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Helping as Mundane Knowledge Sharing: Do Bundled Help Request and Quiet Time Increase Performance?

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Abstract. On a daily level, knowledge is shared when one employee asks another for help. The positive effects of helping have been studied, but less is known about how helping can be made more efficient in terms of lowering the costs for the helpers. We investigated how two methods to channel knowledge sharing (bundled help requests and quiet time) affect helping efficiency. Bundling means that help requesters first collect some requests before asking; quiet time means that an organization defines time spans during which its employees must not interrupt and ask one another for help. We conducted a laboratory experiment and found that bundling increased the efficiency of helping, thereby increasing the combined performance of the helper and the help requester. Quiet time, however, decreased their combined performance. We discuss the implications of our findings for knowledge management research and practice.

Keywords: Knowledge sharing; helping; time management; interruptions.

1. Introduction

Every day, knowledge in organizations is transmitted by simple helping: Information one employee has is shared when another employee asks for it. Without such "mundane knowledge management" (Davenport, 2002, p. 1038), work would often be very tedious — imagine office employees who must use software applications they have not worked with before, sales representatives who must prepare presentations for clients they have not met yet, or controllers who must use reporting procedures they are not familiar with. Help from knowledgeable colleagues makes these tasks much easier. Thus, researchers have studied helping for a long time, and they have found that helping may increase performance (Podsakoff *et al.*, 2009) and decrease strain (Halbesleben, 2006).

It would, however, be premature to argue that organizations should always endorse helping as a way to increase individual level knowledge sharing, because helping often comes with an interruption for the helper. Interruptions can be costly when they disrupt cognitively demanding tasks, and they can be very costly when they do so frequently (Käser *et al.*, 2013; Speier *et al.*, 1999). Knowledgeable employees who reportedly help their colleagues

often (Sonnentag, 2000) can suffer from helping when they practice it while working on tasks that require considerable concentration, such as calculating, writing or decision making. However, research about helping has by and large neglected this negative aspect. We address this shortcoming by drawing on research about interruptions, and we investigate how helping can be made more efficient by reducing the costs for the helper. From theory about interruptions we derive two means we expect to be most promising: bundled help requests and quiet time. We argue that arrangements between employees to bundle single help requests into longer but fewer requests decrease the helper's costs. In addition, we argue that setting interruption free time spans, also referred to as quiet time or quiet hours, makes helping less disruptive for the helper.

In an effort to ensure internal validity, we used a laboratory experiment to investigate how bundling and quiet time affected the helper, the help requester and the dyad consisting of both. Specifically, we compared a setting in which a less knowledgeable worker could request help from a more knowledgeable colleague with single inquiries at any time, first in a setting that required the bundling of requests, and second in a condition that permitted single requests but only during a certain time span. With this study, we advance research about informational helping in general, and knowledge sharing and interruptions in particular.

2. Theory Development and Hypotheses

Knowledge sharing can be defined as the "activities of transferring or disseminating knowledge from one person, group or organization to another" (Lee, 2001, p. 324). Such knowledge sharing happens both within teams and across team borders, with examples for the latter being contacts to managers in higher hierarchical levels and to customers (Ancona and Caldwell, 1992; Brown and Utterback, 1985; Cross and Jonathon, 2004). Knowledge can come in different forms — some people might seek solutions, others might only hope for referrals to other, even more knowledgeable people and others might look for legitimating contacts (e.g. see also Cross and Sproull, 2004). Furthermore, knowledge sharing might be implicit and explicit: It is implicit if, for instance, somebody learns from a colleague by observing and then imitating her or him; it is explicit if, for instance, somebody writes an email requesting several pieces of information and receives them again by email.

Day to day, knowledge sharing often means informational helping: A person in need of knowledge asks a more knowledgeable colleague for help (with general helping being defined as "actions aimed at benefiting others rather than the self," DeWall *et al.*, 2011, p. 1286). Seeking informational help often means that the person with the knowledge is interrupted because she or he is already working on a task when receiving a help request. Consequently, the original task comes to a temporary halt so that the knowledge can be shared — an interruption (Jett and George, 2003). When helpers resume their original task after having completed the interrupting task, they lose time in addition to the time they spent on helping (Hodgetts and Jones, 2006): They have to take their thoughts off the interrupting task and restart concentrating on the original task. This resulting time lag is called the resumption lag (Hodgetts and Jones, 2006).

According to Monk *et al.* (2008), the resumption lag is already relatively large after a short interruption, but it grows at a slower rate the more the interruption length increases (see also Gillie and Broadbent, 1989). In other words, being interrupted twice for 20 seconds each hurts more than being interrupted once for 40 seconds. This suggests that the bulk of the disruptive effects of interruptions are fixed, whereas the variable part that is dependent on the duration of the interruption represents only a fraction of the costs, which decreases over time (Monk *et al.*, 2008).

Whereas helping is detrimental for the helpers' performance, it is beneficial for the requesters' performance because they get access to and therefore control over the helpers' knowledge. However, this control declines when help requesters aim to decrease the helpers' disruption costs by reducing the quantity of interruptions, or by permitting the helpers to work on their interruption susceptible tasks without interruptions. We expect help requesters who experience such loss of control to perform more poorly, because control at work positively affects performance (Judge and Bono, 2001; Wang *et al.*, 2010).

2.1. *Bundling*

Given the importance of knowledge sharing for organizations (Nonaka, 1994; Wang and Noe, 2010), organizations are likely interested in channelling helping as a means to share knowledge (Cabrera and Cabrera, 2005). One way to do so is to suggest bundling, which means that help requesters first collect some requests before asking. Compared to a common work setting where people often approach more knowledgeable colleagues for each help request separately, a setting where employees agree to bundle their requests reduces the amount of interruptions caused by help requests. At the same time, bundling increases the duration of interruptions. Since a smaller number of longer interruptions is less disruptive for people

than a larger number of shorter interruptions (Hodgetts and Jones, 2006; Monk *et al.*, 2008), bundling decreases the interruption costs for the helper, which is beneficial for the performance of the helper. We therefore offer the following:

H1: *People who get interrupted and receive bundled help requests perform better than people who get interrupted and receive single help requests.*

At the same time, organizations who advise their employees to bundle help requests might risk that bundling negatively affects the performance of help requesting employees. These employees reduce their control in a specific aspect of work: They have less influence over the procedures at work in general and the source of information for their work in particular (Dwyer and Ganster, 1991; Karasek, 1979). When in need of information, people want it immediately (Rennecker and Godwin, 2005) without having to collect additional requests. Bundling therefore constrains help requesters' control regarding how they do their work (Dwyer and Ganster, 1991). Due to these decreases of control, help requesters may be unable to take action as desired, which should generate dissatisfaction and performance decrements according to Karasek's (1979) job demands control model. Thus, we propose the following:

H2: *People who bundle their help requests before they interrupt and ask for help perform worse than people who place their requests separately.*

The question then arises of whether the positive effect of bundling on the helper and its negative effect on the help requester level each other out. This balance is rather unlikely, because bundling affects only a specific aspect of the requester's work control, leaving others unaffected. For instance, bundling has no effect on the variety of the tasks the help requesters work on (Dwyer and Ganster, 1991) and the level of skills (Karasek, 1979) they use. We therefore expect bundling to decrease the requester's control and performance only modestly. In turn, research about interruptions suggests that the benefits of bundling with its fewer but longer interruptions could be substantial for the helpers (Hodgetts and Jones, 2006; Monk *et al.*, 2008). Since experts are known to help their coworkers frequently (Sonnentag, 2000), we reason that their performance increase outweighs the requesters' loss. We therefore offer the following:

H3: *The combined performance of the helper and the help requester is higher when help requesters place their requests in bundles than when they place only one at a time.*

2.2. *Quiet time*

An organization can also influence the way knowledge is shared by implementing quiet hours, which means that it determines time spans during which its employees are unable to approach one another and ask for help (König *et al.*, 2013; Perlow, 1999). Drawing on a control perspective (Dwyer and Ganster, 1991; Karasek, 1979), helpers should benefit from quiet time by scheduling their tasks in a manner that reduces disruption costs: They can work on their disruption susceptible tasks during the time spans without interruptions and on their disruption insusceptible tasks during the spans with interruptions. It should be noted, though, that a previous paper (Käser *et al.*, 2013) found that a certain kind of quiet hours seems to have negative effects. In this paper, research participants had to select one minute blocks as the only time during which help requesting was allowed, whereas the other half of the time help requesting was not possible. Käser *et al.* suggested that participants might have chosen too many (and thus too short) time spans with interruptions, and these interruptions might have caused a process loss because helpers paid too much attention when requests were permitted. To overcome these problems, our quiet time consisted of one 10 min time span at the beginning of the session. Building on the control perspective, we offer the following:

H4: *People who can be interrupted only during certain time spans perform better than people who can be interrupted all the time.*

When an organization sets time spans with and without interruptions (i.e. establishes quiet times), help requesters lose control over some aspects of their work. Specifically, they have less control over the point in time in which they interact with others, which affects the way they work (cf. Dwyer and Ganster, 1991). Consequently, help requesters may suffer a performance decrease because they are unable to take action as desired (Karasek, 1979). For instance, they may request less help than in a common office environment. In support of this reasoning, Perlow (1999) reported that workers found it difficult to place their help requests ahead of the interruption free time spans. (Alternatively, attentiveness as to when help requests are possible may lead to a process loss that decreases the help requesters' performance (Käser *et al.*, 2013)). In sum, we suggest the following:

H5: *People who can interrupt and ask for help only during certain time spans perform worse than people who can interrupt and ask for help all the time.*

The question arises again whether quiet time's positive and negative effects level each other out (positive effects on the helper versus negative effects on the help requester). Similar to our argumentation regarding bundling, we expect the helper's gain to exceed the requester's loss because quiet time should affect the requester's work control only partially. Again, alternative aspects of work control, such as the variety of methods used (Dwyer and Ganster, 1991) or the level of skills required (Karasek, 1979), remain unaffected. For more knowledgeable helpers, in turn, we expect the benefit in terms of reduced disruption costs to be substantial because of the frequency in which experts engage in helping (Sonnentag, 2000). In sum, we offer the following parallel hypothesis:

H6: *The combined performance of the helper and the help requester is higher when interruptions are permitted only during certain time spans than when they are allowed all the time.*

3. Method

We build on the basic experimental design of Käser *et al.* (2013) to empirically test our hypotheses.

3.1. *Sample*

With the online system ORSEE (Greiner, 2004), we recruited 226 voluntary undergraduate and graduate students from a university in Germany to participate in this experiment. We randomly assigned participants in pairs consisting of a helper and a help requester. The experimental material was all in German and included two movies. We showed each participant only one movie, and a precondition for the experiment to work was that the subjects were unfamiliar with the movie they could not watch. Therefore, we excluded participants from the data who were familiar with that movie and whose mother tongue was different from German. The resulting sample consisted of 91 pairs (182 subjects), with 54% of the subjects being female. The control group to this study is also the control group to Käser *et al.* (2013). Their age ranged from 18 to 31 years ($M = 22.30$, $\mathrm{SD} = 2.47$). Neither gender nor age significantly affected performance.

Participants obtained a show up fee of 4 Euros and supplementary income according to their performance. For the two and a half hours the whole experiment lasted, they received an average income of 21.59 Euro.

3.2. *Design*

A typical situation for helping in an organization exists when an employee with less knowledge about a specific task could ask a more knowledgeable colleague for advice. We modelled such a situation in the computer laboratory by showing the helpers a different movie on their computer screens than the help requesters (using the software z Tree by Fischbacher (2007) to program and run the experiment). For the helpers, it was Movie A, and for the help requesters, it was Movie B. This made the helpers more knowledgeable about Movie A and the help requesters about Movie B. In Movie A, two friends and a woman struggled to keep a rich man captivated while trying to ransom him. Movie B was about three young men who met while travelling by hitchhiking and the adventures they subsequently experienced together. We informed participants that they should pay close attention to the movies' contents because they would later have to answer multiple choice questions about them. In addition, participants received the corresponding scripts on paper, allowing them to follow the storylines and dialogues in writing. After the movies, the computer screens presented a list of Movie A and Movie B questions, and participants were free to select the order and speed they answered the questions by clicking the correct one of four possible answers (Fig. 1).

The questions covered themes such as the roles of the persons, their dialogues, and the storylines. An example of a question was: "How does the thief try to escape? A. By bike, B. By scooter, C. By foot, D. By in line skates". Having completed a question by clicking on the "OK" button, the screen indicated whether the answer was "correct" or "incorrect". On their computers, participants could access the script of the movie they had not watched by clicking on the button "Script" (Fig. 1). For the helpers who had seen Movie A, the electronic script was about Movie B, and for the help requesters who had watched Movie B, it was about Movie A. Consequently, the helpers could mostly retrieve the required information for their Movie A questions from their memories, whereas the requesters first had to read the corresponding script. This made questions about Movie A easy and those about Movie B hard for the helpers. For the help requesters, it was the reverse.

Holding the role of the less knowledgeable employees, the help requesters could ask the helpers for advice about their hard Movie A questions. The helpers, though, were unable to ask the requesters for help. Helpers were immediately interrupted by the help requests and had to answer them before they could continue answering their own questions or reading the electronic script. Requesting and giving help was easy: Having opened a hard Movie A question, requesters just had to click on the button "Help" in the treatments with single help requests or "Collect

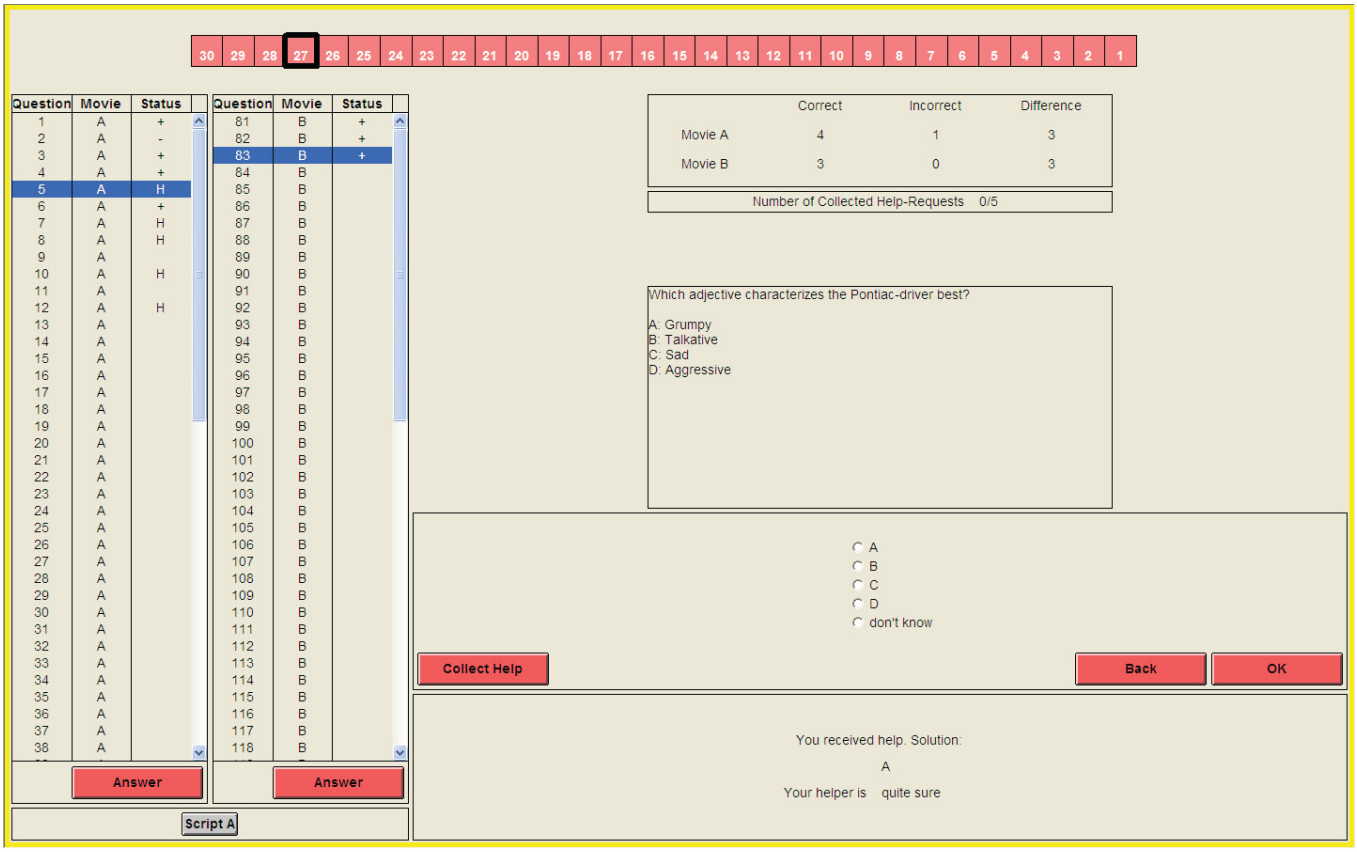

Fig. 1. Screenshot of the program for a help requester in the bundling condition (translated into English).

Help" in the treatment with bundling, and the question with its four possible answers immediately appeared on their helper's screen. The helpers answered the requests by clicking on the answer they expected to be correct and by indicating whether they were "quite sure" or "not so sure" about it. Helping was easy for them because the requests were about Movie A, which they had watched.

3.3. *Procedures and treatments*

We asked the participants at the beginning of each session to read the instructions to become familiar with the design and their role as helper or help requester. They learned that the helpers received income for a fourth of the help requesters' performance in addition to their own performance and irrespectively of whether they helped. This supplementary income was not deducted from the help requesters' income, and it was only granted to the helpers to avoid that they felt disadvantaged and refrained from helping. We used two means to make sure that the participants understood how the experiment worked: First, we started the experiment only after all participants had correctly answered the control questions at the end of their instructions. Second, we ran a pre experiment before we conducted the experiment. The pre experiment had the same design as the experiment, but it was shorter and had different movies. Specifically, the pre experiment movies had a length of seven minutes, and the participants had eight minutes to solve multiple choice questions from a list of 20 easy and 20 hard questions. In the experiment, the length of the movies was 20 min and the participants had 30 min to solve questions from a catalogue of 80 easy and 80 hard questions. In both the pre experiment and the experiment, the helpers had different questions than the help requesters, and the computer screen indicated the remaining time with a bold frame in the horizontal time bar (Fig. 1).

We administered three different treatments: In the control condition, help could be requested during the whole 30 min by placing one request at a time. Likewise, help was possible all the time in the bundling condition, but the requesters had to collect five help requests before they could place the whole bundle of requests. Figure 1 shows the corresponding computer screen for a help requester in the bundling condition who received help for a bundle of five hard Movie A questions: Having the status

"H" indicates that the corresponding question received help, the "+" illustrates a correctly answered question and the "−" shows an incorrectly answered question. Figure 1 displays the computer screen of a help requester who just opened Movie A question five for which he or she received help. In our third treatment, the quiet time condition, help could be requested only during the first ten minutes and with a single request at a time. This is an important difference to the treatment in Käser *et al.* (2013) that permits the helpers to self select the time spans without interruptions, in order to prevent helpers from setting too many and too short interruption free time spans. The computer indicated the time span for helping by colouring the respective minute squares red in the time bar and by displaying a button "Help" when the help requester opened a hard question. While no help was available, this button was absent. We conducted separate sessions for each treatment and communicated their specifications when the participants read the instructions at the beginning of a session.

3.4. *Dependent variable: Performance*

We used two incentives to lead the participants while they answered their questions, because we wanted their behaviour to mirror the conduct of corporate employees: They should minimize the number of mistakes and also perform their tedious tasks. Therefore, we first informed participants that we punished incorrect answers by deducting them from the amount of correct answers for both types of questions. Second, participants learned that we determined performance based on the minimum of these two corrected scores, which represented an incentive to answer a similar amount of easy and hard questions. The computer screen displayed the resulting scores of correct and incorrect answers for each movie, and the differences in real time, thereby permitting the participants to align the answering of their questions with our incentive scheme. We calculated our performance measure based on the same scores.

4. Results

Table 1 shows the means and standard deviations for the performance of the help requester, the helper and the dyad achieved in the three treatments. Hypothesis 1 proposed that people who receive bundled help requests perform better than people who receive single requests. Table 1 illustrates that the helpers' mean performance was 13.56 (SD = 8.25) in the control condition and 16.17 (SD = 9.51) in the bundling condition, a non significant difference, which fails to support H1. With H2, we predicted that people who bundle their help requests before they ask for help perform worse than people who place each request separately. Contrary to H2, Table 1 shows that the help requesters' mean performance was 32.38 (SD = 11.15) in the control condition and 37.38 (SD = 16.53) in the bundling condition — a non significant difference, which fails to support H2. In H3, we proposed that overall performance is higher when help requesters place their requests in bundles than when they place only one at a time. The t test in Table 1 illustrates that the dyads' mean performance differed significantly between the control condition (M = 45.94, SD = 13.89) and the bundling condition (M = 53.55, SD = 18.91), confirming H3.

Hypothesis 4 predicted that people who can be interrupted only during certain time spans perform better than people who can be interrupted all the time. According to Table 1, the helpers' mean performance difference between the control condition (M = 13.56, SD = 8.25) and quiet time (M = 15.00, SD = 7.73) was not significant, thereby failing to support H4. In H5, we stated that people who ask for help only during certain time spans perform worse than people who can ask for help all the time. In line with H5, the t test illustrated in Table 1 documents that the help requesters' mean performance was 24.23 (SD = 7.79), significantly lower in the quiet time condition than 32.38 (SD = 11.15) in the control condition, as predicted. Hypothesis 6 proposed that overall performance is higher when interruptions are permitted only during certain time spans than when they are allowed all the time. Contrary

Table 1. Impact of treatments on performance.

Hypotheses	Unit of analysis	Control condition[a] M(SD)	Bundling[b] M(SD)	Quiet time[c] M(SD)	Bundling versus control condition: t statistic (df)	Quiet time versus control condition: t statistic (df)
H1, H4	Helper	13.56 (8.25)	16.17 (9.51)	15.00 (7.73)	1.15 (59)	0.71 (60)
H2, H5	Help Requester	32.38 (11.15)	37.38 (16.53)	24.23 (7.79)	1.40 (59)	3.31 (60)**
H3, H6	Dyad	45.94 (13.89)	53.55 (18.91)	39.23 (11.63)	1.80 (59)*	2.05 (60)***

Note: [a]n = 32 dyads (from Käser *et al.*, 2013), [b]n = 29 dyads, [c]n = 30 dyads.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, one sided tests, except for H6 two sided test.

to H6, the two sided t test depicted in Table 1 shows that the dyads' mean performance was 39.23 (SD = 11.63) in the quiet time condition, which is significantly lower than the 45.94 (SD = 13.89) in the control condition. This result suggests the opposite of what we predicted with H6. In search of an explanation of this result, we found that in the quiet time condition (where help was permitted only during the first 10 of the 30 min), the requesters placed significantly ($p < 0.001$, two sided t test) less help requests ($M = 23.30$, SD = 10.99) than in the control condition where they could request help during the whole time ($M = 44.38$, SD = 25.89). The number of help requests correlates strongly ($r = 0.73$, $p < 0.001$) with the requesters' performance in the sample of control and quiet time conditions ($N = 62$), suggesting that the lower number of help requests was one of the reasons for the requesters' lower performance.

5. Discussion

If knowledge needs to be shared among employees, it often requires that the more knowledgeable person helps the less knowledgeable one. This research, using bundling and quiet time, investigated two mechanisms we expected to make informational helping more efficient by lowering the costs for the helper while minimally lowering the benefit for the help requester. The results of our experiment showed that bundling increased the performance of the dyad significantly. In addition, quiet time decreased the help requester's and the dyad's performance significantly.

When employees contact other employees in search of knowledge, the help requester interrupts the helper, and such interruptions typically reduce the performance of the interrupted person (see, e.g. Gillie and Broadbent, 1989; Käser *et al.*, 2013; Speier *et al.*, 1999). Our study shows that bundling might be a fruitful approach to manage knowledge sharing in a way that allows both sides — people who have the knowledge and people who like to know the knowledge — to work in an efficient way. Bundling reduces the number of interruptions without negatively affecting the performance of the people who have to collect questions before they can ask more knowledgeable people. Thus, bundling seems to be a mild form of control loss for the help requester (cf. Dwyer and Ganster, 1991).

Bundling might thus be an effective way of knowledge sharing, and this result puts the general view of knowledge sharing as a source of competitive advantage (c.f., Van Wijk *et al.*, 2008) into a new perspective: Not only does it matter how much knowledge is shared, it is also important *how* this knowledge is shared. If knowledge sharing leads to many interruptions for employees, the advantages might be relatively small; but if requests for pieces of knowledge are bundled, the negative effects of interruptions can be reduced and the advantages should be larger.

Our results regarding quiet time on the dyad level were contrary to what we expected. Although Käser *et al.* (2013) found that a quiet time can hamper the performance on the dyad level, we used a quiet time implementation that differed on purpose from Käser *et al.* (2013): Help could be requested only during the first 10 min and with a single request at a time, whereas Käser *et al.* (2013) permitted helpers to self select up to 15 one minute blocks during which help was possible. Thus, the treatment of this study resembles more typical quiet hours and should have been advantageous for the help requester: Their memory of the movie was still fresh, making helping comparatively easy, and they knew that they would be uninterrupted in the last 20 min. Nevertheless, even this new variant of the quiet hour meant that the help requesters (and the dyad) suffered a substantial and significant performance loss — a loss probably caused by the reduced number of help requests being sent. This finding implies that the positive effects of quiet time that have been found in the field (König *et al.*, 2013; Perlow, 1999) should not be overestimated, as quiet time reduces the time in which knowledge can be shared, and this reduced sharing can be problematic for people who need their colleagues' knowledge to do their work.

Among the strengths of this research is the use of an experimental setting that permitted a precise analysis of the costs and benefits of helping under different helping regimes. Despite these advantages of experimental approaches (see also Taylor, 2006), the laboratory setting also comes with some inherent disadvantages regarding external validity. For instance, whereas our findings hold within this design, future research has to demonstrate whether they are also valid in an organizational setting. In such a setting, additional contextual, relational and task specific factors may influence how helping affects the performance of the involved parties (cf. Hansen *et al.*, 2005). In addition, our participants were students, and it is therefore crucial to take this research into a corporate context to investigate whether the effects of bundling and quiet time we documented also manifest in a field study (cf. Wang and Noe, 2010).

Furthermore, the paradigm we used did not allow differentiating knowledge sharing from performance. In a field setting, getting a piece of information from a more knowledgeable colleague does not automatically lead to higher performance for those receiving the information (although research suggests a positive relationship between getting knowledge and performance, see e.g. Collins and Smith, 2006; Cummings, 2004), because most knowledge

has to be modified, edited and built into the existing knowledge base (Hansen *et al.*, 2005). However, in the paradigm developed by Käser *et al.* (2013), the help received from the more knowledgeable person can be immediately used to gain more points. Although the relationship between knowledge sharing and performance could have been made less straightforward, such simplification is often necessary for making lab research possible. Similarly, the experimental setting did not allow differentiating between information and knowledge.

Given the positive results of the bundling intervention, future research should explore the individual and contextual factors that make bundling more likely and more acceptable. Bundling might already be an existing strategy used by some people in some organizations, and these people and organizations need to be characterized (Wang and Noe, 2010). Similarly, some people and organizations might be more willing to encourage (or even prescribe) bundling than others and research could explore by which characteristics this can be predicted — for instance, whether perceived benefits and costs matter, as other knowledge sharing research suggests (Kankanhalli *et al.*, 2005).

Following our unexpected finding that quiet time reduced the performance of the dyad consisting of the helper and the help requester, we call for more research to investigate the effect of quiet time. For example, research could compare the effects other initiated interruptions and self initiated interruptions have: Is it possible that employees might be willing to use the time they normally spend on self initiated interruptions, such as surfing the web, alternatively on other initiated interruptions, such as answering help requests? In a time where much of the work is done electronically, we could image that interruptions in person could be a welcome alternative to self initiated interruptions. This research could build on the work of Dabbish *et al.* (2011) about self interruptions and König *et al.*'s (2010) study about multitasking at work.

More generally, knowledge sharing research will likely benefit from (also) studying "mundane" (Davenport, 2002) knowledge sharing: the daily flow of help requests and answers at the individual to individual level. Although the field of knowledge management has now collected impressive evidence on the importance of general knowledge activities and network ties (e.g. Ancona and Caldwell, 1992; Hansen *et al.*, 2005; Van Wijk *et al.*, 2008), we need to know when, why and with which consequences employees contact each other to share knowledge. In particular, studies are needed that look at how knowledge sharing leads to performance on the daily level. Methodologically, researchers could capture this flow of help requests and answers using diary studies (see, e.g. Reed *et al.*, 2011, for a diary study on knowledge use).

From a practical perspective, our results indicate that organizations that are interested in channelling knowledge sharing benefit more from implementing bundling than quiet time. We therefore advise organizations to be careful with quiet time and experiment with bundling. They could gain from encouraging employees to discipline themselves toward working on helping intense tasks in blocks of similar tasks. However, organizations should be aware that bundling may be detrimental for those tasks that are very urgent and require immediate help.

To conclude, knowledge sharing at the individual to individual level often means that somebody interrupts another person to ask for a piece of information. To mitigate the negative performance effects of being interrupted, we experimentally investigated two interventions, bundled help requests and quiet time. Our results showed that bundling increased helping efficiency and combined performance, but quiet time decreased them. Both findings include unexpected aspects: The fact that bundling also tended to increase the help requester's performance suggests that it could create a win–win situation. Quiet time, in turn, might prove to be a lose–lose condition unless it is administered carefully.

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