

## HELP-SEEKING AND HELP-GIVING AS AN ORGANIZATIONAL ROUTINE: CONTINUAL ENGAGEMENT IN INNOVATIVE WORK

STINE GRODAL  
Boston University

ANDREW J. NELSON  
University of Oregon

ROSANNE M. SIINO  
Stanford University

The literature on help-giving behavior identifies individual-level factors that affect a help-giver's decision to help another individual. Studying a context in which work was highly interdependent and helping was pervasive, however, we propose that this emphasis on the initial point of consent is incomplete. Instead, we find that workplace help-seeking and help-giving can be intertwined behaviors enacted through an organizational routine. Our research, therefore, shifts the theoretical emphasis from one of exchange and cost to one of joint engagement. More specifically, we move beyond the initial point of consent to recast help-seeking and help-giving as an interdependent process in which both the help-seeker and the help-giver use cognitive and emotional moves to engage others and thereby propel a helping routine forward. In contrast to the existing literature, an organizational routines perspective also reveals that helping need not be limited to dyads, and that the helping routine is shaped by the work context in which help is sought. Finally, we extend these insights to the literatures on routines and coordination and debate how our results might generalize even if helping is not part of an organizational routine.

Workplace helping—or the “willing devotion of time and attention to assist with the work of others” (Hargadon & Bechky, 2006: 489)—is critical to the functioning of many organizations (Bamberger, 2009). An extensive literature on helping addresses the question of why an individual might help another individual (e.g., Flynn, 2003; Gouldner, 1960; Miller, Bersoff, & Harwood, 1990; Perlow & Weeks, 2002; Toegel, Kilduff, & Anand, 2013). In fact, Flynn and Lake (2008) argue that this question is the primary focus of the helping literature. In turn, they contend, the literature portrays “help-giving” as an exceptional behavior in which a person offers a simple “yes” or “no” in response to a question.

Yet, in some organizations—for example, where work is highly interdependent and innovative—helping might be both commonplace and complex

---

We thank Stephen R. Barley for making this research possible. We also thank Beth Bechky, Colin Fisher, Emily Heaphy, Jennifer Howard-Grenville, Siobhan O’Mahony, and Taryn Stanko for their help and invaluable comments.

(Grant & Patil, 2012). As organizations develop novel complex products, workers encounter dependencies and knowledge gaps that they cannot anticipate in advance (Barley & Kunda, 2001; Sosa, Eppinger, & Rowles, 2004). Consequently, they approach one another for help. For example, in their study of consultants in organizations tasked with providing “creative products,” Hargadon and Bechky (2006: 490) found that “the seeking out of help [was] perceived [by employees] as a necessary means for bringing the organization’s knowledge to bear.” In her study of the R&D group at Ditto, Perlow (1999) also found that it was impossible for workers to carry out their work if they were not able to get help from their colleagues. Similarly, Grant and Patil (2012) argue that work environments characterized by a need for collaboration and coordination will feature pervasive helping. In these environments, helping behavior might be widespread and consist of more than a simple exchange.

Contexts in which helping is both widespread and highly engaged refocus our attention on a set of

issues beyond initial consent. Specifically, they raise questions as to how helping encounters unfold over time and how the recurrence of helping may shape its performance. Indeed, repeated behaviors can give rise to organizational routines—that is, “repetitive, recognizable patterns of interdependent actions, carried out by multiple actors” (Feldman & Pentland, 2003: 95; see also Cyert & March, 1963; March & Simon, 1958; Nelson & Winter, 1982; Thompson, 1967). Unfortunately, the helping literature has provided little attention to these questions. Thus, following a review of this literature, Bamberger (2009: 55) concludes that “there is a real need for prospective research in help-seeking in which the complex ‘tango’ between help-seekers and potential providers can be monitored and tracked over time.” In the present study, we address this gap in the literature by asking, “How does helping behavior unfold in organizations doing innovative work?”

We examined a large, cutting-edge information technology organization in which helping behavior was pervasive. We found that help-seeking and help-giving behavior in this organization displayed the predictable, recurrent, yet flexible patterns characteristic of an organizational routine. Forwarding an organizational routines perspective on helping challenges several key assumptions in the existing literature. First, by highlighting help-seeking and help-giving as a routine, our research shifts the emphasis from abbreviated exchanges focused on the cost of providing help to an interdependent process that requires joint cognitive and emotional engagement by help-seeker and help-giver(s) alike. Second, by unpacking the “complex tango” of helping, our work departs from dominant depictions of helping as dyadic by showing how helping can intertwine multiple help-givers through often-extended encounters. Third, our analysis situates helping within an organizational context. Finally, we extend these insights to the literatures on routines and coordination, and debate how our results might generalize even if helping is not part of an organizational routine.

In making these contributions, our research opens up a new perspective on helping as an engaged process. This perspective is essential because, if scholars continue to view helping primarily as costly and rare, they will likely miss the generative role that helping plays in organizations, and, as a result, may fail to understand a crucial part of how organizations function. Moreover, if organizations do not capitalize on the productive

power of helping, they might neglect a forceful vehicle for staying innovative.

## HELP-SEEKING AND HELP-GIVING: INFLUENCES AND INITIATION

Scholars have focused considerable attention on helping behaviors (e.g., Ames, Flynn, & Weber, 2004; Blau, 1963; Flynn, 2003; Gouldner, 1960; Haas & Hansen, 2007; Miller & Luthar, 1989; Organ & Konovsky, 1989; Perlow & Weeks, 2002). The starting point for much of this literature lies in the observation that helping another person is costly: from the help-giver’s perspective, helping requires time and effort and may lower a worker’s productivity as a result (DePaulo & Fisher, 1980; Flynn, 2003). Accordingly, this literature has focused on the reasons why one person may help another person.

Early research answered this question by highlighting reciprocity. Gouldner (1960) posited that people help people who have helped them or who might help them later. Blau (1963) formulated a somewhat different account of reciprocity, in which a help-seeker confers “status” upon a help-giver in exchange for their help. In both cases, the concern is with the initial decision to help. Other scholars have shown how individual perceptions shape this initial decision (Flynn & Brockner, 2003; Flynn, Reagans, Amanatullah, & Ames, 2006; Miller & Bersoff, 1998; Miller et al., 1990). These studies find that help-givers’ perceptions of the beneficiaries of help (McNeely & Meglino, 1994), their interpretations of the value of the help being given (Flynn & Brockner, 2003), and their reflections on the help they themselves have received (Grant & Dutton, 2012) affect their likelihood of agreeing to a helping request.

In related research, scholars also have found that framing affects an individual’s response to a helping request. For example, Miller, Bersoff, and colleagues (Miller et al., 1990; Miller & Bersoff, 1994; Miller & Bersoff, 1998; Miller & Luthar, 1989) compared the perceptions of Americans and Indians in a variety of helping situations, and found that different cultural framings affected helping outcomes. Perlow and Weeks (2002) extended this work and found that Americans were more likely to view helping as an unwanted interruption while Indians viewed helping as a desirable opportunity to build skills. Again, this research focuses on factors that influence the initial decision to help, demon-

ing the roles that individual exchange relationships and framing play in this decision.

A much smaller literature addresses initiation of helping encounters from the perspective of the help-seeker (Bamberger, 2009; Lee, 1997; Nadler, 1991, 1997). For example, Lee (1997, 2002) investigated the role of gender, status, and organizational norms in shaping the likelihood that an individual will seek help. Hofmann, Lei, and Grant (2009) found that a help-seeker's perceptions of the potential help-giver's expertise, accessibility, and trustworthiness shaped the likelihood of help-seeking. Nadler, Ellis, and Bar (2003) also focused upon the help-seeker's perceptions of the potential helper, identifying a role for both perceived knowledge and a work relationship. Finally, Ames et al. (2004) brought help-seeking and help-giving perceptions together, finding that a help-recipient's perceptions of why they were offered help in the past shaped their own propensity to help in the future. By and large, however, the help-seeker's perspective has been nearly absent in the literature (Bamberger, 2009).

As a result, most studies of helping investigate the role that perceptions and framing play in an individual's decision to give help or, sometimes, to seek help. As Flynn and Lake (2008) conclude, this literature places primary emphasis on whether a potential help-giver agrees to or refuses a helping request. Undoubtedly, agreeing to help is a necessary and important step in a helping interaction. By focusing on this outcome only, however, the literature has offered far less attention to the ways in which helping interactions unfold beyond the point of initial consent.

This omission might be particularly problematic in organizations where work is interdependent and innovative (Barley & Kunda, 2001; Grant & Patil, 2012; Sosa et al., 2004). In these environments, helping interactions can unfold over longer periods of time because helping is focused on the development of new knowledge, not the simple sharing of existing knowledge (Grant & Patil, 2012; Hargadon & Bechky, 2006; Perlow, 1999). Moreover, helping can be pervasive in such environments because workers cannot anticipate the many challenges that may arise and because their interdependence decrees that a challenge for one worker will likely affect the work of others (Grant & Patil, 2012).

In fact, in organizations where helping is pervasive, helping may even form an organizational routine. Organizational routine scholars detail how many behaviors can be understood as a series of

related and repeated behaviors that unfold over time. They emphasize, moreover, that this repetition shapes how the behavior is carried out (Cyert & March, 1963; Feldman & Pentland, 2003; March & Simon, 1958; Nelson & Winter, 1982; Thompson, 1967). In turn, if helping can be embedded in an organizational routine, then a focus only on the initial activity rather than on the full routine runs the danger of missing the dynamics that facilitate the enactment of helping behavior within organizations.

## ORGANIZATIONAL ROUTINES AND HELPING AS A PROCESS

Routines are a fundamental characteristic of most organizations (Cyert & March, 1963; March & Simon, 1958; Nelson & Winter, 1982; Thompson, 1967). Feldman (2000: 611) defines routines as "repeated patterns of behavior that are bound by rules and customs and that do not change very much from one iteration to another." Each instance of a routine consists of a series of moves or "unitary act[s] of the routine." In Pentland and Rueter's (1994: 490) study of a software support group, for example, these moves include "greet a customer" and "transfer a customer." Moves can be grouped into clusters forming subroutines, which are an intermediate part of the routine. In Pentland and Rueter's (1994) study, for example, subroutines include "answering the phone" and "authorizing a credit card." Thus, identification of a routine requires researchers to consider how common patterns unfold over time.

As Feldman and Pentland (2003: 94) describe, routines can be conceptualized on two different levels: "The ostensive aspect of a routine embodies what we typically think of as the structure. The performative aspect embodies the specific actions, by specific people, at specific times and places, that bring the routine to life." These two levels interact, such that the performance of the routine serves to create and maintain the ostensive aspect. Likewise, the ostensive aspect enables the continued and varied performance of the routine. (See also Pentland, Haerem, & Hillison, 2010.)

As Parmigiani and Howard-Grenville (2011) note in their review of the routines literature, the key to understanding routines in practice lies not only in identifying the recurrent patterns that form routines, but also in recognizing that "the same routine can generate many different patterns" (Pentland et al., 2010: 935), because "what we actually observe,

empirically, is never the whole routine . . . but only specific instances of it" (Pentland & Rueter, 1994: 490). In this way, routines have what Pentland and Rueter (1994: 490) label a "paradoxical quality," in that organizational members may employ slight variations in the kind and sequence of actions every time the routine is enacted.

Importantly, even the ostensive routine can vary in the extent to which it is formalized or codified. Although much existing work focuses on cases in which the routine is codified (e.g., Howard-Grenville, 2005; Pentland & Rueter, 1994; Pentland et al., 2010; Rerup & Feldman, 2011), Feldman and Pentland (2003: 101) write that the "ostensive aspect may be codified as a standard operating procedure, or it may exist as a taken-for-granted norm." As evidence of the latter, Turner and Rindova (2012: 29) describe how organizational members tacitly understood a waste-collection routine. As expressed by one of their informants, "[I]f you are going down one street [ . . . ] then you automatically know that the truck is going to make a right turn, and one laborer may go straight. *Everybody just knows where each other is at*" (italics added). Similarly, studying hotel housekeepers, Bapuji, Hora, and Saeed (2012) found that changing towels followed a tacitly understood organizational routine.

As these examples indicate, scholars have investigated a wide variety of organizational behaviors through the lens of routines (see also Pentland & Rueter, 1994, on software support activities; Edmondson, Bohmer, & Pisano, 2001, on technology implementation by cardiac surgery teams; Pentland et al., 2010, on invoice processing; and Rerup & Feldman, 2011, on recruiting). As a recurrent and pervasive behavior in some organizations, workplace helping, too, may form an organizational routine—although there is no direct evidence on this point since the routines literature has not studied helping and the helping literature has not focused on contexts in which helping is pervasive.

Thus, understanding helping as a routine requires consideration of help-seeking and help-giving beyond the initial point of consent by the help-giver. Indeed, studies of routines emphasize the unfolding of a behavior over time. For example, Pentland and Rueter (1994) examine not only how software support technicians initially answer a call, but also how they handle the call and resolve the caller's issue. By using this longer timeframe, the authors show how helpline activity follows a routinized script and the different ways technicians enact this routine. Studies of routines, there-

fore, suggest that focusing only on one part of an interaction may miss important dynamics that characterize the interaction as a whole. Thus, while the helping literature has focused on the initial decision to seek or give help, scholars have not explored how helping unfolds over time and the extent to which it may constitute an organizational routine. Our research aims to address this gap.

## METHODS

### Research Approach and Setting

To observe the process through which helping unfolds in an organizational context, we conducted an inductive qualitative study. This method is most appropriate for asking process questions that the existing literature has not fully addressed (Eisenhardt, 1989; Langley, 1999).

We selected a setting in which work was highly innovative and interdependent, because helping behavior can be abundant in such settings (Grant & Patil, 2012). Specifically, we studied hardware and software engineers at AdvanteQ, a leading technology company. At the time of our study, AdvanteQ had approximately 30,000 employees in offices throughout the world. Its products included computer servers, workstations, and software applications, including software development tools and infrastructure software.

AdvanteQ had a strong engineering culture that glorified technical achievements. For example, the corridors of AdvanteQ buildings were adorned with posters of employees who had made significant technical contributions, as noted in this excerpt from our field notes: "On the way down the stairs, I notice one of the several letter-sized posters that says 'Wizards of Technology' featuring James Kapales, the Chief Technology Officer." As we report passages from our field notes, the quotes sometimes contain fairly technical language, reflecting the cutting-edge tasks in which team members engaged.

The work that AdvanteQ engineers did was extremely complex because the company was developing new-to-the-world, large-scale, and technically sophisticated products. The components that AdvanteQ engineers were building had to function together in these final products, leading their work to be highly interdependent. Because the engineers could not anticipate all of the intricacies and relationships in a final product, their work was also highly unpredictable. (Our setting, therefore, bears

similarity to other studies of engineers and technical professionals, including Hargadon & Bechky, 2006; Kellogg, Orlitzki, & Yates, 2006; and Sosa, Browning, & Mihm, 2007.)

For these reasons, the work of AdvanteQ engineers necessitated constant coordination. Often-times, workers would encounter dependencies, newly surfaced issues, and problems that they had not anticipated in advance, which prompted them to seek help from their colleagues. All engineers knew that their knowledge was limited to a very specific part of the overall development process, and they respected that other engineers had knowledge different from their own. AdvanteQ maintained a culture, therefore, in which it was both a widespread and acceptable practice to approach others for help. Thus, AdvanteQ displayed "psychological safety" (Edmondson, 1999) around help seeking.

## Data Collection

Our contacts within AdvanteQ volunteered three temporary project teams as a starting point for our observations. Thus, although our research question was not team specific, we nonetheless used teams as an entry point into the organization. A few months prior to our arrival, AdvanteQ had assembled the teams and had charged each with a separate technical or project task. These tasks—server architecture design, computer network development, and software optimization—were representative of the work done at AdvanteQ. The company's expectation was that the teams themselves would dissolve after six to twelve months, or when they completed their assigned projects.

Each of the three teams was geographically distributed across AdvanteQ sites in California's Silicon Valley, Southern California, Massachusetts, and/or India. We limited our observations to team members in Silicon Valley and Massachusetts, which meant that we began by shadowing 19 AdvanteQ workers. Our field notes include observations beyond this group of 19, however, since these workers interacted with a vast number of AdvanteQ employees beyond their immediate team members.

We collected three types of data: (1) ethnographic observations, (2) semi-structured interviews, and (3) archival material. Our main source of data came from observations. Each member of the research team followed a different AdvanteQ team. Observations in a single day ranged from 1 hour to 5 hours. In total, we conducted 59 site visits that

covered 184 hours of work at AdvanteQ, and resulted in 602 pages of single-spaced typed field notes. We shadowed the engineers by sitting and walking next to them—in the office, at meetings, and in the cafeteria—and observing their activities. We made detailed notes of the engineers' activities, including the commands they typed on their computers; the emails they read, replied to, or ignored; and the conversations that they held in person and via online chat and telephone. Whenever possible, we also asked them questions to clarify relationships, decisions, and activities. Initially, our observations focused on our grand tour question (Spradley, 1979): "How do helping behaviors unfold?" Over time, however, as our inquiry became more focused on specific aspects of helping behavior, the nature of these questions changed to reflect our growing understanding.

Consistency and coordination were particularly important on a project that involved multiple people conducting observations. Our research team members thus typed up and distributed field notes to the entire team the same day we made observations, and we coordinated our efforts through frequent email and in-person conversations. Further, the research team met once per week to share notes, address questions, discuss observation techniques, and review observations.

In addition to our observations, we also conducted 32 brief semi-structured interviews with AdvanteQ employees. These interviews primarily took place when we first entered the organization or when we met a new team member, and at the end of our observational period.

Lastly, we collected documentation and reports about the work done at AdvanteQ, such as organizational charts, team meeting memos, and product documentation. Due to both the complexity of the organizational structure of AdvanteQ and the highly technical work in which the engineers engaged, these documents helped us navigate the daily workflow at AdvanteQ and served as a resource to which we could refer as we had questions on the context.

## Analysis

In our data analysis, we triangulated between the ethnographic observations, interviews, and the archival material. We began by coding the ethnographic observations using grounded theory techniques (see Charmaz, 2006; Glaser & Strauss, 1967; Spradley, 1979), and we used the interviews and

archival material as resources for deepening our thinking and understanding. If we encountered an issue that we did not understand in our field notes, we would circle back to the interviews and documentation in order to clarify the issue. Consistent with an adapted grounded theory approach (see Lofland & Lofland, 1995; Strauss & Corbin, 1998), our analysis cycled between deep analysis of the data, development of theoretical categories, and relating these emerging insights with the existing helping literature. We continued this cyclical data analysis until the process failed to yield any new insights.

We first set out to identify how help-seeking and help-giving behaviors unfolded at AdvanteQ by identifying all the instances in our field notes where members of AdvanteQ sought help. Hargadon and Bechky (2006: 489) define organizational help-seeking as “activities that occur when an individual who either recognizes or is assigned a problematic situation actively seeks the assistance of others.” Helping can be proactive as well as reactive (Grant, Parker, & Collins, 2009), and can address both personal and task-focused needs (Mossholder, Richardson, & Settoon, 2011). In our study, the helping encounters were task-focused and the help-seekers proactively sought assistance in order to continue with or complete their tasks. Following Hargadon and Bechky (2006: 489), we define help-giving as the “willing devotion of time and attention to assist with the work of others,” whether or not the problem was solved.

The concept of helping is closely related to problem solving, but is distinct from it. Problem solving involves an individual or group recognizing an issue and resolving it themselves (e.g., Newell & Simon, 1972; Tucker, Edmondson, & Spear, 2002; Von Hippel, 1994). By contrast, as Lee (1997) argues, helping requires not only that a problem or difficulty exist, but also that the person initially encountering the problem approach someone else, and that at least two parties engage in an interaction to address the issue. Thus, although a problem could be solved by turning to a reference manual or figuring out a workaround on one’s own, helping is interpersonal by nature (Bamberger, 2009). We acknowledge, however, that the two concepts are closely related and sometimes difficult to distinguish in practice.

Ultimately, we identified 189 helping interactions in our data. Colby, Kennedy, and Milanesi (1991: 383) recommend that researchers conducting a microanalysis of interactions capture “at least

over fifty [interactions] and preferably twice as much” (see also Pentland & Rueter, 1994: 493). Therefore, we are confident regarding our sample size. After identifying all of the helping interactions in the data, we proceeded to code each helping interaction individually. The first part of our data analysis examined all the helping interactions in our data, deconstructing them into individual moves and reconstructing them into subroutines and an overall helping routine. The second part of our data analysis focused on those moves that served special roles in cognitive or emotional engagement, as we describe below. Finally, the third part of our data analysis compared and contrasted our three teams and the work context of the interactions in order to identify potential differences.

***Identifying moves, subroutines, and an overall routine.*** The first part of our data analysis proceeded in three phases: (1) open coding of interactions into specific statements and actions that could constitute moves (e.g., building blocks of the routine (see Pentland & Rueter, 1994: 490)); (2) categorization of these statements and actions into moves; and (3) analysis of patterns among the moves to identify subroutines and an overall helping routine.

In Phase 1, after we had identified the 189 helping interactions, our first step was to identify their primary components. Through open coding, we dissected full interactions into very short specific actions and statements that we found to recur throughout the helping interactions. Each segment consisted of a specific statement or action taken by an individual, such as “Pamela dialed Jack’s number” or “Keith said, ‘I do not think that those numbers are reliable.’”

In Phase 2, we then worked to categorize the specific segments from our field notes into the more general activities or roles that they played in an interaction. For example, dialing a phone number was a means of locating a potential help-giver, while stating “those numbers are not reliable” was an instance of judging information. Analyzing multiple helping interactions, we thus built up a library of moves that described the actions that AdvanteQ workers used when seeking or giving help. Ultimately, we identified 28 specific moves used by help-seekers and/or help-givers (see Table 1). Each author reviewed each helping interaction to confirm the determination of moves within it. In cases of discrepancies between coders, we discussed each interaction until we reached a shared understanding of the moves within it. In total, we iden-

**TABLE 1**  
**Moves within the Help-Seeking and Help-Giving Routine**

Move	Move (abbreviation)	Help-Seeker	Help-Giver	Move is Part of Which Subroutine(s)
<i>General moves</i>				
Identify a potential help-giver	Identify	100	0	Establishing mutual attention
Locate a potential help-giver	Locate	124	0	Establishing mutual attention
Consent to help	Consent	0	24	Establishing mutual attention
Explain the issue	Explain	79	0	Orienting towards the issue
Respond to a question	Respond	81	139	Orienting towards the issue
Volunteer information	Info	65	101	Orienting towards the issue
Judge information	Judge	8	26	Striving towards a resolution
React to representational tool	React tool	22	31	Orienting towards the issue
Comment on the process	Comment	10	18	Striving towards a resolution
State/signal agreement with a statement	Agree	45	64	Orienting towards the issue
State/signal disagreement with a statement	Disagree	28	25	Striving towards a resolution
Search information repositories	Search	8	10	Striving towards a resolution
React to a proposed solution	React sol	56	24	Striving towards a resolution
Refusal tactic	Refuse	0	32	Concluding the encounter
Don't know	— know	8	18	Concluding the encounter
Promise/schedule future help	Future	0	22	Concluding the encounter
Terminate interaction	Terminate	100	60	Concluding the encounter
<i>Moves used to create cognitive engagement</i>				
Attract attention	Attract	147 <sup>a</sup>	0	Establishing mutual attention
Ask a process question	Process?	19	9	Establishing mutual attention
Ask a question related to the issue	Issue?	180	151	Orienting towards the issue
Invoke representational tool	Tool	26	54	Striving towards a resolution
Propose a solution	Solution	55	136	Establishing mutual attention
<i>Moves used to create emotional engagement</i>				
Express urgency	Urgency	7	8	Establishing mutual attention
Use humor	Humor	17	21	Orienting towards the issue
Show excitement	Excite	28	25	Striving towards a resolution
Show interest	Interest	21	49	Establishing mutual attention
Express sympathy	Sympa	0	22	Striving towards a resolution
Show appreciation	Apprec	36	4	Establishing mutual attention
Total		1268	1076	Concluding the encounter

<sup>a</sup> Although we assigned all of the “attract attention” moves to the help-seeker, in some helping clusters, the boundary between the help-seeking and help-giving roles was blurred, such that the original help-giver could become a “help-seeker” who approached an additional potential help-giver.

tified 2,344 moves across the 189 helping interactions, for an average of about 12 moves per helping interaction. In addition, during this coding phase, we coded contextual details for each interaction, such as whether the helping request concerned a well-defined or ambiguous issue, whether the interaction took place as part of a planned meeting or a spontaneous encounter, and whether it unfolded face to face or over the telephone or via email.

In Phase 3, with the interactions coded for specific moves, we searched for regularities in the patterns of moves across interactions, examining “when” in an interaction a worker used a particular move and what other moves appeared to accompany this move. Thus, the earlier phase of our analysis consisted of deconstructing each helping interaction into moves, while this phase consisted of “reconstructing” moves into subroutines and an overall routine.

Some moves appeared only at certain points of an interaction. “Locating a help-giver,” for example, happened only as a help-seeker was beginning an interaction with a new help-giver, while use of a “refusal tactic” always happened at the end of an interaction. Other moves appeared to be used throughout an interaction, although they were used for varying purposes at different points of the routine. For example, a help-seeker might “share information” early in an interaction with the effect of orienting a help-giver towards the issue, and might “share information” later in an interaction as part of a response to a suggestion. By examining these constellations of moves and the roles that they appeared to play in helping interactions, we identified four subroutines, each of which constitutes a “building block” for the full helping routine (Pentland & Rueter, 1994: 390). We elaborate on these subroutines in our findings. Furthermore, we identified an overall helping routine at AdvanteQ that assembled these four subroutines.<sup>1</sup> This helping routine intertwined actions by help-givers and help-seekers. Thus, when we refer to the “helping routine,” we are signaling this intertwined help-seeking and help-giving routine.

**Identifying and analyzing cognitive and emotional engagement moves.** In the second part of our data analysis, we identified moves that created

cognitive and emotional engagement. Metiu and Rothbard (2013) define group engagement as “the process by which interdependent individuals engage with each other around work tasks to develop and maintain mutual focus of attention in an interaction episode.” Moreover, they suggest that engagement enables joint striving for solutions. We defined *cognitive engagement moves* as those moves that encouraged the other person(s) to continue devoting thoughtful attention to the helping interaction (see Collins, 2004). Specifically, cognitive engagement moves obliged the other person to continue the conversation. For example, “asking a question” set up the social expectation that the person to whom the question was directed would respond, and not responding would violate norms of conversational exchange (Goffman, 1981; Sacks, 1973/1987). In this way, asking a question not only elicited a response, but also fundamentally engaged the other person in an interaction.

We defined *emotional engagement moves* as those moves that aligned and/or elevated “affective states” across a help-seeker and a help-giver, thus reinforcing a mutual focus of attention (Collins, 2004). For example, an excited “high five” between a help-seeker and a help-giver could serve to reflect and develop shared positive feelings about the helping interaction and a mutual attention upon it.

Table 1 indicates these cognitive and emotional engagement moves. Alongside the identification of cognitive and emotional engagement moves, we also analyzed the role that these moves played in the routine. Thus, we examined where in the routine they appeared. In addition, we examined what challenges they seemed to be associated with and what function they seemed to serve in overcoming these challenges.

**Comparing teams and contexts.** Finally, the third part of our data analysis compared and contrasted the work context of the helping interactions. We define organizational context in accordance with Johns (2006: 386) as “situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables.” Specifically, we investigated three contexts: (1) whether the helping request concerned a well-defined or ambiguous issue; (2) whether the interaction took place as part of a planned meeting or a spontaneous encounter; and (3) whether it unfolded face to face, over the telephone, or via email. We elaborate upon these findings below.

<sup>1</sup> As we discuss later and consistent with the existing literature on routines (see Howard-Grenville, 2005), any given interaction did not necessarily include all four subroutines.

## HELP-SEEKING AND HELP-GIVING AS AN ORGANIZATIONAL ROUTINE

Our analysis indicates that help-seeking and help-giving at AdvanteQ followed an organizational routine. In the sections below, we first describe the ostensive helping routine—that is, the general template that guided the enactment of the routine (see Feldman & Pentland, 2003). We then focus on the performative routine—that is, how the routine was actually enacted. This analysis highlights that helping requires continual cognitive and emotional engagement; that helping can occur not only in dyads, but also in groups; and that the helping routine was shaped by the work context.

### The Ostensive Helping Routine

Through our analysis, we identified an ostensive help-seeking and help-giving routine (which we will call, more simply, the “ostensive helping routine”). This routine was not formalized or made explicit as an organizational procedure, but, rather, existed as a “taken-for-granted norm” (Feldman & Pentland, 2003: 101). It also was enacted slightly differently across work contexts (as we will address in more detail below). All enactments of the helping routine, however, consisted of variations over four

subroutines: (1) establishing mutual attention, (2) orienting towards the issue, (3) striving towards a resolution, and (4) concluding the encounter. Figure 1 shows in a stylized form how three helping encounters from our data followed this four-subroutine pattern. Although we describe these subroutines as discrete, they would sometimes overlap, with two subroutines blending into one another.

In the first subroutine—*establishing mutual attention*—a help-seeker worked to engage a potential help-giver in an interaction. In order to establish mutual attention, the help-seeker and the help-giver needed to shift from what Goffman (1963) calls “situational co-presence” to “focused interaction.” Help-seekers did this by attracting the attention of the help-giver—as in the example below, where Sophia begins by asking a question (“How are you?”) before seeking help with her issue:

Sophia dials a phone number and waits, with the receiver at her ear. She says, “Hi! How are you? We haven’t talked for a while . . . right. Okay. Say, do you have a minute? I’m [Sophia begins to describe her issue].”

As the above excerpt illustrates, the role of the first subroutine, therefore, was to make the help-seeker and the help-giver mutually aware of each

**FIGURE 1**  
**The Four Subroutines of the Help-Seeking and Help-Giving Routine**

In Example 1A, below, Ali walks to Peter’s office to get help. Peter agrees to help. Ali shows Peter a printout of his code. Peter shows Ali a page in a manual that describes the correct syntax. Ali jots down some code sentences on his printout. Peter proposes a solution for how Ali might rewrite the code. Ali says “thanks,” and walks back to his own office.

**Example 1A**

Help-seeker	Identify	Locate	Attract		Tool	Info	Humor		Issue?		Tool	Tool	Apprec	Terminate
Help-giver				Consent				Judge		Issue?		Tool	Solution	
<b>Subroutine</b>	<b>(1) Mutual attention</b>				<b>(2) Orienting</b>				<b>(3) Striving</b>				<b>(4) Conclude</b>	

In Example 1B, below, Anya walks to Michael’s office. Michael agrees to help her with her issue. After Anya has explained her issue, Michael draws a diagram on the whiteboard. Anya extends Michael’s drawing. Michael proposes a solution, but Anya says that she does not think it will work. Instead, she comes up with her own proposal, to which Michael agrees. Anya walks back to her office.

**Example 1B**

Help-seeker	Identify	Locate	Attract		Explain	Judge			React tool		Excite		Disagree	
Help-giver				Consent		Info		Disagree	Tool	Judge	Solution			Cont. next row
<b>Subroutine</b>	<b>(1) Mutual attention</b>				<b>(2) Orienting</b>				<b>(3) Striving</b>					

(1B continued)

Help-seeker	Solution	Agree	Terminate
Help-giver			
<b>Subroutine</b>	<b>(3) Striving (cont.)</b>		<b>(4) Concluding</b>

In Example 1C, below, Kathy calls Ben on the phone. She asks him about the structure of a code-merge. Ben makes a joke about writing incomprehensible code. Kathy shares more information about her issue. Ben adds to her understanding of the issue. Based on what Ben shared, Kathy expresses new understanding of the issue, thanks Ben, says “bye,” and hangs up the phone.

**Example 1C**

Help-seeker	Identify	Locate	Attract	Issue?	Info	Info	Apprec	Terminate
Help-giver				Humor	Info			
<b>Subroutine</b>	<b>(1) Mutual attention</b>			<b>(2) Orienting</b>			<b>(3) Striving</b>	

*Note:* The figures are read from left to right as time progresses in the helping routine. In the example tables above, each rubric signifies a move. At times, the help-seeker or the help-giver engages in several moves in a row without the involvement of the opposite party.

other and to encourage the help-giver to focus his or her attention on the help-seeker.

The goal of the second subroutine—*orienting towards the issue*—was to make the help-giver aware of the issue, so that the help-seeker and the help-giver could shift their focus from each other to form a shared understanding of the task at hand. We see an example of orienting towards the issue in the following excerpt. Chris has called Jordan to seek help. After Chris has established mutual attention with Jordan, he begins to orient towards the issue of how to invoke the program “Aeri”:

CHRIS: “How can I try Aeri?”

JORDAN: “Let me think. You have no test case, right?”

CHRIS: “Should I invoke something?”

JORDAN: “You should do it during the file merge.”

CHRIS: “But I didn’t want to do an update.”

JORDAN: [Chuckling] “Okay, why don’t you do your normal work, and, when you have to update, do it?”

Thus, Chris and Jordan focused their attention on Chris’s inability to try “Aeri.”

In the third subroutine—*striving towards a resolution*—the help-seeker and the help-giver work to resolve the help-seeker’s issue. In this subroutine, both the help-seeker and the help-giver would use various moves aimed at determining the underlying cause of the issue, with both parties asking and responding to questions. We found that, during this process, the role distinctions between the help-seeker and the help-giver would often blur; although the existing literature depicts help-seekers asking questions and help-givers answering them, we found frequent question-asking by help-givers and question-answering by help-seekers. In the following excerpt, for example, we find help-giver Sharma asking a question of Risa, who has asked Sharma for help setting a schedule for running software tests:

SHARMA: “Which is more important: The PM stuff or the customer apps?”

RISA: “The customer apps.”

Later in the striving subroutine, the help-seeker and the help-giver would propose possible resolutions to the issue. In contrast with what the existing literature would suggest, however, we found that, in almost one-third of cases (see Table 1), the proposed solution came from the help-seeker herself. In turn, the help-giver sometimes reacted to this

proposed solution and evaluated its fit with the issue at hand. In the following excerpt, we see that, after Karl has engaged Tony for help with an issue, Karl proposes the solution himself:

TONY: “Are you sure? [Check] in the PWD [power work drive].”

KARL: “Oh . . . wait a minute . . . I think I figured it out.”

TONY: [chuckles] “Does that mean I don’t get a consulting fee?”

KARL: “You guys haven’t made any packages . . .”

TONY: “No, no. CD. Up. Up. Up.”

KARL: “No . . . no, I see what the problem is. The packages aren’t made yet.”

The help-seeker, Karl, finds the solution himself through the course of interacting with Tony. The multiple exchanges that could occur in the striving subroutine meant that it tended to be the longest subroutine.

Once the help-giver and the help-seeker had found a resolution or, in rare instances, given up, the help-seeker and the help-giver would *conclude the encounter*, which marked the last subroutine. Concluding the encounter could consist of a simple move such as saying “bye,” as in the following short helping encounter:

Cynthia stops by and asks Jerry for a directory path. He responds, and she asks for the complete directory. Jerry puts both of his hands on his face and exclaims, “Oh.” Cynthia smiles. Jerry tells Cynthia that he will send her an email. Cynthia thanks him and leaves.

Often, concluding the encounter also involved displays of appreciation, establishment of a sense of joint accomplishment, and/or broadcasting the solution beyond the workers who were involved in the helping interaction. In turn, these actions served to set up the next helping encounter. For example, in the interaction below, Sanjay has approached Jackson for help regarding Sanjay’s inability to control access to his machine. The interaction does not stop, however, with the resolution of Sanjay’s issue. Instead, Sanjay and Jackson attempted to determine the boundary conditions for this problem and the sorts of databases that might be affected so that they could point to solutions—or obviate the issue altogether—across a wider range of contexts than Sanjay’s immediate situation:

Jackson and Sanjay began to talk again about the problem while drawing on the whiteboard. Jackson

wrote several numbers on the board, which represented version numbers of the software tools and the design databases that Jackson and Sanjay believed were involved in the problem . . . After they had resolved not only Sanjay's specific problem, but also what they saw as a larger problem in the way that the software tools and databases were organized, Jackson followed up on the conversation by contacting the responsible AdvanteQ employees in [the East Coast office].

Thus, Jackson and Sanjay's interaction not only allowed Sanjay to proceed with his work, but also led to outcomes that might facilitate helping interactions in the future. First, Jackson and Sanjay developed a common understanding or common ground (Bechky, 2003b; Carlile, 2002), which might make the seeking and resolution of help between them easier in the future. Second, after they finished resolving the specific issue, they shared their insights with other AdvanteQ employees. In so doing, they anticipated that other workers might experience similar issues, and therefore made their solution widely available so that other workers might not need to seek help in the future.

The ostensive helping routine just described outlines the general template of the helping process; by contrast, the performative helping routine reflects the ways in which AdvanteQ employees enacted the routine by recombining various moves depending on the context. Our findings of the performative help-seeking and help-giving routine also depart from expectations set by the existing helping literature in three ways: (1) in our data, help-seeking and help-giving do not amount to a simple "yes" or "no" answer from the help-giver, but, rather, constitute a process propelled by continual cognitive and emotional engagement; (2) in our data, help-seeking and help-giving are not always dyadic, but, rather, can be a group phenomenon; and (3) in our data, help-seeking and help-giving were not decontextualized activities; instead, we found that the nature of the helping request, the pursuit of help during a meeting, and the use of different communication technologies all affected the helping routine. We elaborate on these points in the sections below, which together detail the performative helping routine.

### **Help-Seeking and Help-Giving as a Process of Continual Cognitive and Emotional Engagement**

Although the helping literature has focused on the initial point of consent to help as the moment

of interest, our analysis of helping as an organizational routine revealed that creating and maintaining continual engagement was an essential part of the help-seeking and help-giving routine at AdvanteQ. At AdvanteQ, employees used specific moves within the help-seeking and help-giving routine to create continual cognitive and emotional engagement.

As detailed in Table 2, we identified five cognitive engagement moves: (1) attract attention, (2) ask a process question, (3) ask a question related to the issue, (4) invoke a representational tool, and (5) propose a solution. Each cognitive engagement move served to create a social expectation that the other person(s) in the interaction would respond. For example, asking process and issue questions created cognitive engagement because not answering a question would violate norms of conversational exchange (see Collins, 2004; Goffman, 1981; Sacks, 1973/1987). In the following interaction, for instance, the turn-taking by Oliver and Jay is marked by questions, which prompts the other person to answer:

OLIVER: "So, can you tell me what you did?"

JAY: "We have a script. We write filemerge. The file resulting from this makes a duplicate line. We do filemerge a lot, and it's happened only once. I just wanted to know, is this a known problem?"

OLIVER: "I need to see the code. Can you send it?"

Representational tools—that is, physical or virtual objects used to denote aspects of an issue—played a special role in creating cognitive engagement (see Carlile, 2002). Whereas attracting attention, asking questions, and proposing solutions created engagement by compelling help-seekers and help-givers to respond verbally, representational tools created cognitive engagement by setting up the social expectation that participants would respond visually by directing their attention to the tool. Thus, representational tools provided a continuous orienting device around which the help-seeker and the help-giver(s) could be mutually co-present. Furthermore, because people might differ in their understanding of a particular issue, representational tools allowed the help-seeker and help-giver to develop a common understanding (see Cronin & Weingart, 2007). In the following example, Jack is trying to help Sameer with his issue while using the computer monitor as a point of joint reference:

JACK: "If we change the config[uration] spec[ification] to this . . ."

**TABLE 2**  
**Examples of Cognitive and Emotional Moves**

Move	Example from the Data
<i>Moves used to create cognitive engagement</i>	
Attract attention	Jason stops by Mark's office and says, "Hi, Mark. So, I'm trying to run [a program]. . ." Elise walks over to Mike in the hallway and says, "I keep getting errors when I run RIS."
Ask a process question	After stating his issue, Bohai says to Peter: "Should we go to my office?" After struggling with understanding the issue, Nalin requests: "Can you send me the screen shot?"
Ask a question related to the issue	Ying asks: "Have you tried invoking the sub-matrix?" Colin replies: "Where [in the code] is that?" Jacob: "Is that the directory?"
Invoke a representational tool	Matt starts to draw on the whiteboard with a gray pen while he says: "This is what it looks like." While Matt is drawing the diagram, he is explaining what the different units are going to do. When Matt is finished, Jan starts to draw circles around Matt's with a red pen. Matt draws more while he speaks. Jan says: "You would have to group them together." (While he says this, he uses both of his hands to signify wrapping the two groups, and points towards the boxes drawn on the board.) Rolling his chair closer to the whiteboard, Pallab says, "That's why I recommend putting IMG on this box. [He points to one of the boxes he has drawn on the whiteboard]. Physically remove 2 CPUs." He explains other changes he'd make as well, while pointing at the whiteboard.
Propose a solution	Keith: "Is the problem that you changed all the switches but forgot to change one?" Hannah: "We could use the import path, and it could work."
<i>Moves used to create emotional engagement</i>	
Express urgency	Hsien rushed into Jack's office: "Is there anything that the scripts look at then? I have to work on it now. All the stuff-files are there."
Use humor	[After Ben shares an issue with Sarah and asks for help.] Sarah: "Oh, sh**. Okay, let's get this fixed for you quick!" Mitchell starts to clean the whiteboard and says: "Normally, I do not like to use whiteboards, because then I have to write it down twice [from the whiteboard into the computer]. Or you can get a camera and take pictures and then download it to your computer . . ." Jack says (laughing): "Yes, then it would be like this manual." Jack shows the "manual," which is just a pile of papers held together with a paperclip, to Mitchell. He points to a picture of a whiteboard with a lot of diagrams on it that have been scanned into the manual. The writing and drawing are very small and the quality is very bad. It is nearly impossible to read and understand the diagrams. We all laugh.
Show excitement	Sara (sarcastically): "So then, we'll have it all done today?" [She laughs.] Peter says, "You have to run Blaze." He points to the whiteboard and says, "Blaze, Blaze, Blaze everywhere. So Charles has it on his desktop and can control it from there!" Tina exclaims, "This is good for experiments!" Peter says, "Yes!" and sits back down. Mike asks a question to which Peter responds, "Yes, yes, yes!" Mick exclaims, "I found a way to block the others!"
Show interest	Pamela: "If there is a new file added to some directory, can I just get these new files? . . . Okay . . . Sure, okay . . . If you could tell us the features. . . if you could just give us a pointer . . . Sure, okay."
Express sympathy	Mark says, "Yeah," vigorously nodding. He looks towards Sam, who continues her explanation. Tom has approached Peter for help: "Hi Peter. I am trying to test [the code]. I ran into the same problems as when I was testing [another set of code]." Peter [staring at the code says in a depressed tone]: "I see the problem."
Show appreciation	Alex: "I'm sorry it's not working." [Towards the end of a helping routine in which Praveen had sought help from her colleague over the phone.] Praveen: "Great . . . Okay . . . Thanks a lot. So, it's all clear now. . . Great. Thanks." [After Pauline has helped Tom find a reference.] Tom: "Great. Thanks . . . Thanks so much."

SAMEER: "Yes [pause]. These are the two important ones."

They continued talking, both questioning and answering, and using many gestures . . . Jack had moved even closer to Sameer since they were both looking and pointing at the right side monitor to lines of commands on the screen.

SAMEER: "It must be some sync problem, right?"

JACK: "Is that the directory?"

SAMEER: "Yes. Let's do the same thing."

We also identified six moves (also detailed in Table 2) that created emotional engagement by aligning and/or elevating affective states across the help-seeker and help-giver(s), reinforcing a mutual focus of attention (Collins, 2004): (1) express urgency, (2) use humor, (3) show excitement, (4) show interest, (5) express sympathy, and (6) show appreciation. Sometimes, as with statements of sympathy or interest, these emotional moves demonstrated that each party was emotionally invested, or that they understood one another's emotional state. In the quote below, Pamela's colleague, John, has encountered a major bug in his code and calls her for help. She sympathizes with him, which creates an atmosphere in which John feels comfortable sharing his lengthy issue with her.

The phone rang. Pamela held the handset with her left hand, clicking with the computer mouse in her right hand. Pamela: "Hi John. What's up? . . . sh\*\* . . . Oh, don't worry . . . tell me the question again? . . ."

At other times, as with showing excitement, using humor, and showing appreciation, emotional moves served to build positive affect between the participants. In the example below, Raj is helping Matt and Qiang with an issue. The atmosphere during the helping interaction has been tense because Raj is busy and frustrated with programming in ASK. To ease tensions, Raj makes a joke about how the program is taking on a life of its own. This use of humor elevates the mood and Matt responds with a joke about Raj not doing regular programming work:

MATT: "Are you working on JSP?"

RAJ: "I'm still getting syntax errors. It's very tedious to do ASK programming. Most errors are syntax errors you don't compile; it compiles on the fly." [In other words, the program causes the error on its own.] [Matt and Qiang laugh.]

RAJ: "I am looking for a stand-alone compiler."

MATT: "Or a syntax checker."

RAJ: "I'm missing a semicolon or the colon is a semicolon."

QIANG: "Basically, it's a script."

RAJ: "No. It's a C program."

Matt [pointing to Raj and saying while smiling]: "Raj doesn't write scripts!" [They laugh.]

As Table 1 shows, we found that both help-seekers and help-givers used each of these moves in various subroutines. Figure 2 highlights examples of how cognitive and emotional engagement moves were used throughout a helping interaction. Interestingly, among the engagement moves, we found relatively few instances of urgency and appreciation (as shown in Table 1). We interpret these findings as further suggesting that helping unfolded as an organizational routine. For example, project timelines at AdvanteQ created intense time pressure, such that most helping requests were urgent. Accordingly, in an environment in which helping is part of an organizational routine, the overt expression of such urgency may be unnecessary as urgency is implicitly understood in the mere act of seeking help. Similarly, we observed displays of appreciation in only a minority of helping routines, even when the help-seeker and the help-giver jointly managed to reach a resolution. Again, we interpret this finding as further evidence of the routine nature of helping: helping was considered a normal, everyday activity that did not necessarily warrant special acknowledgement.

**Propelling the routine forward.** The most important aspect of these cognitive and emotional moves, however, lay beyond their mere presence throughout the routine: these moves also served a critical role by propelling the routine forward. Specifically, we found that, even as the ostensive routine was pervasive at AdvanteQ, it could encounter several barriers that made it difficult to execute. In turn, engagement moves kept the help-seeker and help-giver participating in the routine and propelled the routine past these barriers in five distinctive ways: (1) joint mobilization, (2) continued engagement, (3) overcoming impasses, (4) accelerating engagement, and (5) preparing for future helping encounters. Figure 3 illustrates which cognitive and emotional engagement moves served these different roles, along with the relationships between these roles and the four subroutines.

The first way in which cognitive and emotional engagement moves propelled the routine forward

**FIGURE 2**

### Using Cognitive and Emotional Moves to Achieve Continual Engagement during the Help-Seeking and Help-Giving Routine

In Example 2A, below, Tim walks into Jim's office because he does not understand the performance of the script that he is trying to write. After an extended series of questions and answers, Tim and Jim reach a joint resolution to the issue.

**Example 2A**

<b>Help-seeker</b>	Locate	Attract	Urgency		Explain	Process?		Explain		Respond	Issue?		Info		<i>Cont. next row</i>
<b>Help-giver</b>				Consent			Respond		Issue?			Respond		Issue?	
<b>Subroutine</b>	<i>(1) Mutual attention</i>				<i>(2) Orienting</i>				<i>(3) Striving</i>						
<b>Help-seeker</b>	Info		Humor	Tool	Solution		Respond		Respond		Tool		Excite		<i>Cont. next row</i>
<b>Help-giver</b>		Humor	Tool	Solution		Issue?		Prob?		Solution	Tool				
<b>Subroutine</b>	<i>(3) Striving (cont.)</i>														
<b>Help-seeker</b>	Tool	Excite			React sol.			React tool			Apprec	Terminate			
<b>Help-giver</b>			Excite	Solution		Search	Tool		Tool	Solution					
<b>Subroutine</b>	<i>(3) Striving (cont.)</i>												<i>(4) Concluding</i>		

In Example 2B, below, Erol walks down to James's office because he is having problems with the network. James helps Erol resolve the problem, then Erol walks back to his own office.

**Example 2B**

<b>Help-seeker</b>	Identify	Locate	Attract			Issue?		Issue?			Humor		React tool		React sol.	<i>Cont. next row</i>
<b>Help-giver</b>				Info	Solution		-know		Respond	Humor	Tool		Solution			
<b>Subroutine</b>	<i>(1) Mutual attention</i>				<i>(2) Orienting</i>				<i>(3) Striving</i>							
<b>Help-seeker</b>		React sol.		Judge		React Sol			Apprec							
<b>Help-giver</b>	Excite		Solution	Solution			Apprec		Terminate							
<b>Subroutine</b>	<i>(3) Striving</i>								<i>(4) Concluding</i>							

In Example 2C, below, Janna has been looking for Shiva and finds him in his office. Janna and Shiva work on the whiteboard and look up code in a database. After Janna and Shiva have gone back and forth for a while, Janna is excited because she believes that she has resolved the issue. She walks back to her office.

**Example 2C**

<b>Help-seeker</b>	Identify	Locate	Attract		Prob?	Info	Tool		Search		Search		Issue?		Solution	<i>Cont. next row</i>
<b>Help-giver</b>				Consent			Tool	Solution		Solution		Excite		Respond		
<b>Subroutine</b>	<i>(1) Mutual attention</i>				<i>(2) Orienting</i>				<i>(3) Striving</i>							
<b>Help-seeker</b>			Respond		Prob?				Respond		Excite		Info	Apprec		
<b>Help-giver</b>	Tool	Issue?		Solution		Respond	Tool	Issue?		Solution	Process?				Terminate	
<b>Subroutine</b>	<i>(3) Striving</i>												<i>(4) Concluding</i>			

= moves that create cognitive engagement; = moves that create emotional engagement

was through joint mobilization. Joint mobilization addressed the challenge of getting the helping routine going in the first place, which happened particularly in the “establishing mutual attention” and, to a lesser extent, the “orientating towards the issue” subroutines. We found that the cognitive moves of attracting attention, asking process questions, asking issue questions, and invoking representational tools helped to overcome this challenge by encouraging responses and, therefore, engagement. We also found that the emotional moves of expressing urgency, expressing sympathy, using humor, and showing excitement facilitated such “joint mobilization,” aiding the help-seeker and help-giver in making the transition from non-engagement to initial engagement and opening a space for increased cognitive engagement. In the following excerpt, for example, Kris and Elliott use attracting attention, expressions of urgency, asking

questions, and invoking a representation tool to jointly mobilize:

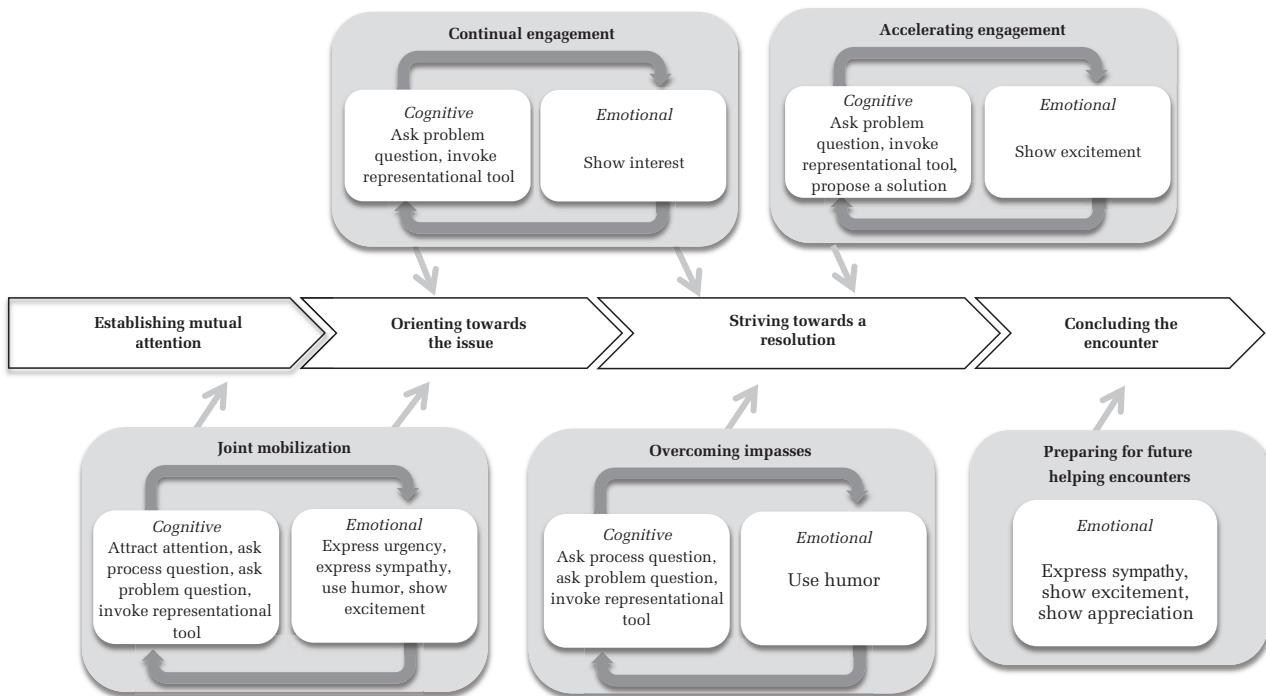
Someone from the hall [Elliott] passes and says, “Later.” Kris abruptly spins around in his chair and says, “The packages are there, but it’s telling me there aren’t any.”

Elliott turns and says, “Are you sure they’re there? Show me where you are.” He peers over Kris’ shoulder. Kris points to his screen.

In this interaction, cognitive and emotional engagement helped to get the routine going in the first place.

Second, cognitive and emotional moves propelled the routine forward by maintaining continual engagement. Continual engagement addressed the challenge of continuing forward progress on the routine, even in the face of distractions or slowing momentum. We found that continual engagement

**FIGURE 3**  
**Propelling the Helping Routine through Cognitive and Emotional Engagement**



was especially associated with the subroutines of “orienting towards the issue” and “striving towards a resolution.” The most important emotional move used in this subroutine was showing interest. Interest is “sometimes used interchangeably with curiosity, intrigue, excitement, or wonder,” and is one of the most common positive emotions (Fredrickson, 1998: 305). Showing interest signaled continued engagement and emotional investment of the encouraging party, and it motivated the other party to go on. When used by the more knowledgeable party, it also could create an emotionally safe environment in which the other party felt it was appropriate to ask the next question. The following example, in which Sarah is helping Mark customize an application, illustrates how showing interest could propel the helping routine:

SARAH: “The two files are really different. This should have been more like a data type.”

MARK: “I want to minimize this [refers to a portion of the application sketched on a notepad] . . .”

SARAH: “Yeah.”

MARK: “. . . to put in my own data managers.”

SARAH: “Okay. Go on.”

MARK: “I wonder if I can do this . . .”

Sarah’s statements of “yeah,” “okay,” and “go on” signaled to Mark that Sarah was interested in what he was saying and encouraged him to continue the engagement.

Alongside emotional engagement by showing interest, we also found that the cognitive engagement moves of “ask an issue question” and “invoke a representational tool” served to propel the routine through continued engagement. In contrast to the role played by representational tools in achieving joint mobilization, in which their introduction and novelty “jump started” engagement, the role of a representational tool in continued engagement was to serve as a constant backdrop of joint attention that created continuity, even during moments of brief silence. In the excerpt immediately above, for instance, the representational tool of the notepad provides continuity during the interaction.

Third, cognitive and emotional engagement moves propelled the routine forward by overcoming impasses. At times, the help-seeker and help-giver(s) would encounter an apparent blockage that threatened to derail the routine’s progress. We found that the cognitive moves of asking process

questions, asking issue questions, and invoking representational tools served the function of renewing cognitive momentum. Moreover, the emotional engagement move of using humor was especially powerful in overcoming such impasses; when a help-seeker or a help-giver told a joke or made a humorous comment that made the other party laugh, it ignited new emotional energy into an otherwise stalled routine. Such a revitalized energy motivated the participants to reengage with the issue and provided an impetus for renewed cognitive engagement. In the excerpt below, for example, a humorous comment from Mitchell helps to reignite Paul's participation in the helping routine:

[Paul is helping Tammy and Mitchell to configure a database to test a program. At this point in the routine, the conversation has hit a lull.]

Tammy says, "You look really tired."

Paul says, with some frustration, "Because I have already explained this so many times to so many people."

Mitchell says, smiling, "But your performance is flawless."

They laugh, and Paul continues.

Fourth, we found that emotional and cognitive engagement functioned to accelerate engagement in the helping interaction, particularly during the "striving towards a resolution" subroutine. To accelerate engagement, help-seekers and help-givers alike used expressions of excitement, which added a spurt of energy into a conversation that was already ongoing. Furthermore, the cognitive moves of asking issue questions, invoking representational tools, and proposing solutions could help by adding to the positive momentum. In the following excerpt, Matt, Sebastian, and Janna are so engaged in the routine that they excitedly finish one another's sentences as they interact around the representational tool of the whiteboard.

MATT: "Yes! It [the program control] goes from parent 3 to parent 4."

SEBASTIAN [writing on the whiteboard]: "Yes, I do not see just . . ."

MATT [finishing Sebastian's sentence]: ". . . why it is happening."

SEBASTIAN: "Right. The only thing that merges is . . . that goes over here is the updated . . ."

Matt [pointing to the whiteboard]: ". . . and then you put it on the parent branch."

JANNA: ". . . branch!" [Janna says "branch" at the same time as Matt and points to the whiteboard, too.]

SEBASTIAN: "This is a check-in/check-out!"

In these interactions, engagement moves accelerated the interaction's pace, resulting in participants becoming consumed by the issue such that both their verbal and non-verbal behaviors were in synch.

Finally, during the "concluding the encounter" subroutine, emotional engagement was used to prepare for future helping interactions. In particular, the help-seeker and help-giver(s) used expressions of excitement to create a joint sense of achievement. In one example, Carlos had sought help from Marcus. After jointly working on the issue for a while, they reached a solution, and Marcus reacted by saying, "Aaaaaaa, Wow!" and then he put two thumbs up in the air. Such expressions of excitement during the final phase of the helping routine are noticeable because they call into question the existing literature's emphasis on the cost of helping: we observed both help-seekers and help-givers (as in the example above) express excitement once they had come up with a solution, showing how helping can lead to a joint emotional experience. In fact, our findings suggest that such feelings of shared accomplishment may facilitate the next enactment of a helping routine, as participants left the helping routine feeling emotionally elevated (see Collins, 2004; Lawler, 2001). In turn, showing appreciation—such as an animated "thank you so much!"—could further create emotional attachment and elevation.

Even where a helping outcome was not successful in resolving the help-seeker's issue, the emotional engagement move of expressing sympathy could prepare for a future encounter. For example, Kasper at one point refused to help by expressing sympathy: "I'm really not in development . . . I'm not in the tuning-of-the-app side of things. It's not even on my direct team. Sorry." Thus, the emotional engagement move of expressing sympathy could be used to *disengage* from the helping routine as well. In so doing, however, it may have also functioned to permit a future enactment of the helping routine by establishing an engagement history between help-seeker and help-giver (see Collins, 2004; Lawler, 2001).

**Disrupting the helping routine.** We also observed instances where engagement in the routine was disrupted. In fact, these rare disruptions serve to highlight the routine's otherwise taken-for-

granted structure (Garfinkel, 1967), and the importance of both cognitive and emotional engagement in propelling the routine forward. One way that engagement in the helping routine was disrupted was through the breaking of cognitive engagement. As we describe above, questions and answers often functioned to keep mutual awareness between the help-seeker and help-giver. At times, however, potential help-givers would break engagement by not responding to a question. In the example below, Samina is trying to get help in a team meeting from co-worker Matt, but their manager Lakshmi keeps interrupting the helping routine and Samina leaves the meeting without having received help:

SAMINA: "Matt, there's some things I'll need help with . . . the MPI matrix and load balance . . . and the others I think I can do . . ."

LAKSHMI [interrupting]: "Here's what I suggest: do this as though you are not automating. I want all this in place. I want scripts in place. Learn STT on the side—it should not impact the test case. I want all tests in place by March . . . that is four weeks . . . So we have to look into it . . . how we can achieve it."

SAMINA: "Well, if LQF is going . . ."

LAKSHMI: "I can pretty much say that LQF will not be 30 days. What do you say, Matt?"

MATT: "With regards to . . ."

LAKSHMI [interrupting]: "Getting all the tests in place."

MATT: "We'll get the same amount of coverage if the tests are run manually."

SAMINA: "The goal has always been to run the tests manually. I'll see if I can get done by LQF. That's a nice goal. Once I see the executables . . ."

LAKSHMI [interrupting]: "You won't see executables until March or April. You have to build the tests now . . ."

The example above shows Samina trying to use the moves of the help-seeking routine, which normally work to engage the help-giver in the interaction. Lakshmi does not respond, however, with the usual help-giving countermoves. Instead, she ignores Samina's attempt to engage her by disrupting the flow of the conversation, and she proceeds to create a strict timeline for the work that Samina has to execute.

We also observed breaks in emotional engagement, which disrupted the routine's flow. Emotional expressions generally functioned to engage

fellow participants in the helping interaction; however, expressions of anger and indifference functioned in the opposite way—creating distance and disengagement from the interaction. In the interaction below, for example, Karl is in a meeting and other people are trying to engage him, but his expression of anger makes Steve respond angrily as well. The expression of these negative emotions creates disengagement, which disrupts the flow of the routine. At one point, the conversation stops as the other participants are uncertain how to react:

At this point, Karl forcefully makes some factual assertion about the problem. Throughout this conversation about the network problems, Karl has been stating his points with a very adamant and sharp tone. Michael and Jack act less certain and self-assured, and Steve has remained relaxed but serious. But, in response to Karl's assertion, Steve turns around halfway in his chair, cranes his neck back towards Karl, and firmly says, "You're wrong!" Thereafter, Karl sits with his head bowed as he fiddles with something he holds in his hands. The conversation in the room stops and everyone is just looking at Karl.

Karl and Steve's expressions of anger serve to disrupt the routine. Although not knowing how to help was an acceptable response at AdvanteQ (see Table 1), Karl's emotional disengagement abruptly stopped the routine in a way that not only upset the other participants, but also highlighted the taken-for-granted nature of the helping routine at AdvanteQ.

Overall, our investigation of how cognitive and emotional engagement were enacted during the helping routine suggests that cognitive and emotional engagement are intertwined. Thus, although emotional engagement served primarily to deepen interpersonal engagement, such elevated affective alignment facilitated cognitive engagement around the task at hand. Together, cognitive and emotional engagement served to propel the routine through potential impasses.

### **Helping as a Group Phenomenon: Engagement and the Formation of Helping Clusters**

Building on our observations of engagement, we also found that engagement could lead to and be evident in the formation of helping clusters. Although the helping literature primarily portrays helping as a dyadic encounter between two people, we found that workplace helping often involved more than two people. Indeed, the many possible

recombinations of moves that constituted the helping routine made it flexible enough so that it need not be limited to one help-seeker and one help-giver only, but could accommodate multiple people participating in the interaction.

If the original help-seeker and help-giver were not able to resolve the issue on their own, it was not unusual for them to engage a new person, such that an expanding group—a helping cluster—would attempt to aid the help-seeker in resolving the issue. The existence of clusters departs from current research on helping, which has focused on one help-seeker and one help-giver only. By contrast, we observed clusters ranging in size from three to five. Importantly, even though it was possible for the original help-giver to leave the encounter when it became clear that the original help-seeker and help-giver could not resolve the issue on their own, the original help-giver was often so engaged in the issue that s/he stayed with the help-seeker while engaging the third, fourth, or fifth person.

Although it was possible for new help-givers to become involved at any point in time during the helping routine, we most frequently observed new help-givers become involved during the “striving towards a resolution” subroutine because it was during this part of the routine that the help-seeker and help-giver(s) realized that they could not address the issue on their own. In one example, Aaron has dropped by Blake’s office because he does not understand the functioning of one of his programs. After they have talked for a while, they decide to also ask another colleague, Axel, for help. Just prior to the excerpt below, they’ve left a message on Axel’s voicemail as they continue to work on the issue.

BLAKE: “Once you add input buffers and once you’ve used the buffer, do you drain it?”

AARON: “Without the output buffer, it’s a simple model.”

BLAKE: “Jerome’s looked at it enough that you don’t have any stupid bugs.”

Blake asks whether there’s “enough communication with the QUR team.”

The phone rings. Blake looks over and says, “There’s Axel,” and presses a button. “So, we’re just talking through this issue,” Blake says on the phone. “The basic concern is why is it 70% and not higher, given that the analytical model is 63%?”

Blake continues to describe the problem and ends by saying, “Does that make sense?” Axel replies that the problem might be the “unreality of the analytical model.” Blake asks about Aaron’s intuitive sense of the problem.

AARON: “When we decided to do output buffering, Jerome did a study about what was the improvement?”

BLAKE: “Right.”

AARON: “Why don’t we call him?”

BLAKE: “So I’ll conference him in, OK?”

Blake dials a number.

“Jerome Brown,” a high, male, American voice responds.

“Hi, Jerome,” says Blake. “Aaron is here and I’ll hit conference and Axel will be here.”

Axel gets on the line. Blake explains their confusion and how “output buffering had a significant effect on system performance.” Jerome responds that “the latest result that I got a week ago might be useful.” [Jerome goes on to explain his results, and, after Blake, Aaron, Axel, and Jerome have discussed the problem for a while, they come up with a possible solution.]

The helping encounter above evolved from a dyadic interaction between Aaron and Blake to become a group of four as Axel and Jerome also joined in to resolve the issue. When a new person was engaged in the helping encounter, the initial steps of the routine were reenacted, beginning with locating a potential help-giver, establishing mutual attention, and orienting towards the issue. In many instances, the creation of clusters led to a blurring of roles between the help-seeker and the help-giver as some of the original help-givers got so engaged that they became the help-seekers who expanded the cluster. For example, even though Aaron was the one who had the original issue, Blake initiated the contact with Jerome. In some cases, in fact, we even found that the help-giver would be so engaged in resolving the issue that they would approach a new help-giver even if the original help-seeker was not present.

Figure 4 provides an overview of clusters in our data and of how they draw upon the overall helping routine. While the first row matches other helping encounters, the second and third rows illustrate the introduction of additional help-givers and the accompanying repetition of the first two subroutines.

**FIGURE 4**  
**An Example of a Cluster of Helping during the Help-Seeking and Help-Giving Routine**

In Example 4A, below, David (help-seeker) has come into Greg's office to ask a question. Greg (help-giver 1) cannot find a solution and suggests that they call up Jonathan (help-giver 2) on the phone. However, when they get Jonathan on the phone, he suggests that they also include Hal (help-giver 3) on the call. They call Hal and, through their combined efforts, reach agreement on a solution. Jonathan and Hal hang up, and David leaves Greg's office.

Help-seeker	Locate	Attract	Issue?	Info	Judge	Info			Info	Judge	Judge	Judge		Cont. next row
Help-giver 1			Interest	Info		Tool	Solution		Info	Judge	Judge	Judge		
Subroutine	(1) Mutual attention			(2) Orienting			(3) Striving							
Help-seeker	Solution			Respond		Locate	Attract	Explain	Process ?		Issue?		Info	
Help-giver 1		React sol.	Process?							Respond		Judge		
				Help-giver 2 (phone)										
Subroutine	(3) Striving (cont.)			(1) Mutual attention			(2) Orienting							
Help-seeker	Process?													Cont. next row
Help-giver 1			Locate (help-giver 3)	Attract	Explain	Issue?			Info	Issue?		Issue?		
Help-giver 2 (phone)							Explain							
Help-giver 3 (phone)							Respond		Info			Humor		
Subroutine	(2) Orienting (cont.)			(1) Mutual attention			(2) Orienting			(3) Striving				
Help-seeker		Info		Issue?			Issue?			Apprec				
Help-giver 1	Excite		Disagree		Issue?									Terminate
Help-giver 2 (phone)				Interest				Info			Terminate			
Help-giver 3 (phone)		Solution			Interest			Future				Terminate		
Subroutine	(3) Striving (cont.)									(4) Concluding				

= moves that create cognitive engagement; = moves that create emotional engagement

As the example above illustrates, the existence of clusters highlights the deep engagement of both help-seekers and help-givers in the helping process. Further, the presence of clusters emphasizes a need to augment studies of helping to include the possibility that helping interactions are not always dyadic, but, rather, can occur in groups, thereby changing the social dynamic of the interaction.

### Contextual Factors Shaping the Help-Seeking and Help-Giving Routine

In contrast to the existing helping literature, which has offered little attention to context, we found that the work context in which helping took place shaped the unfolding of the helping routine. In particular, we compared helping interactions across three types of contexts: (1) in which the task was well defined versus ambiguous, (2) in which helping took place in meetings versus impromptu encounters, and (3) in which the helping routine unfolded through face-to-face versus technologically mediated interactions. As we detail below, we found that all of these contextual factors shaped the helping routine.

**Well-defined versus ambiguous tasks.** We found that an important dimension of the work context for the help-seeking and help-giving routine was the nature of the task at hand. In particu-

lar, the unfolding of the helping routine varied depending on whether the task was well defined or ambiguous. Well-defined tasks bear more similarity to the kinds of tasks that have been studied in the existing literature (Bamberger, 2009; Flynn & Lake, 2008). Well-defined tasks enabled help seekers to frame their questions narrowly and to seek specific information. In turn, that approach made it easier for a potential help-giver to provide either a “yes” or “no” answer, or to provide help through a short factual statement. In the following excerpt from our field notes, for example, Jackson receives a call from Hareem, who works on a team that produces a critical component for a computer that Jackson’s group is building. Hareem is unsure how to copy and then share a database that Jackson manages.

The phone rings again and Jackson answers. It is Hareem. Hareem asks how his group can gain access to the database used by Jackson’s group to store design information. He asks a number of questions that Jackson answers quickly.

In this encounter, Hareem knew that he needed access to the database and that Jackson would be able to help him gain access by answering some straightforward questions.

We observed that, when the task was well-defined, the enactment of the helping routine was often very brief and lasted no more than two min-

utes. This brevity meant that the subroutines “orienting towards the issue” and “striving towards a resolution” were cut short, as the help-giver and help-seeker could quickly orient towards the well-defined issue, and, once that happened, the help-giver often had the desired information readily at hand. Indeed, such encounters most closely match the “yes”/“no” approach to helping that dominates the literature (see Flynn & Lake, 2008).

By contrast, we found that most of the helping encounters that we observed concerned an ambiguous issue. Ambiguous issues were much harder to resolve because, although the help-seeker knew that something was not working or would not work, she did not understand when, where, why, or under which circumstances the issue occurred, nor did she have a sense of the path to resolving the issue. With ambiguous tasks, therefore, workers confronted the challenge of “radical uncertainty” (Tsoukas, 1996), in that they “didn’t know what they didn’t know.” In the following excerpt, Alicia has sought help from Brian on a problem that she has encountered in her code: the performance of her model is not behaving as expected. Alicia has drawn a diagram of her software structure on Brian’s whiteboard and they are both looking at it, attempting to figure out why Alicia’s software model of the server’s performance is yielding a 74% figure when the specification says that the figure should be 81%:

Brian says, “So when you have bad [data] congestion [in the server] . . . it will be even less than 74%.”

Alicia says something, her hands behind her head, slouched back in the chair.

Brian responds, “But it was really close to 74% given that.”

Alicia says, “I’d expect the numbers to be identical.”

The interaction continues with neither Brian nor Alicia understanding why her model of the server’s performance yields a different percentage than the server’s performance specifications. Later in our field notes, Brian and Alicia decide to ask Paul for help. Although they are unsure whether Paul is the right person to ask, they suspect that certain server subcomponents might be related to the problem and they believe Paul is familiar with that part of the data architecture. That is, both when Alicia contacted Brian and when they jointly decided to ask Paul for help, they recognized there was something they did not know that prevented them from

moving forward. It was unclear, however, what the obstacle was.

Ambiguous tasks led to extended helping interactions. In particular, the two subroutines “orienting towards the issue” and “striving towards a resolution” could be quite extensive. Because the help-seeker seldom could articulate the issue, it often took several moves back and forth between help-seeker and help-giver to come to a shared understanding, making the subroutine “orienting towards the issue” quite lengthy. Similarly, ambiguous issues often required many moves back and forth between the help-seeker and help-giver(s) to come up with and agree upon a solution during the “striving towards a resolution” subroutine.

**The helping routine during meetings.** Meetings provided a special work context for the enactment of the helping routine. In meetings, multiple people were already present at the onset, easing the formation of a helping cluster. Even if a person addressed a question to one specific colleague, other people would hear the question and jump in if they had information that they thought might aid in resolving the issue. In the following excerpt, Jenny and Parvan are in a face-to-face meeting with two other people, while Mark is joining in via a teleconferencing line. During the meeting, Jenny seeks help from Parvan on an issue that she has encountered:

Jenny [addressing Parvan]: “My code does not update. Do you know why?”

Parvan: “Jenny, let me ask you a couple of questions . . . So the trigger happens when [says a long series of codes].”

JENNY [mumbling]: “Yes, the trigger happens when I. . . .”

[Parvan continues trying to work out a solution.]

PARVAN: “There is a checkout operation so this one makes . . .” [He writes: “/main/parent/checkout” on the virtual whiteboard.]

PARVAN: “So step 2 is a merge.”

MARK: “Right now something is missing. It should say ‘main/parent/4’; otherwise, it would want to make a connection between main/parent/3 and main/parent/4.”

Even though Jenny had not asked Mark for advice, he hears their conversation and jumps in to help.

Meetings also changed how help-seekers and help-givers established mutual attention during an enactment of the helping routine. Because

AdvanteQ workers were already co-present when they were in a meeting, we observed that the helping routine enacted during meetings did not include the “establishing mutual attention” subroutine. Instead, workers jumped straight into the subroutine “orienting towards the issue.” Furthermore, the last subroutine, “concluding the encounter,” often was missing because the meeting would proceed directly to a new agenda item.

Figure 5 provides a schematic overview of another example from our data of how the help-seeking and help-giving routine was enacted during meetings, illustrating how these subroutines were missing from encounters enacted during meetings.

A striking feature of meetings was the lack of emotional engagement. In fact, in our analysis, we discovered almost no emotional engagement moves in meetings. Moreover, the most common emotional engagement move used in meetings was “show interest,” which had less emotional intensity than, for example, using humor or showing excitement. By contrast, most of our observed expressions of negative emotion occurred during meetings, as with the angry exchange between Karl and Steve recounted above. This lack of emotional engagement in meetings meant that the helping routine was often not propelled forward. We thus observed that helping encounters during meetings more frequently came to a halt and had gaps of silence as compared with the impromptu helping encounters we observed.

**The helping routine enacted via communications technology.** Lastly, we found that the helping routine was altered when it was enacted through communications technology; in particular, it was difficult to establish and maintain engagement when the routine was technologically mediated. Establishing mutual attention, the first subroutine, was often unsuccessful over the phone and via email because it was easy for the potential help-giver to simply not pick up the phone or to leave emails unanswered. For example, we observed Sam

programming in his office when, per our field notes: “The phone rang. The incoming call was 555-555-5637. Sam did not answer.” Similarly, while we were observing Pamela at work, our field notes show a case in which “the phone rings; Pamela looks over but doesn’t answer it.” AdvanteQ workers did not always comment on these instances, and we cannot conclude that all these calls were tied to helping. When probed, however, their frequent explanation echoed that of Jack, who said, “I knew who it was; I knew that it was not urgent.” Overall, while only 3 of 75 (4%) face-to-face encounters that we observed met with a refusal to help, 23 of 89 (26%) phone encounters and 7 of 25 (28%) email encounters resulted in refusals. Examining the other side of the encounter—reaching out for help—our interviewees indicated a preference for face-to-face encounters because they perceived that such encounters better enabled them to establish mutual attention. Elena, for example, explained that, if she needed help from experienced and busy people, it was easy to be refused if the request was technologically mediated: “I think face to face is better . . . because [for example] Jack is so busy, but, if I go to his office, he takes my priority.”

Even in situations where AdvanteQ workers managed to engage a help-giver via phone or email, they struggled to enact core elements of the help-seeking and help-giving routine. Collins (2004) highlights that a core part of creating engagement is bodily co-presence, which facilitates both cognitive and emotional engagement. By contrast, both continual cognitive and emotional engagement are challenged over phone and email. Representational tools, for example, were difficult to invoke over the phone or via email. Email, in fact, posed additional challenges because of its asynchronous nature: question-answer exchanges, for example, did not serve to maintain cognitive engagement over email in the same way they did face to face since the real-time element was lost. Similarly, non-verbal

**FIGURE 5**  
**Enacting the Helping Routine during Meetings**

In Example 5A, Vinit asks for help during a team meeting. Both Longwei and Arthur jump in to help, and the issue is quickly resolved. Notice that Subroutine 1—“establishing mutual attention”—is missing from clusters enacted during meetings as help-seekers and help-givers are already co-present. Furthermore, Subroutine 4—“concluding encounter”—is also often missing, as most meetings do not terminate after a helping encounter ends.

Help-seeker	Process?	Issue?	Info
Help-giver 1	MISSING	Respond	
Help-giver 2		Respond	
Subroutine	(1) Mutual attention	(2) Orienting	(3) Striving
			(4) Concluding

= moves that create cognitive engagement; = moves that create emotional engagement

cues that served to maintain emotional engagement were difficult to express over email.

In the excerpt below, Richard is attempting to get help from Allan via email to try to understand how the changes that he is making might affect the memory of the server that they are building:

There is a beep from the computer, and the email window flashes once. Allan brings it forward. It's an email from Richard Linley about "bursty traffic" and its "effect on the memory hierarchy." Richard asks if it's possible to "modify Gladiator to include timestamps?" Allan drafts a reply, deleting the message header of the old email and intersperses comments. "Could you give me a better picture of what you need?" he writes at one point, and, later, "My guess would be that you want to track the GGQL time stamps back through the cache hierarchy." He writes that a "remaining question is how to present results of the simulation." "Am I on the right track here?" he concludes. "If so, let me know, and that it would take a week or so if it's urgent." He sends off the reply.

The encounter noted above illustrates how email broke the general back-and-forth flow of the helping routine. In turn, workers tried to recreate the engagement pattern by interspersing questions and answers within each other's emails. In the exchange above, for example, Richard writes back to Allan a few hours later, trying to clarify the issue. Even after Richard's clarification, however, Allan is unsure of the exact issue and asks Richard (via email) if he can "specify which module of Gladiator you are referring to?"

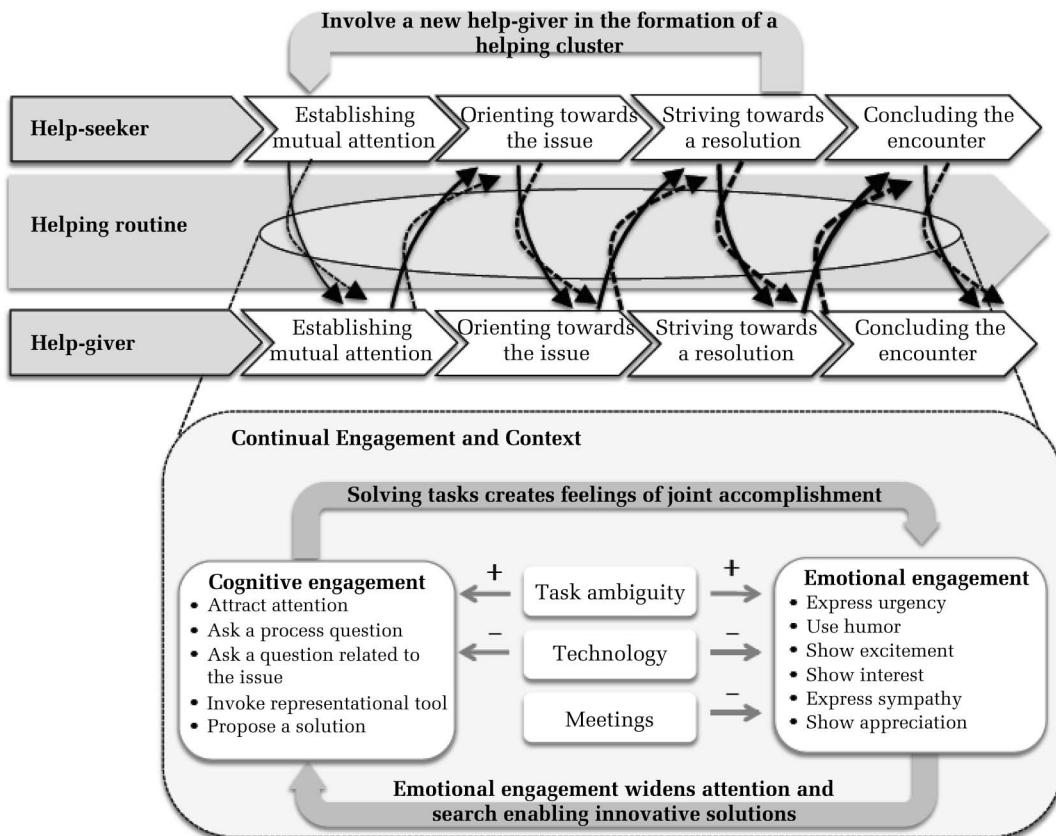
### **Theoretical Model: Help-Seeking and Help-Giving as an Organizational Routine**

Our investigation of help-seeking and help-giving at AdvanteQ led us to develop a theoretical model that describes how help-seeking and help-giving unfolded as an organizational routine. Figure 6 provides an overview of this model. As the figure illustrates, the helping routine consists of four subroutines that serve unique roles that together enable a successful helping encounter. In particular, we found that participants first establish a mutual focus of attention towards each other and then begin to orient towards the issue. This shared attention towards each other and the issue allows them to jointly strive towards a resolution. Finally, after they reach a resolution (or give up), they conclude the encounter.

The enactment of this helping routine involves a sustained interaction between the help-seeker and help-giver, in which both people actively work to keep the other person cognitively and emotionally engaged (as illustrated in the intertwined arrows between the subroutines and the circular motion in the callout at the bottom of the figure). Cognitive engagement moves prompt a response from the other party, thereby functioning to engage the other person to work towards issue resolution, which, in turn, can create feelings of joint accomplishment. Emotional engagement moves, on the other hand, serve to create a shared affective state among participants, increasing their common sense of purpose, and, thus, facilitating cognitive engagement. Both cognitive and emotional engagement serve to keep help-seekers and help-givers in the interaction, even if they do not readily have a solution. Indeed, as participants progress through the helping routine, the clusters of cognitive and emotional engagement moves used to propel the routine forward tend to become more intense. (In Figure 6, this increased engagement is shown by the thickness of the arrows.) Subsequently, whereas the early subroutines display engagement moves that emphasize joint mobilization, the middle subroutines are characterized by continued engagement and overcoming impasses. Late in the enactment of the routine, engagement can be accelerated as participants are striving to reach a resolution. This engagement means that, even when a new help-giver becomes involved in the interaction, the earlier participants stay involved, thus forming a helping cluster. After participants reach a resolution, they often carry out engagement moves aimed at building an experience of joint accomplishment and affect, which would facilitate the enactment of future helping interactions.

The model depicted in Figure 6 also highlights that the process of help-seeking and help-giving cannot be understood outside the context in which helping takes place. Indeed, whether the task is well defined or ambiguous, whether the helping interaction takes place during a meeting or an impromptu interaction, and whether it is enacted face to face or through technology shapes the unfolding of the helping routine. Specifically, these three contextual factors influence both cognitive and emotional engagement and the weight that is given to the various subroutines and to moves within these subroutines. For example, while enacting the helping routine during a meeting leads to the elimination of "establishing mutual attention" and

**FIGURE 6**  
**Theoretical Model of Help-Seeking and Help-Giving as a Routinized Process**



- Cognitive engagement moves. The thickness of the arrow signals the intensity of cognitive engagement in the interaction.
- Emotional engagement moves. The thickness of the arrow signals the intensity of emotional engagement in the interaction.

“concluding the encounter,” well-defined tasks lead to a dramatic reduction in the length of “orienting towards an issue” and “striving towards a resolution.”

Overall, our model illustrates the ways in which helping can be an organizational routine, the subroutines that comprise this process, the role of cognitive and emotional engagement in propelling this routine forward, and the ways in which context shapes the routine. Moreover, it shows the integration and relationships between these elements, which jointly serve to shape and facilitate helping.

## DISCUSSION

Although an extensive literature has examined why individuals initially decide to offer or seek help, this literature has focused far less attention on helping as an organizationally embedded process

(Grant & Ashford, 2008). Indeed, the existing literature has focused either on lab experiments or on settings in which work was primarily independent and predictable. By contrast, we studied an organization in which tasks were interdependent and helping behavior was abundant. Investigating helping as a process, we found that help-seeking and help-giving constituted an organizational routine and that this routine held important implications for how helping unfolded.

This perspective on helping shifts the emphasis from one of exchange and cost to one of joint engagement. It also departs from dominant depictions of helping by emphasizing how helping might not only be dyadic, but also involve several individuals in roles that blur the distinction between help-seeking and help-giving. Moreover, we show how the enactment of the routine is shaped by the work context and how it enables the coordination of

work. Finally, we extend our contributions to the literature on routines while also considering how our findings may hold even in contexts where helping is not embedded in an organizational routine. We elaborate on each of these contributions below.

### **Help-Seeking and Help-Giving as an Organizational Routine**

The helping literature has largely failed to examine how helping unfolds over time, instead focusing on the initial decision to offer or seek help (e.g., Bamberger, 2009; Flynn & Brockner, 2003; Grant & Dutton, 2012; McNeely & Meglino, 1994; Miller & Bersoff, 1998; Perlow & Weeks, 2002). Our research complements and extends existing research by illuminating helping as a process. In turn, we demonstrate how the helping routine shapes the ways in which people go about seeking and giving help: people react to each other's moves, stringing subroutines together to both draw upon and recreate the organization's overall helping routine. Approaching helping in this way highlights an overlooked continuity to helping encounters. The helping literature treats most encounters as independent, and, where it acknowledges that one encounter may influence another one, the primary mechanism is reciprocity: a help-giver on one occasion may become a help-seeker on another occasion (Blau, 1963; Gouldner, 1960; Grant & Dutton, 2012). Our analysis, however, shows how an ostensive helping routine connects seemingly disparate helping encounters.

By highlighting helping as an organizational routine, our research also moves the literature beyond the "cost" of helping and the apparent paradox of why one worker would help another (DePaulo & Fisher, 1980; Flynn, 2003; Lee, 1997). We show that workers were able to both seek and give help with relative ease by drawing upon the helping routine: although the problems themselves could be challenging, the existence of a helping routine meant that there was little debate or explanation both as to why a person would seek help and the process through which helping should proceed. Thus, our research suggests that scholars should look beyond "why people help other people" (DePaulo & Fisher, 1980; Flynn, 2003; Lee, 1997) to also consider how routines facilitate (or constrain) helping behaviors.

Viewing helping through the lens of organizational routines also reveals a paradox between elements of help-seeking and help-giving that "do not demand our full attention" (Gioia & Mehra, 1996: 1228) and elements that continue to necessitate

mindful behavior (Levinthal & Rerup, 2006). We found many elements of the help-seeking and help-giving routine were "less mindful," with little evidence, for example, of workers reflecting on whether and how to signal agreement or terminate an encounter. At the same time, however, the issues themselves that helping encounters attempted to resolve could be quite "mindful," demanding the full attention of participants. Thus, our results suggest that the helping routine serves to shift attention away from the underlying "scaffolding" of the helping encounter—which the routine encapsulates—to the specific details of the problem at hand. As Emirbayer and Mische (1998: 973) explain, the enactment of habitual actions might enable people to "gain a reflective distance from received patterns that may (in some contexts) allow for greater imagination, choice and conscious purpose." Thus, in contrast to Obstfeld (2012: 1571), who finds that routine behaviors and creative projects constitute "two types of action trajectories differing with respect to their repetitiveness," we show that helping behavior constitutes a routine that can be embedded within the larger action trajectory of a creative project, facilitating the accomplishment of creative work. In other words, rather than contrasting against creativity, the helping routine serves to enable and support creativity.

### **Helping as a Process of Continual Engagement**

Our exploration of helping as a routine also highlights helping as involving continuous cognitive and emotional engagement. Thus, we move the helping conversation beyond the initial decision of a help-giver to say "yes" or "no" to a helping request, as Flynn and Lake (2008: 128) characterize the literature, to consider the ways in which complete helping interactions unfold. Specifically, we show how continuous cognitive and emotional engagement serves to propel the routine forward.

This perspective builds upon research that emphasizes emotional engagement's role in accomplishing tasks and facilitating group interactions. For example, Locke (1996) finds that physicians' use of comedy aids patient cooperation and service delivery. Fredrickson (1998, 2001: 221) elaborates on the connections between such emotional engagement and cognitively linked action, positing that positive emotions might "widen the array of thoughts and actions which come to mind," thus allowing for a greater degree of creativity in solving tasks (Isen, Daubman, & Nowicki, 1987). Further-

more, recent literature has shown that “emotion signals the need for and provides the energy that fuels sensemaking” (Maitlis, Vogus, & Lawrence, 2013: 222), and that a mutual focus of attention on a task both results from and reinforces emotional engagement (Collins, 2004; Metiu & Rothbard, 2013). In our context, therefore, the positive emotions experienced during helping interactions might facilitate success in delivering help, which might create enhanced experiences of positive emotion, resulting in a virtuous cycle. Thus, our research builds upon these studies by demonstrating the prevalence of both cognitive and emotional engagement throughout the entirety of the helping routine, how these two components might be mutually reinforcing, and how together these dynamics facilitate the completion of innovative work.

In turn, this emphasis on helping behavior as a joint cognitive and emotional process shifts the emphasis from one of exchange, as in the existing helping literature (Blau, 1963; Lee, 2002), to one of joint engagement. As discussed, the helping literature has focused on the cost of help, and has proposed that receiving help puts the help-seeker in “debt” to the help-giver (DePaulo & Fisher, 1980; Flynn, 2003). By contrast, our findings suggest that helping is a process through which participants come to a new and shared understanding that can benefit *all* participants. The helping process not only aids help-seekers, but also enables help-givers to expand their understanding of colleagues’ tasks. Furthermore, help-seekers and help-givers often share excitement when they are able to resolve a difficult issue. In this way, our research bears similarities to recent research by Dutton and colleagues (Grant, Dutton, & Rosso, 2008; Heaphy & Dutton, 2003; Rynes, Bartunek, Dutton, & Margolis, 2012; Sonenshein, Dutton, Grant, Spreitzer, & Sutcliffe, 2013), who focus on the positive consequences that certain behaviors have for organizations. In the case of helping, both the help-seeker and the help-giver can become so cognitively and emotionally engaged that they come to share joint ownership not only of the issue but also of the resolution. Like Lawler (2001), we thus suggest that social exchange might create positive affect in the form of joint achievement, and that such feelings actually might lead to a virtuous cycle whereby participating help-seekers and help-givers become more likely to provide future help. Complementing Grant and Patil (2012), who examine how individuals’ actions might spur a culture of helping, we suggest that such a culture might also develop through exten-

sive use of cognitive and emotional engagement moves by multiple participants. Interestingly, the likelihood of developing such a helping culture might increase in organizations where work is ambiguous rather than well-defined, because help-seekers and help-givers in ambiguous contexts have the opportunity to develop deep cognitive and emotional engagement during the helping routine’s enactment and to achieve a sense of shared accomplishment by jointly resolving the issue.

Moreover, the role of cognitive and emotional engagement might not be limited to context in which helping behavior is part of an organizational routine. In environments without helping routines, cognitive and emotional engagement may still serve the critical role of propelling encounters forward. Specifically, we find that engagement moves help mobilize and maintain encounters, overcome impasses, accelerate engagement, and prepare for future encounters. None of these roles is limited to environments in which there is a helping routine. In fact, we might speculate that cognitive and emotional engagement could lay the foundation for the *emergence* of a routine. That is, repeated and deep engagement around helping may reinforce an evolving subroutine structure. Although the emergence of routines lies well beyond our study, future research could investigate the role of cognitive and emotional engagement across helping encounters along with their role in the emergence of organizational routines.

### Cognitive and Emotional Engagement in Organizational Routines

Our demonstration that both cognitive and emotional elements play a role in the enactment of helping interactions also extends the literature on routines in useful ways. The routines literature has focused primarily on the cognitive elements of routines such as “intentions and orientations” (Howard-Grenville, 2005: 618). Feldman and Rafaeli (2002: 309), for example, argue that:

The connections between people that are formed as they engage together in organizational routines are important for developing understandings about both what needs to be done in a specific instance of performing a routine and about the goals of the organization that routines presumably help accomplish.

Other scholars have highlighted, however, that “the inherently relational aspects of [routines] have not been explored in depth” (Dionysiou & Tsoukas, 2013: 184). Accordingly, our research re-

veals that the ability to constantly engage the opposite party is essential to the unfolding of the helping routine. Further, we extend the existing literature by examining the micro-interactions that take place within a routine to show that certain cognitive elements function not just to create a “developing understanding,” but also to engage the help-seeker and help-giver in the helping process by developing predictable interaction patterns that facilitate its continuation and completion.

Moreover, we add to this literature by showing how routines also have important emotional components. Our work thus shares commonalities with Fletcher's (2001) research showing that emotional work done in technical settings is often invisible. While Fletcher's focus is on relational practices, however, our work highlights that emotional components are integrated into a basic routine associated with accomplishing technical work. In fact, our findings suggest a symbiotic role for the cognitive and emotional elements of a routine. For example, while cognitive engagement may be linked most directly to the issue-resolving outcome of a helping encounter, emotional engagement can underlie this cognitive engagement, encouraging participants to do the work necessary to stay cognitively engaged (see Collins, 2004; Durkheim, 1912). Indeed, as Collins (2004: 35) argues, “collective attention enhances the expression of shared emotion; and in turn the shared emotion acts further to intensify collective movements and sense of inter-subjectivity.” We also show, by way of contrast, how *disruptions* to the cognitive and emotional components of the routine can disrupt the routine itself. These observations, therefore, emphasize that helping behavior can be fruitfully recast as a process of intertwined cognitive and emotional engagement.

These findings open new research avenues in the routines literature by suggesting that future scholarship on routines must consider not only the role that routines play in organizational functioning (Nelson & Winter, 1982; Zollo, Reuer, & Singh, 2002) or how routines change over time (Feldman, 2000; Howard-Grenville, 2005; Rerup & Feldman, 2011), but also how engagement is maintained as the routine unfolds. Moreover, we highlight that future studies of routines should be examined not only for their cognitive components, but also their emotional ones. Likewise, emotional components may not be *separate* from cognitive engagement in helping encounters, but, rather, may *underlie* this engagement. Our research, therefore, suggests that

investigations of cognitive and behavioral routines might fruitfully overlap with investigations of emotional patterns in organizations.

### The Helping Routine as a Collective and Contextual Process

Our study also unveils new perspectives on how helping encounters unfold as a collective process shaped by work context. Existing studies have considered helping in dyads and have separated the actions of the help-seeker from those of the help-giver (e.g., Ames et al., 2004; Flynn & Brockner, 2003; Flynn et al., 2006; Howland & Simpson, 2010; Lawler, 2001; Nadler et al., 2003). By contrast, we found that the helping process could evolve over time to include a growing number of participants as clusters formed. Showing that helping can involve a group and not just a dyad is important because it raises questions about the generalizability of the existing literature. By conceptualizing helping as dyadic, the literature has focused primarily on individual-level attributes that can shape the propensity to help (Ames et al., 2004; Flynn, 2003; Flynn & Brockner, 2003; Miller et al., 1990; Organ & Konovsky, 1989). If helping is a group phenomenon, however, then it is unclear how individual-level attributions are assigned or serve to influence the encounter. For example, how do potential help-givers assign reciprocity to the help-seeker (e.g., Blau, 1963; Gouldner, 1960; Lee, 2002) when there is already one or several help-giver(s) present? How does the potential help-giver's perception of the help-seeker change when the help-seeker is not alone? Our findings, therefore, open up many avenues for future research by recasting helping as a collective endeavor.

Furthermore, our investigation of the dynamics of helping clusters not only answers a call in the literature to better represent the help-seeker's perspective (Bamberger, 2009), but also moves beyond the clean distinction between help-“seekers” and help-“givers” that has been a core assumption in the existing literature (e.g., Ames et al., 2004; Nadler et al., 2003). The helping literature proposes that help-givers do, in fact, “help” and that help-seekers receive this help. By contrast, our findings highlight how, in many instances, it is the help-seekers who propose a resolution or the help-givers who suggest that additional help is needed. Although the help-giver might aid the help-seeker by serving as a sounding board, our results place much more emphasis on helping as a process to which all

parties contribute rather than as a simple exchange. In certain helping clusters, in fact, we demonstrate how two help-givers might completely take over the helping process, with the help-seeker remaining silent and nearly invisible in the interaction. As we show, this deep engagement, at times, led the help-giver (and not the help-seeker) to initiate contact with another potential help-giver, in some cases, even when the help-seeker was not present. Existing theories, which focus on helping as a dyadic exchange relationship (e.g., Blau, 1963; Flynn et al., 2006; Lee, 2002), are insufficient to explain these observations.

By contrast, we show how viewing help-seeking and help-giving as an intertwined organizational routine that is propelled forward by deep engagement enables us to explain a broader range of organizational helping behaviors. In fact, our data suggest that it is the existence of a helping routine that serves to facilitate clusters as collective approaches to helping: because participants know what to expect in an encounter, because they become increasingly engaged in the routine over time, and because they can reassemble subroutines as needed to accomplish their helping goals, they draw on these aspects of the routine to seamlessly include more organization members in the interaction. Indeed, the workers we observed never questioned these extensions of helping interactions from dyads to clusters, thus underscoring the normality of this behavior within the organization (Goffman, 1967).

More generally, an organizational routines perspective on helping shifts the analysis of helping from one focused wholly on individuals in a specific helping interaction to one that is inseparable from the work context in which helping encounters are embedded. Indeed, several scholars have called for more studies of how work context shapes help-seeking and help-giving (Bamberger, 2009; Grant & Ashford, 2008). Bamberger (2009: 51), for example, argues that “the concept of help-seeking in the workplace has been largely neglected by organizational scholars,” and he questions whether simple models of helping can be applied to complex workplaces. Similarly, Grant and Ashford (2008: 22) call for investigations into “a broader range of situational influences” on help-giving. Our illumination of the helping routine at AdvanteQ connects helping to the work context by showing that the helping routine was shaped by its enactment around ambiguous issues and through meetings and communication technology. Our work thus builds upon a

long line of literature suggesting that work context is important with respect to how work is done (Barley & Kunda, 2001; Bechky, 2011; Kellogg, 2009). In particular, we show that the work context can function both to facilitate and constrain the helping routine. In line with a large literature on how technological mediation can disrupt existing work practices (e.g., Armstrong & Cole, 2002; Kiesler & Cummings, 2002), we find that technological mediation disrupted the helping routine’s enactment by hindering moves that facilitate engagement. Although Metiu and Rothbard (2013) posit that emotional engagement is possible even among distributed teams, we found that technological mediation made this engagement more difficult. Indeed, technological mediation made it difficult even to attract the attention of a potential help-giver. Future research, therefore, needs to investigate how communication technology shapes helping behavior.

Like technological mediation, we found that meetings also changed the enactment of the helping routine. Specifically, many of the subroutines were missing when the routine was enacted in meetings, and meetings were associated with less positive (and more negative) affect. Our observations, therefore, both strengthen the literature showing that meetings affect work in organizations (Barley, Meyer, & Grodal, 2011; Schwartzman, 1989), and challenge the helping literature to consider how other organizational patterns might influence help-seeking and help-giving. Moreover, our results indicate that, to understand “how” people seek help, scholars need to consider that participants’ perceptions may be shaped by the work context in which they are embedded and the process through which helping unfolds.

## Coordination through Helping Routines

Finally, our research connects the literatures on helping and coordination. Specifically, whereas current helping literature focuses on the benefit to the help-seeker of receiving help (e.g., Ames et al., 2004; Flynn & Brockner, 2003), we show that helping behavior might serve a larger organizational function. A core function of an organizational routine is to reduce the cost of coordination. Typically, scholars argue that these reduced coordination costs are a result of the efficiencies inherent in employing the schemas and scripts embedded in routines (Cyert & March, 1963; March & Simon, 1958; Nelson & Winter, 1982; Thompson, 1967), or

that they are the result of the predictability tied to routines (Becker, 2004; Gittell, 2002; Zollo et al., 2002). In the first case, therefore, time savings and efficiencies enable easier coordination; in the second case, the predictability of other workers' actions (as they, too, are following routines) makes coordination easier.

Our demonstration of a helping routine suggests a third way in which routines may serve to enable organizational coordination. Environments where the structure of dependencies between workers is fluid and unpredictable can pose special coordination challenges, because workers cannot fully plan for how their tasks may integrate with others' contributions (Argote, 1982; Malone & Crowston, 1994; Van de Ven, Delbecq, & Koenig, 1976). Thus, coordination challenges arise as workers encounter unforeseen issues (e.g., MacCormack, Rusnak, & Baldwin, 2006). Our research shows that helping behaviors serve to resolve these challenges. By enabling workers to proceed with their work, helping not only aids the particular help-seeker in a given moment, but also benefits the organization as a whole by ensuring that the help-seeker's work is integrated with that of the rest of the organization and that the help-seeker's lack of progress does not hinder other projects or workers dependent upon this progress. Furthermore, helping behavior facilitates a broader, shared understanding of the organization's work, easing further coordination. Thus, by making help-seeking and help-giving easier and more predictable, a helping routine eases the resolution of problems that might otherwise obstruct coordination. Ironically, it is the routine's predictability that makes it particularly effective for coordinating in an unpredictable environment.

### Managerial Implications

Our paper also holds important implications for management practice, especially in highly innovative and interdependent environments. Given helping's role in maintaining workflow and enabling task completion in these environments, our findings highlight the importance of establishing a work culture that provides both rewards and psychological safety around seeking and giving help. Rewarding—extrinsically and/or intrinsically—helping behavior among team members is critical, in that workers will be discouraged from seeking or giving help if pursuing or offering help is not modeled or positively reinforced by their managers (see Kerr, 1975; O'Reilly, 1989). Our work also indicates

that rewarding and establishing psychological safety around helping may be particularly beneficial when an organization is young, because the cognitive and emotional engagement that occurs in helping interactions can create a self-reinforcing cycle: that is, such engagement can encourage future helping interactions.

In line with other research indicating that meetings can impede organizational processes (Barley et al., 2011; Schwartzman, 1989), our study also points to obstacles to helping behavior in meetings because of difficulties in establishing emotional engagement among attendees. Thus, managers might do well to consider their teams' current tasks and level of interdependence before deciding whether meetings are the best way to accomplish and coordinate work. Similarly, our research indicates that technological mediation can also make establishing and maintaining engagement in helping interactions more difficult. Managers might thus consider, when possible, physically collocating those team members who are most likely to need help from one another to accomplish their tasks, or assigning tasks with high degrees of interdependence to collocated workers, as Kiesler and Cummings (2002), Hinds and McGrath (2006), and others have suggested.

### Boundary Conditions and Future Research Opportunities

Ultimately, our study demonstrates that organizational routines are a powerful and informative lens through which to view helping behavior. With the nature of work changing, such that more workplaces require work that is both interdependent and innovative (Barley & Kunda, 2001), it is likely that helping routines are widespread.

At the same time, we acknowledge several limitations to the generalizability of our findings. First, even when work is innovative and interdependent, it is likely that there are organizations in which helping behavior is likely to be less routinized. In newer organizations, for example, a helping routine might not yet be established, or, as Bechky (2006) suggests, the routine may be embedded in generalized role structures rather than within the organization. Second, help-seeking and help-giving based on routines might break down when workers seek help across occupational boundaries, as helping routines might not be shared by all occupations alike. Both Bechky (2003a) and Carlile (2002), in fact, show that helping interactions are difficult

across occupational boundaries. Third, our context was dominated by work-related help-seeking and help-giving, and helping behavior might be quite different—and, indeed, less routinized—if the request is personal and not work related. Finally, our context was one in which the ostensive elements of the routine were not well articulated, nor were they governed by formal rules. The helping routine might display less flexibility in contexts where this is not the case.

These potential issues highlight limitations of our single case-study approach: although we provide a deep analysis of helping behaviors within AdvanteQ, we can only speculate about the transferability of our findings to other settings and to related questions that our research approach was not designed to address. For example, how do changes in the organizational environment shape the variation, selection, and retention of different parts of the helping routine, and, thus, the change in the helping routine over time? Similarly, Pentland et al. (2010) showed the fruitfulness of examining how one routine varied across different organizational contexts. As a first step, it would be informative to compare two organizations—one in which helping is prevalent and one in which it is not—to examine the ways in which routinization impacts how help-seeking and help-giving unfold in the two environments.

As these extensions highlight, the field of organization studies could benefit from much more research into how helping behavior is situated in practice. Given the prevalence and importance of helping to workplace functioning, our article marks but an initial step towards better integrating organizational and helping perspectives.

## REFERENCES

- Ames, D. R., Flynn, F. J., & Weber, E. U. 2004. It's the thought that counts: On perceiving how helpers decide to lend a hand. *Personality and Social Psychology Bulletin*, 30: 461–474.
- Argote, L. 1982. Input uncertainty and organizational coordination in hospital emergency units. *Administrative Science Quarterly*, 27: 420–434.
- Armstrong, D. J., & Cole, P. 2002. Managing distances and differences in geographically distributed work groups. In P. J. Hinds & S. Kiesler (Eds.), *Distributed work*: 167–186. Cambridge, MA: MIT Press.
- Bamberger, P. 2009. Employee help-seeking: Antecedents, consequences and new insights for future research. In J. Martocchio & H. Liao (Eds.), *Research in personnel and human resources management*, 28: 49–98. Bingley, U.K.: Emerald Group Publishing.
- Bapuji, H., Hora, M., & Saeed, A. M. 2012. Intentions, intermediaries, and interaction: Examining the emergence of routines. *Journal of Management Studies*, 49: 1586–1607.
- Barley, S. R., & Kunda, G. 2001. Bringing work back in. *Organization Science*, 12: 76–95.
- Barley, S. R., Meyerson, D. E., & Grodal, S. 2011. E-mail as a source and symbol of stress. *Organization Science*, 22: 887–906.
- Bechky, B. A. 2003a. Sharing meaning across occupational communities: The transformation of understanding on a production floor. *Organization Science*, 14: 312–330.
- Bechky, B. A. 2003b. Object lessons: Workplace artifacts as representations of occupational jurisdiction. *American Journal of Sociology*, 109: 720–752.
- Bechky, B. A. 2006. Gaffers, gofers, and grips: Role-based coordination in temporary organizations. *Organization Science*, 17: 3–21.
- Bechky, B. A. 2011. Making organizational theory work: Institutions, occupations, and negotiated orders. *Organization Science*, 22: 1157–1167.
- Becker, M. C. 2004. Organizational routines: A review of the literature. *Industrial and Corporate Change*, 13: 643–677.
- Blau, P. M. 1963. *Dynamics of bureaucracy*. Chicago, IL: University of Chicago Press.
- Carlile, P. R. 2002. A pragmatic view of knowledge and boundaries: Boundary objects in new product development. *Organization Science*, 13: 442–455.
- Charmaz, K. 2006. *Constructing grounded theory: A practical guide through qualitative analysis*. London, U.K.: SAGE Publications.
- Colby, B. N., Kennedy, S., & Milanesi, L. 1991. Content analysis, cultural grammars, and computers. *Qualitative Sociology*, 14: 373–387.
- Collins, R. 2004. *Interaction ritual chains*. Princeton, NJ: Princeton University Press.
- Cronin, M. A., & Weingart, L. R. 2007. Representational gaps, information processing, and conflict in functionally diverse teams. *Academy of Management Review*, 32: 761–773.
- Cyert, R., & March, J. G. 1963. *A behavioral theory of the firm*. New York, NY: Prentice Hall.
- DePaulo, B. M., & Fisher, J. D. 1980. The costs of asking for help. *Basic and Applied Social Psychology*, 1: 23–35.
- Dionysiou, D. D., & Tsoukas, H. 2013. Understanding the (re)creation of routines from within: A symbolic in-

- teractionist perspective. *Academy of Management Review*, 38: 181–205.
- Durkheim, E. 1912. *The elementary forms of religious life*. Oxford, U.K.: Oxford University Press.
- Edmondson, A. C., Bohmer, R. M., & Pisano, G. P. 2001. Disrupted routines: Team learning and new technology implementation in hospitals. *Administrative Science Quarterly*, 46: 685–716.
- Edmondson, A. 1999. Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44: 350–383.
- Eisenhardt, K. M. 1989. Building theories from case study research. *Academy of Management Review*, 14: 532–550.
- Emirbayer, M., & Mische, A. 1998. What is agency? *American Journal of Sociology*, 103: 962–1023.
- Feldman, M. S. 2000. Organizational routines as a source of continuous change. *Organization Science*, 11: 611–629.
- Feldman, M. S., & Pentland, B. T. 2003. Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, 48: 94–111.
- Feldman, M. S., & Rafaeli, A. 2002. Organizational routines as sources of connections and understandings. *Journal of Management Studies*, 39: 309–332.
- Fletcher, J. K. 2001. *Disappearing acts: Gender, power, and relational practices at work*. Cambridge, MA: MIT Press.
- Flynn, F. J. 2003. How much should I give and how often? The effects of generosity and frequency of favor exchange on social status and productivity. *Academy of Management Journal*, 46: 539–553.
- Flynn, F. J., & Brockner, J. 2003. It's different to give than to receive: Predictors of givers' and receivers' reactions to favor exchange. *Journal of Applied Psychology*, 88: 1034–1045.
- Flynn, F. J., & Lake, V. K. 2008. If you need help, just ask: Underestimating compliance with direct requests for help. *Journal of Personality and Social Psychology*, 95: 128–143.
- Flynn, F. J., Reagans, R. E., Amanatullah, E. T., & Ames, D. R. 2006. Helping one's way to the top: Self-monitors achieve status by helping others and knowing who helps whom. *Journal of Personality and Social Psychology*, 91: 1123–1137.
- Fredrickson, B. L. 1998. What good are positive emotions? *Review of General Psychology*, 2: 300–319.
- Fredrickson, B. L. 2001. The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56: 218–226.
- Garfinkle, H. 1967. *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice Hall.
- Gioia, D. A., & Mehra, A. 1996. Sensemaking in organizations. *Academy of Management Review*, 21: 1226–1230.
- Gittell, J. H. 2002. Coordinating mechanisms in care provider groups: Relational coordination as a mediator and input uncertainty as a moderator of performance effects. *Management Science*, 48: 1408–1426.
- Glaser, B. G., and Strauss, A. L., Struzel, E. 1968. *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine Publishing Company.
- Goffman, E. 1963. *Stigma: Notes on the management of spoiled identity*. New York, NY: Prentice Hall.
- Goffman, E. 1967. *Interaction ritual: Essays on face-to-face behavior*. New York, NY: Anchor Books.
- Goffman, E. 1981. *Forms of talk*. Philadelphia, PA: University of Pennsylvania Press.
- Gouldner, A. W. 1960. The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25: 161–178.
- Grant, A. M., & Ashford, S. J. 2008. The dynamics of proactivity at work. *Research in Organizational Behavior*, 28: 3–34.
- Grant, A. M., Dutton, J. E., & Rosso, B. D. 2008. Giving commitment: Employee support programs and the prosocial sensemaking process. *Academy of Management Journal*, 51: 898–918.
- Grant, A. M., Parker, S., & Collins, C. 2009. Getting credit for proactive behavior: Supervisor reactions depend on what you value and how you feel. *Personnel Psychology*, 62: 31–55.
- Grant, A. M., & Patil, S. V. 2012. Challenging the norm of self-interest: Minority influence and transitions to helping norms in work units. *Academy of Management Review*, 37: 547–568.
- Grant, A., & Dutton, J. 2012. Beneficiary or benefactor: Are people more prosocial when they reflect on receiving or giving?. *Psychological Science*, 23: 1033–1039.
- Haas, M. R., & Hansen, M. T. 2007. Different knowledge, different benefits: Toward a productivity perspective on knowledge sharing in organizations. *Strategic Management Journal*, 28: 1133–1153.
- Hargadon, A. B., & Bechky, B. A. 2006. When collections of creatives become creative collectives: A field study of problem solving at work. *Organization Science*, 17: 484–500.
- Heaphy, E., & Dutton, J. 2003. The power of high quality connections. In K. Cameron, J. E. Dutton & R. E.

- Quinn (Eds.), *Positive organizational scholarship*: 263–278. San Francisco, CA: Berrett-Koehler.
- Hinds, P., & McGrath, C. 2006. Structures that work: Social structure, work structure and coordination ease in geographically distributed teams. In P. Hinds & Association for Computing Machinery, *Proceedings of the 2006 20th anniversary conference on Computer Supported Cooperative Work*: 343–352. New York, NY: ACM.
- Hofmann, D. A., Lei, Z., & Grant, A. M. 2009. Seeking help in the shadow of doubt: The sensemaking processes underlying how nurses decide whom to ask for advice. *Journal of Applied Psychology*, 94: 1261–1274.
- Howard-Grenville, J. A. 2005. The persistence of flexible organizational routines: The role of agency and organizational context. *Organization Science*, 16: 618–636.
- Howland, M., & Simpson, J. A. 2010. Getting in under the radar: A dyadic view of invisible support. *Psychological Science*, 21: 1878–1885.
- Isen, A. M., Daubman, K. A., & Nowicki, G. P. 1987. Positive affect facilitates creative problem solving. *Journal of Personality and Social Psychology*, 52: 1122–1131.
- Johns, G. 2006. The essential impact of context on organizational behavior. *Academy of Management Review*, 31: 386–408.
- Kellogg, K. C. 2009. Operating room: Relational spaces and microinstitutional change in surgery. *American Journal of Sociology*, 115: 657–711.
- Kellogg, K. C., Orlikowski, W. J., & Yates, J. 2006. Life in the trading zone: Structuring coordination across boundaries in postbureaucratic organizations. *Organization Science*, 17: 22–44.
- Kerr, S. 1975. On the folly of rewarding A, while hoping for B. *Academy of Management Journal*, 18: 769–783.
- Kiesler, S., & Cummings, J. N. 2002. What do we know about proximity and distance in work groups? A legacy of research. In P. J. Hinds & S. Kiesler (Eds.), *Distributed work*: 57–80. Cambridge, MA: MIT Press.
- Langley, A. 1999. Strategies for theorizing from process data. *Academy of Management Review*, 24: 691–710.
- Lawler, E. J. 2001. An affect theory of social exchange. *American Journal of Sociology*, 107: 321–352.
- Lee, F. 1997. When the going gets tough, do the tough ask for help? Help seeking and power motivation in organizations. *Organizational Behavior and Human Decision Processes*, 72: 336–363.
- Lee, F. 2002. The social costs of seeking help. *Journal of Applied Behavioral Science*, 38: 17–35.
- Levinthal, D., & Rerup, C. 2006. Crossing an apparent chasm: Bridging mindful and less-mindful perspectives on organizational learning. *Organization Science*, 17: 502–513.
- Locke, K. 1996. A funny thing happened! The management of consumer emotions in service encounters. *Organization Science*, 7: 40–59.
- Lofland, J., & Lofland, L. H. 1995. *Analyzing social settings—A guide to qualitative observation and analysis*. Belmont, CA: Wadsworth Publishing Company.
- MacCormack, A., Rusnak, J., & Baldwin, C. Y. 2006. *Exploring the structure of complex software designs: An empirical study of open source and proprietary code*. Working Paper. Cambridge, MA: Harvard Business School.
- Maitlis, S., Vogus, T. J., & Lawrence, T. B. 2013. Sensemaking and emotion in organizations. *Organizational Psychology Review*, 3: 222–247.
- Malone, T. W., & Crowston, K. 1994. The interdisciplinary study of coordination. *ACM Computing Surveys*, 26: 87–119.
- March, J. G., & Simon, H. A. 1958. *Organizations*. New York, NY: McGraw-Hill.
- McNeely, B. L., & Meglino, B. M. 1994. The role of dispositional and situational antecedents in prosocial organizational behavior: An examination of the intended beneficiaries of prosocial behavior. *Journal of Applied Psychology*, 79: 836–844.
- Metiu, A., & Rothbard, N. P. 2013. Task bubbles, artifacts, shared emotion, and mutual focus of attention: A comparative study of the microprocesses of group engagement. *Organization Science*, 24: 455–475.
- Miller, J. G., & Bersoff, D. M. 1994. Cultural influences on the moral status of reciprocity and the discounting of endogenous motivation. In D. Miller & D. Prentice (Eds.), *Personality and social psychology bulletin*, special issue on “The self and the collective: Groups within individuals,” 20: 592–602.
- Miller, J. G., Bersoff, D. M., & Harwood, R. L. 1990. Perceptions of social responsibilities in India and in the United States: Moral imperatives or personal decisions? *Journal of Personality and Social Psychology*, 58: 33–47.
- Miller, J. G., & Bersoff, D. M. 1998. The role of liking in perceptions of the moral responsibility to help: A cultural perspective. *Journal of Experimental Social Psychology*, 34: 443–469.
- Miller, J. G., & Luthar, S. 1989. Issues of interpersonal responsibility and accountability: A comparison of

- Indians' and Americans' moral judgments. *Social Cognition*, 7: 237–261.
- Mossholder, K. W., Richardson, H. A., & Settoon, R. P. 2011. Human resource systems and helping in organizations: A relational perspective. *Academy of Management Review*, 36: 33–52.
- Nadler, A. 1991. Help-seeking behavior: Psychological costs and instrumental benefits. In M. S. Clark (Ed.), *Review of personality and social psychology—Vol. 12: Prosocial behavior*: 290–311. Newbury Park, CA: Sage.
- Nadler, A. 1997. Autonomous and dependent help seeking: Personality characteristics and the seeking of help. In B. Sarason, I. Sarason & R. G. Pierce (Eds.), *Handbook of personality and social support*: 258–302. New York, NY: Plenum.
- Nadler, A., Ellis, S., & Bar, I. 2003. To seek or not to seek: The relationship between help seeking and job performance evaluations as moderated by task-relevant expertise. *Journal of Applied Social Psychology*, 33: 91–109.
- Nelson, R., & Winter, S. 1982. *An evolutionary theory of economic change*. Cambridge, MA: Harvard University Press.
- Newell, A., & Simon, H. A. 1972. *Human problem solving*. Englewood Cliffs, NJ: Prentice Hall.
- O'Reilly, C. A. 1989. Corporations, culture, and commitment: Motivation and social control in organizations. *California Management Review*, 31: 9–25.
- Obstfeld, D. 2012. Creative projects: A less routine approach toward getting new things done. *Organization Science*, 23: 1571–1592.
- Organ, D. W., & Konovsky, M. A. 1989. Cognitive vs. affective determinant of organizational citizenship behavior. *Journal of Applied Psychology*, 74: 151–164.
- Parmigiani, A., & Howard-Grenville, J. 2011. Routines revisited: Exploring the capabilities and practice perspectives. *Academy of Management Annals*, 5: 413–453.
- Pentland, B. T., Haerem, T., & Hillison, D. 2010. Comparing organizational routines as recurrent patterns of action. *Organization Studies*, 31: 917–940.
- Pentland, B. T., & Rueter, H. H. 1994. Organizational routines as grammars of action. *Administrative Science Quarterly*, 39: 484–510.
- Perlow, L. A. 1999. The time famine: Toward a sociology of work time. *Administrative Science Quarterly*, 44: 57–81.
- Perlow, L., & Weeks, J. 2002. Who's helping whom? Layers of culture and workplace behavior. *Journal of Organizational Behavior*, 23: 345–361.
- Rerup, C., & Feldman, M. S. 2011. Routines as a source of change in organizational schemata: The role of trial-and-error learning. *Academy of Management Journal*, 54: 577–610.
- Rynes, S., Bartunek, J., Dutton, J., & Margolis, J. 2012. Care and compassion through an organizational lens: Opening up new possibilities. *Academy of Management Review*, 37: 403–423.
- Sacks, H. 1973/1987. On the preferences for agreement and contiguity in sequences in conversation. In G. Button & J. R. Lee (Eds.), *Talk and social organization*: 54–69. Clevedon, U.K.: Multilingual Matters.
- Schwartzman, H. B. 1989. *The meeting: Gatherings in organizations and communities*. New York, NY: Plenum Press.
- Sonenshein, S., Dutton, J. E., Grant, A. M., Spreitzer, G. M., & Sutcliffe, K. M. 2013. Growing at work: Employees' interpretations of progressive self-change in organizations. *Organization Science*, 24: 552–570.
- Sosa, M. E., Browning, T. R., & Mihm, J. 2007. Studying the dynamics of the architecture of software products. In American Society of Mechanical Engineers (Ed.), *Proceedings of the ASME 2007 International Design Engineering Technical Conference & Computers and Information in Engineering Conference*: 329–342. New York, NY: American Society of Mechanical Engineers.
- Sosa, M. E., Eppinger, S. D., & Rowles, C. M. 2004. The misalignment of product architecture and organizational structure in complex product development. *Management Science*, 50: 1674–1689.
- Spradley, J. 1979. *The ethnographic interview*. New York, NY: Holt, Rinehardt and Winston.
- Strauss, A. L., & Corbin, J. M. 1998. *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.
- Thompson, J. D. 1967. *Organizations in action*. New York, NY: McGraw-Hill.
- Toegel, G., Kilduff, M., & Anand, N. 2013. Emotion helping by managers: An emergent understanding of discrepant role expectations and outcomes. *Academy of Management Journal*, 56: 334–357.
- Tsoukas, H. 1996. The firm as a distributed knowledge system: A constructionist approach. *Strategic Management Journal*, 17(special winter issue): 11–25.
- Tucker, A. L., Edmondson, A. C., & Spear, S. 2002. When problem solving prevents organizational learning. *Journal of Organizational Change Management*, 15: 122–137.
- Turner, S. F., & Rindova, V. 2012. A balancing act: How organizations pursue consistency in routine func-

- tioning in the face of ongoing change. *Organization Science*, 23: 24–46.
- Van de Ven, A. H. V. D., Delbecq, A. L., & Koenig, R. 1976. Determinants of coordination modes within organizations. *American Sociological Review*, 41: 322–338.
- Von Hippel, E. 1994. “Sticky information” and the locus of problem-solving: Implications for innovation. *Management Science*, 40: 429–439.
- Zollo, M., Reuer, J. J., & Singh, H. 2002. Interorganizational routines and performance in strategic alliances. *Organization Science*, 13: 701–713.



**Stine Grodal** (grodal@bu.edu) is assistant professor of strategy and innovation at Boston University. She received her PhD in Management Science and Engineering from Stanford University. Her research centers on

the emergence and evolution of industries and organizational fields with a specific focus on the role categories and their associated labels play in this process.

**Andrew J. Nelson** (ajnelson@uoregon.edu) is assistant professor of management at the University of Oregon. He received his PhD in Management Science and Engineering from Stanford University. His research investigates the role of organizational and occupational contexts in shaping the development, commercialization, and diffusion of technologies.

**Rosanne M. Siino** (rsiino@stanford.edu) is a consulting faculty member in Management Science and Engineering at Stanford University. She is also an independent strategic consultant to high-technology firms and non-profit organizations. She received her PhD in Management Science and Engineering from Stanford University.

