behavior); (2) calculate the difference between any two pairs of slopes; (3) calculate the standard error of the difference of the pairs of slopes; and finally (4) test whether the ratio of the difference between pairs of slopes and their standard errors differ from zero. However, because we do not have quantitative data representing the time cost of the three OCB dimensions, we would have to include a dimension of OCB as both the predictor \((X)\) and one of the moderators \((Z)\). This would represent a mis-specified model, as two dimensions of a latent variable would be utilized as both a predictor and moderator. In essence, we would require a quantitative representation of the time cost of each dimension of OCB to include as the second moderator for an accurate examination of a three-way interaction. We do not have this data and are not aware of any attempts, to date, to quantify the time cost of different dimensions of OCB. Therefore, we suggest that our two tests of Hypothesis 3 make use of the most robust currently available methods, given the reasonable constraints of our data.

**Discussion**

Consistent with a resource allocation conceptualization of OCB, our results supported the hypothesis that task interdependence moderates the relationship between OCB and group performance. Specifically, across 46 intact work groups performing diverse tasks and producing a wide range of products and services, the relationships between three distinct dimensions of OCB and group performance were positive under high task interdependence and neutral to negative under low task interdependence. In brief: OCB had utility in groups with interdependent tasks and not in groups with independent tasks.

These results provide situation-specific support for the largely untested premise that citizenship has utility for group performance (Organ et al., 2006). Specifically, our results suggest that OCB may bring amplified performance benefits to task-interdependent groups, and in task-independent groups, OCB may actually degrade group performance. While our findings partly justify the leap of faith made by researchers, they also highlight the fact that we still have much to learn about contingency factors affecting OCB in actual work contexts.

The principal implication of our results is that OCB may have differential utility and may benefit performance mainly in work groups with interdependent tasks. It will be important for future research in the OCB area to focus on work groups’ operational contexts. Understanding group contexts may help predict when OCB has positive utility. However, task interdependence
is only one of many operational contingency factors. Consistent with our resource allocation analysis, social interdependence theory (Johnson & Johnson, 1989) may provide a basis for predicting the discrepant effects of OCBs across a range of operating contexts. For example, as we note above, prior research has reported inconsistent relationships between OCB and group performance, ranging from $r = -0.36$ in bank branches (e.g., Naumann & Bennett, 2002) to $r = +0.57$ in military units (e.g., Ehrhart et al., 2006). In bank branches (Naumann & Bennett, 2002), like the insurance sales groups studied by Podsakoff and MacKenzie (1994), members may operate independently, and thus OCBs may detract from or impede group performance because they necessarily limit the amount of time and possibly expertise that members have available to allocate toward their independent work (Bergeron, 2007; Hockey, 1997). In contrast, military groups (Ehrhart et al., 2006) or manufacturing groups (Podsakoff et al., 1997) typically have higher levels of task interdependence, where OCBs may lubricate member interactions and so improve group performance where such interactions are an explicit requirement of group work. Thus, scarce time resources may be misallocated in contexts where citizenship does not directly contribute to task-interdependent group processes. In addition to the application of resource allocation theory, it will be important for future research to continue to examine the role of various forms of interdependence in the relationship between OCB and group performance.

**Implications for Theory**

The theoretical implications of this research center on the contingent role of the task context in the OCB-to-group performance relationship. Recent work has highlighted the importance of understanding the broader context within which work groups operate (Kozlowski & Ilgen, 2006). For example, Nielsen, Edmondson, and Sundstrom (2007) noted, “A group’s success depends critically on how it manages relationships within the context in which it is embedded” (p. 39). Consistent with this idea, the current results suggest that the task context is central to understanding the utility of OCB for achieving enhanced group performance. As the nature of work in groups continues to change and become increasingly complex (Kozlowski & Ilgen, 2006), conceptual development in the OCB domain will rest at least in part on an understanding of the role of the operational context within which these behaviors are demonstrated and the impact of context on their potential utility. Qualified support for the resource allocation framework (Bergeron, 2007) applied to work groups is a second theoretical implication. The resource allocation framework extended to the group level suggests that, although OCB may contribute to group performance, this contribution is likely to vary depending on the degree to which the task context can create conditions that amplify the beneficial impact of this kind of behavior.

Specifically, the benefits of helping behavior will likely outweigh its high time costs because role ambiguity, coordination requirements, and shared workload management amplify the positive effects of helping behavior. In contrast, helping behavior may decrease the performance of task-independent groups because it detracts time from the helper’s task, diverts time from the recipient’s task, distracts the recipient afterward, and de-motivates the recipient if it is interpreted as negative feedback (Bachrach et al., 2006). We find support for these
contentions, as helping behavior was positively related to performance in task-interdependent groups and negatively related to performance in task-independent groups. Future research should consider our proposition that group members with greater levels of expertise and experience are more likely to help others, which may result in expertise costs in addition to those involving time. Assessing the attributes of those who most frequently help in task-independent contexts may permit a more accurate estimation of the negative impact of this behavior.

Similar to helping behavior, we suggest that the positive impact of civic virtue outweighs associated time costs because it is magnified in task-interdependent groups by role ambiguity and coordination requirements. The possible negative implications of civic virtue for task-independent groups involve the significant time costs related to preparing suggested improvements by researching the problem, defining relevant metrics, collecting data, and garnering support from colleagues. Although our results strongly support these propositions, it will be important for future research to more fully consider the specific mechanisms required for civic virtue’s long-term positive effects. That is, suggestions for improvement will likely benefit those groups whose environments welcome this type of input (Edmondson, 1999) and that possess a learning orientation that helps transform suggestions into action. Researchers might consider collecting data related to psychological safety and learning orientation, and doing so with a longitudinal design permitting the analysis of changes over time.

In contrast to helping and civic virtue, sportsmanship requires little or no time. We suggest that sportsmanship in task-interdependent groups is highly related to performance. Because it does not carry the time costs of helping and civic virtue, it will likely have a stronger, positive relationship with performance for interdependent groups. Similarly, the negative utility of sportsmanship for independent groups may be limited due to its low time costs, which may make it performance-neutral in independent groups. We find strong support for these predictions, as sportsmanship was more strongly related to performance for task-interdependent groups, compared to helping and civic virtue, and was slightly, positively related to performance in task-independent groups.

As with any single research study, however, our results should be interpreted cautiously. The results from our aggregated OCB analysis (aggregated OCB combined helping, civic virtue, and sportsmanship measures) indicated that OCB still had a positive relationship with group performance even in task-independent contexts. However, this may reflect sportsmanship, which we predicted would be less negative in task-independent contexts due to its relatively low time cost.

Practical Implications

Although a great deal of effort has been devoted to understanding the processes that lead to the demonstration of OCB (Organ et al., 2006), less effort has been directed to understanding the conditions under which these behaviors are likely to foster (or hinder) group performance. Managers who use leadership techniques (Podsakoff & MacKenzie, 1995; Podsakoff et al., 1996), incentives (Deckop, Mangel, & Cirka, 1999), or performance evaluations (Podsakoff et al., 2000) to increase OCB levels may find themselves in
the position of encouraging behaviors that contribute negatively to group performance (Bachrach et al., 2006; Naumann & Bennett, 2002; Podsakoff & MacKenzie, 1994). To leverage the potential benefits of OCB, managers must understand the role that situational factors play in achieving these outcomes. Managers who recognize the degree to which groups are interdependent or independent can inform their approaches to improving group performance. Managers may consider group-building sessions focused on promoting the importance of citizenship for task-interdependent groups whose performance is more likely to benefit from higher levels of OCB. Similarly, in groups with independent tasks, where OCB has potentially greater benefits between working sessions—for example, during breaks and after hours—managers may help employees identify and focus on the specific contexts in which OCB boosts performance.

Similar implications hold for both group selection and intergroup succession planning processes. For example, it may be beneficial for organizational group members who have historically operated in highly interdependent environments to stay in similar group environments in the future. This could be one data point that managers include in the selection process to promote faster integration and higher levels of “appropriate,” or complimentary, contributions. Similarly, “context congruence” also may be considered as managers develop succession planning processes. It may be beneficial for managers to account for the group contexts that comprise an employee’s past experiences when inserting employees in the organization’s succession plan. This may help managers avoid difficult context transitions and improve the implementation of position changes within the organization.

Limitations

A principal limitation of the current study comes from our use of group members’ self-reports to capture task interdependence. In the absence of an additional, objective index of some kind, we have no way to tell how well members’ ratings match their “true” operational constraints. Some members who rate their tasks as relatively independent may have overlooked interdependencies that customers notice. Although it is difficult to identify an alternative explanation for our results that also would coincide with this kind of systematic misperception, it will be important for future field research to incorporate objective measures of task interdependence to offset this potential limitation. Another limitation concerns the group performance measure we used, which is based on subjective evaluations by group customers. While customers’ judgments are well-accepted indicators of group performance (e.g., Hackman, 1990), they tell only part of the story. However, because we used a lagged research design with a delayed measure of group performance, our results show the relationship of group performance with OCBs measured six months earlier. This time sequence strengthens the conclusion that OCB may have played a causal role with respect to group performance, and not the reverse. Of course, group performance reflects the influence of other variables besides OCB. Nonetheless, given the design of the current study, group performance could not have influenced OCB, so our design effectively rules out the alternative hypothesis that high group performance promoted citizenship behavior or ratings of citizenship behavior (Bachrach, Bendoly, & Podsakoff, 2001).
Prior research also suggests that the relationship between OCB and performance outcomes may be different depending on whether objective versus subjective measures are used (Podsakoff et al., 2000). Future research may address this limitation by using objective indices of group performance. Further, although one of the goals of the current study is to extend prior contextual moderation research by expanding the range of OCBs, we examined only three established subdimensions—helping behavior, civic virtue, and sportsmanship. Other subdimensions of OCB have been identified (e.g., Organ et al., 2006) that could further extend citizenships’ established domain. For example, a potentially important dimension of OCB is self-development, a dimension of OCB that encompasses employee efforts to improve their professional knowledge and skills through voluntary participation in training activities (Podsakoff et al., 2000). Although conceptually this dimension of OCB takes a great deal of time, it is unclear whether its relationship with group performance is subject, in the same way, to the constraints of task interdependence as are other time-consuming dimensions of OCB. Because self-development by definition occurs outside of regular work hours, with employees spending their personal time in development activities, the zero-sum calculus of Bergeron’s framework is brought into central focus. This remains an important question for future research to explore.

Finally, it also is important to note that although our conceptual arguments are based on resource allocation theory, control theory (i.e., Bachrach et al., 2006) has been applied as a conceptual framework to understand the role played by task interdependence in the relationship between OCB and group performance outcomes. In the current study, we do not measure the degree to which OCBs are seen by individual group members as feedback indicative of poor performance, individuals’ perceptions of control, or individuals’ motivation to perform task activities. Thus, although a resource allocation explanation may be more parsimonious, the fact remains that we did not capture the variables that would allow us to test whether control issues underlie the pattern of results we observed in the current study.

Agenda for Future Research

Of the many questions our findings raise for future research, we place highest priority on five open questions that carry both theoretical and practical implications: (1) How does the relationship between OCB and group performance change over time? If we had measured performance after one year or two years, how would the results have changed? We expect the relationship of OCB and group performance to strengthen over time, as Bergeron (2007) predicts for the relationship of OCB and individual performance. (2) To what extent does the relationship between OCB and group performance vary by specific dimensions of OCB? We measured three of the dimensions here and left many others unmeasured (from 30 types of OCB identified by Bergeron, 2007). (3) To what extent does the relationship of OCB and group performance depend on allocation of individuals’ time to tasks versus OCB? Central to the resource allocation framework is the idea that time devoted to OCB is subtracted from task work, but we did not measure time allocation directly. Similarly, (4) to what extent do increments in group performance associated with individual-level or group-level OCBs correlate with features of task interdependence that might amplify the benefits of OCB (role
ambiguity, coordination requirements, and workload management) and group dynamics that might amplify team effectiveness (group cohesion, substitutes for leadership, and group efficacy)? We measured none of these directly. (5) Under what conditions, especially in task-independent groups, do members interpret OCBs as unwelcome feedback and/or infringements on individual control and/or de-motivating, as suggested by Bachrach et al. (2006)? Our research did not assess any of these possible dynamics behind the paradoxical—and, we hope, unusual—negative impact of OCB on group performance.

**Conclusion**

The results of this study support arguments that the utility of OCB for group performance varies with task interdependence. Across a wide range of groups, the performance of groups with interdependent tasks was positively related to three dimensions of OCB. In contrast, we uncovered neutral or negative relationships between these same dimensions of OCB and performance in task-independent groups. Our findings suggest that, consistent with a resource allocation framework, allocating time toward OCB may promote group performance only under certain conditions. The operation of task interdependence as a significant contingency factor in a diverse sample of groups warrants further research into the utility of OCB and how employees may best expend scarce resources.

**References**


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