Remote and Alone: Coping with Being the Remote Member on the Team

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ABSTRACT

Geographically distributed work has become a popular way to work. Past CSCW research has shown that remote workers rely on innovative communication platforms but still face challenges being remote. Research has also provided organizational and managerial strategies to bridge the distance gap. Our study in contrast investigates how individuals develop strategies to cope with the daily challenges of working remotely and alone, and what managers can do to help them. We interviewed seventeen individuals involved in remote work about their experiences, identifying unique challenges and their workarounds. Our interview results suggest that, although people may work alone, the process of conducting distributed work is actually very social. Individual remote workers establish a unique kind of work rhythm, visibility management for evaluation, social support infrastructure, and personal connection as a part of their coping strategies to balance their professional and personal lives.

Author Keywords

Distributed Teams; Individual Remote Worker; Visibility Management; Best Practices.

ACM Classification Keywords

H.5.3. Group and Organization Interfaces: Computer Supported Cooperative Work, Organizational Design.

General Terms

Human Factors; Management.

INTRODUCTION

Geographically distributed work has become a global phenomenon. The formation of distributed teams has become common business practice [5]. A report by the Gartner Group, a research company investigating the global IT industry, estimated that 41 million corporate employees worldwide worked in distributed settings for at least one day per week in 2008 [11]. Recent developments in information and communication technology for collaborative work processes have enabled many employees to work from any location without requiring a physical office. Many companies benefit from the reduced costs associated with allowing people to work from home. However, working alone from remote locations also presents a variety of challenges on individual employees and, we find, their teammates. Given the growing number of remote team workers, a closer look at individual remote workers' perspectives and their daily routine practices and challenges can offer important insights.

Past literature in CSCW has suggested best practices on how to mitigate the issues inherent in collaboration across distance [15, 19, 20]. However, research has focused mostly on analyzing communication patterns and process outcomes. Our study aims at complementing this research by contributing an understanding of how individual remote workers cope and what their managers can do to help them.

RELATED WORK

Distributed teams have been the focus of extensive research in organizational science and CSCW for more than two decades [15, 20, 25]. This work recommends enabling remote workers with innovative communication platforms (*e.g.*, [3]), recognizing the downsides of computer-mediated communication (*e.g.*, [1]), and providing organizational and managerial strategies to bridge the distance gap (e.g., [19]). Our study extends the previous literature by understanding how individual remote workers adapt their personal and professional lives to accommodate for challenges of distance work, and how managers can aid them.

In their review of distributed teams research, Martins *et al.* and Powell *et al.* stress the importance of investigating distributed team member characteristics and interpersonal team processes such as affect management, social integration of team members, and the social context of distributed teams and individual team members [15, 20]. Our study explores these previously under-researched areas.

Olson and Olson synthesized past studies on the effects of geographical distances on workgroups [18, 19]. They found that in spite of the availability of advanced information and telecommunication technologies, inherent effects of collaborating over distance continue to linger. Specifically, persistent factors such as culture, time zones, management styles, and trust continue to have influence over collaboration outcomes. Table 1 presents a summary of organizational strategies to mitigate challenges in distributed collaboration.

Team Challenges	Organizational Strategies
Collaboration Readiness	Organizations should implement incentive structures that support a mix of competition and cooperation
Technology Readiness	Organizations should provide sufficient technical support to enable remote workers to conduct their work
Common Ground	Organization should maintain a common base of shared knowledge and vocabulary for geographically distributed teams.
Nature of the Work	Organizations should structure tasks so that interdependence is reduced
Management & Decision Making	Organization should provide good leadership. Team members should feel that decisions are made fairly and clearly
Culture	Organizations should promote awareness of cultural differences
Time Zone	Organizations should adjust work shift hours in order to allow overlapping work time to accommodate time zone issues
Visibility & Presence	Awareness tools should be provided to indicate availability of remote workers and to increase their sense of presence across distributed teams
Coordination & Communication	Organizations should have clearly defined distributed work processes and communication plans
Social Support Network	Enterprise social networking and knowledge management tools should be provided to enable easy expertise identification

Table 1. Organizational Strategies to Overcome Distributed Team Challenges.

Olson and Olson defined three classes of distributed work topologies that could exhibit distinct characteristics due to their differing setups [18]. Using a team of four to illustrate, the three classes of topologies are:

- Hub and spoke: 3-1
- Hub-to-hub: 2-2
- Fully distributed: 1-1-1-1

Most of the literature focuses on the hub-to-hub configuration in which there is critical mass represented at the headquarters and the remote hub centers. For example, Hinds and McGrath conducted a longitudinal study on globally distributed teams in the hub-to-hub configuration and found that informal hierarchical structure was most effective in inducing smooth communications [8].

O'Leary and Mortensen [17] presented one of the few studies of individual remote workers. Interestingly, the authors found that while a hub-to-hub configuration created tensions across subgroups, individual remote workers did not. The authors further suggested that isolates may serve a beneficial role for the team by strengthening the need for overall information sharing and explicitly confronting conflict.

We build our analysis on the concept of coping, pioneered by Lazarus and Folkman in the field of psychology [12, 13]. We look at individual actions of remote workers as coping strategies to investigate the different ways of dealing with being alone. Nurmi extended Lazarus and Folkman's concept of coping and undertook a qualitative examination of teams with some dispersed members [16]. The study found that general coping strategies that are typically

employed to ease long distance collaboration (*e.g.,* using synchronous and asynchronous CMC and traveling) can result in *more* stress for the remote members. Consequently, individual workers need to develop strategies to cope with the coping strategies that are in place. In contrast to O'Leary and Mortensen's findings [17], Nurmi suggests avoiding isolates in a team, by having at least two members at a location for social support. Clearly there are tradeoffs— social support vs. the possibility that they will become an in-group.

Tang *et al.* conducted interviews of globally distributed team members in the hub-to-hub configuration to study their work rhythms and strategies of getting around time zone issues [24]. Given the wide variety of environmental and contextual differences in the way individual remote workers operate in their surroundings, the same strategies that resulted from the hub-to-hub setting may not generalize to the hub and spoke or the fully distributed setup. Very few studies have focused on understanding the personal affect of remote workers who work alone at a distance. In general, we believe that individual remote workers would encounter the same or even more challenges than the remote workers working in the hub-to-hub setting. Venolia *et al.* saw an opportunity to address the "out of sight, out of mind" problem for the remote members and created a tool to sustain their social presence at the hub site [26]. We share a similar perspective with these authors, and our study details various facets of sociotechnical issues that individual remote workers face. Previous studies did not put much focus on individual accounts of remote work in actual daily work settings. This study provides personal perspectives to provide a more accurate account of individual remote work and to provide best practices for managers and team members. Studies on multicultural teams [2] and individual work rhythms also informed our approach [9, 22].

METHODS

To explore a broad range of personal experiences of remote workers working in global teams, we conducted a total of seventeen semi-structured interviews with individuals working in a wide range of industries. Table 2 shows the demographics of the seventeen interview participants and the context of their work.

Participants were recruited using connections to industries and a snowball sampling methodology. Potential participants qualified for the study if they fit into one of the following categories:

1. The company does not provide them a physical office. The participant works primarily from home or at a client site, and occasionally travels to the company (*P2*, *P3*, *P4*, *P8*, *P9*, *P10*, *P11*, *P12*, *P13*, *P15*).

#	Gender	Industry	Company Size	Job Role	Experience	Work Setting	Work Type (Continuous- vs. Project-based)	Work Location	Remote Collaboration
P1	F	IT	Small Start-up	UX Engineer	5 years, always remote	Home	Continuous & Project	US (CA)	China, Europe, US (CA)
P2	M	IT	Small Start-up	Founder and President	1 year, always remote	Home	Continuous	US (CA)	India, US (CA)
P3	M	Software	Small Start-up	Founder and President	8 years, always remote	Home	Continuous & Project	Estonia	Estonia, Philippines
P4	M	Entertainment	Small Start-up	Founder and President	8 years, always remote	Home	Continuous & Project	Estonia	Australia, Canada, China, Estonia, France, Netherlands, Singapore, UK
P5	F	IT	1,000-9,000	Sr. UX Designer	3 years	Office (80%)	Continuous & Project	US (CA)	Germany, India, US (CA, NY)
P6	M	IT	1,000-9,000	Sr. UX Designer	4 years, 1 year remote	Home	Project	US (CA)	Germany, India, US (CA, NY)
P7	M	Software	1,000-9,000	Director, Product Marketing	14 years	Office (80%)	Continuous & Project	US (CA)	Asia, Australia, New Zealand, Sweden, UK, US
P8	M	Software	1,000-9,000	Vice President, Product Marketing	19 years, gradually became remote	Home	Continuous & Project	UK	Australia, Austria, Germany, Russia, US (CA, MN),
P9	M	IT	> 10,000	Sr. Researcher	13 years, always remote	Home	Project	US (MN)	Netherlands, US (IA, NY)
P10	F	IT	> 10,000	Sr. Researcher	15 years, 10 years remote	Home	Project	US (CA)	UK, US (CA, TX, NY, PA, DC)
P11	F	Financial Services	100-500	Sr. Pricing Application Analyst	2 years, always remote	Home	Project	US (WI, IL), or Client Sites (50% travel)	Czech Republic, France, Germany, Netherlands, Switzerland, UK, US (CA, IL, PA, UT)
P12	M	Financial Services	100-500	Lead Configuration Engineer	5 years, always remote	Home	Project	Spain	France. Switzerland, UK, US (CA),
P13	M	Financial Services	100-500	Project Manager	2 years, always remote	Home	Project	US (FL)	China, Czech Republic, Germany, India, UK, US (CA, IL, PA, TN)
P14	M	Cosmetics	> 10,000	Human Resource Information System Project Manager	5 years, 1 year remote	Hub Office	Project	Mexico	Argentina, Brazil, France, Mexico, Pakistan
P15	F	Environmental Services	Small Start-up	Partner	2 years, 1 year remote	Home	Continuous & Project	Mexico	France
P16	M	Software	> 10,000	Sr. Researcher	2 years, always remote	Hub Office	Continuous & Project	US (CA)	China, US (ME, WA)
P17	M	Computer Hardware	1,000-9,000	Global Product Marketing Manager	1 year	Office (80%)	Continuous & Project	US (CA)	China, Japan, UK, US (CA)

Table 2. Demographics of Interview Participants.

2. The participant has a physical office at the company but chooses to work primarily from home (*P1*).
3. The participant works as a remote team member at a hub office. The managers, team members, customers, and all other project-related personnel are dispersed in other locations. The participant works from the office for the sole purpose of utilizing physical resources and technological and network infrastructures provided in an office (*P14*, *P16*).
4. The participant works at an office, but a significant number of team members are remote. We included this category in order to verify the remote worker practices with the collocated person who offers support (*P5*, *P7*, *P17*).

All interviews were conducted on the phone or over VoIP by two interviewers and lasted approximately 40 minutes to 1 hour. Participants were not compensated. The interview protocol covered questions about the nature of work, performance evaluation, the planning and decision-making process, common ground, collaboration readiness, technology readiness, and trust. The interviews were semi-structured to allow the interviewees to interject personal perspectives and other reflections on working in distributed teams. A particular emphasis was put on a personal experiences and concrete examples of their use of technology and their social network.

Interviews were audio-recorded and transcribed. We used open-coding techniques to discover patterns and recurring themes [23]. The cross-referenced themes allowed us to develop our understanding of the social context of our participants and their individual workplace configurations. Our coding thus focused on individual solutions developed by our participants and their managers rather than processes implemented at the organizational level. Through the personal accounts conveyed during the interview sessions, we believe we can best understand the complex relationship between groups and remote workers.

RESULTS: COPING STRATEGIES
In the following sections, we use selected quotations to illustrate the emergent themes from the interviews. We discuss our findings in the format of individual coping

strategies [12, 13, 16] as reported by our study participants. We present our findings in the following categories:

1. How individual remote workers deftly adapt their work rhythms to accommodate for coordination and time zone issues.
2. How individual remote workers manage to remain visible in order to allow effective communication, and how they strategically maintain their visibility so that they are evaluated fairly at performance evaluation.
3. How individual remote workers cope with their social needs and the type of personal social infrastructure they create in order to balance their professional and personal lifestyles.
4. How individual remote workers use their personal connections to smoothly transition into distributed work.

Work Rhythms and Time Zone Issues
Remote team members report explicit attention to organizing their workdays. All but two participants talked about the setup and attendance of meetings with their team members. Meeting schedules to a large extent anchored the organization of the employees' workday. For individual remote workers, all too often they do not have the same leverage as collocated workers to set meeting times and agendas. *P15*, a founding partner of a French start-up company who is now working remotely in Mexico, discusses a case where she is less flexible to meeting time changes than her collocated colleagues:

> *"They are usually late. I'm not, because I have it scheduled. But as they are working together, and they have a meeting that lasts longer than the other, and they see each other, it's okay for them to be late, like ten or twenty minutes. For me, it's difficult because it's early; I woke up early and I organized all my day according to this." (P15)*

Individual remote workers find they have to adapt to the more flexible and *ad-hoc* meeting environment of their collocated team members.

Time zone issues also presented a major challenge for all of our participants and resulted in many adjustments of their typical work rhythms. Individual remote team members were often asked to adapt, to accommodate to the time zone of the majority. For instance, *P11*, a senior pricing application analyst located in the US but who mainly works on projects based in Europe, explained to us that due to the time zone differences, she has to spend additional time in the morning to catch up with her colleagues about what had been done during what for her was overnight.

> *"When I'm sleeping a lot of stuff happens. So I have no idea what's happening. I have to adjust my work hours to start at 7 AM instead. . [...] When I come in everyday, I will have an email exchange, where someone will have been working with the client in the morning already and say, "Hey, what have you done? What have you communicated?" [...] They finish their stuff. They log off." (P11)*

Time zone issues also required the individual remote workers to be more explicit in emails, to explain everything in more detail to prevent questions in order to reduce turnaround time. *P6*, a user experience designer at a large IT company who is currently working from home, noted the following when talking about email exchanges with his colleagues:

> *"It basically creates a 24-hour [response] cycle. You have to learn to be as efficient as possible in your communication so that they [the work colleagues at the hub site] can move forward [...]. You cut down on the back and forth as much as possible." (P6)*

A lot of work during the day is concerned with continuous communication across different time zones and locations. The explicit and fast emailing style defines a typical, fast paced work rhythm of our participants.

The findings related to different time zones are consistent with previous literature [24]. Additionally, in order to battle uncertainties from a distance, we found that individual remote workers often employ careful planning and strategizing in advance. The earlier example showed scheduling as a daily work component. On top of that, 12 out of 17 participants spend a considerable amount of time working ahead of actual meetings. They want to be as prepared as possible in order to achieve the desired meeting outcome. The following sentiment by *P14*, a project manager at a large cosmetics company who works from a remote hub office away from all of her team members, provides an example for this coping strategy:

> *"What they expect from me is to be prepared. That's the thing I learned with starting to work remotely; you need to either have a presentation ready or, like, know every point that you want to talk about. So you won't miss something. When you are not working remotely you can always forget something and then go back: 'Oh, you know what, I forgot about that. What should we do?' You can't do that when you work remotely." (P14)*

Working alone remotely means a considerable preparation overhead that becomes part of the daily workday. Being well prepared is not only necessary for the individual remote team members to perform any distributed tasks; it is also often expected from them—more so than from collocated team members. It is much more difficult for remote members to clarify discussions after meetings unlike collocated members who can easily do so in face-to-face conversations. Three quarters of the participants reported that it was helpful to finish administrative tasks such as emails, calendar scheduling, and to-do lists at a set time during the day—most often in the early morning hours or the previous evening.

When working remotely means working at home and at times that are normally part of one's home life, they have to balance personal and work life in novel ways. Our participants reported many benefits of remote team work, such as the freedom to arrange their personal workday in the way they desire. For instance, *P10* stated the following:

> *"I have a lot of flexibility. So, all the family issues and some health issues I've had over the last three or four years, I've been able to do all kinds of accommodations and keep my job and keep working at basically a full salary in a way that would have been extremely difficult to do if I have to go into a 9-to-5 office."(P10)*

Work-life balance for remote workers has often been a one-sided tale. Studies found that remote work creates more flexibility [7] and higher productivity [6] because it allows more freedom for the remote workers to plan their work and personal life. Our findings confirm previous findings but they also show that the issue is often more complex. Our participants mentioned the ability to be "flexible" in the face of fast changing needs. Coping with work-life balance and time-zone issues simultaneously demands careful strategizing. Getting a child dressed and off to school immediately before an important meeting or milestone deadline can be another stressor. Working at a physical office often creates a routine to help structure a person's workday. However, remote workers who work from home often do not have a clean separation of work from private life. They have to be extra cognizant of their priorities and consciously organize their workday in order to keep a coherent schedule and maintain a healthy work-life balance.

Visibility & Evaluation

Visibility within their team and the company they work for in general was a universal concern for our participants. They have to generate different strategies to make their voices heard and to establish a remote presence. A core strategy to maintain visibility was described as "over-communication" by *P6*:

> *"It's one of those things where you really do need to be online, have your instant messenger up so that people know that you're at your desk, because they have no other way to really gauge that. If they need to get a hold of you, they can't walk over to your desk. So you have to advertise that [the availability] electronically and virtually. Really doing that and really over communicating in the sense of maybe sending out status updates a little bit more often just to show people what you're working on. And in meetings, speaking up, chiming in. Even if it's sometimes just to say 'yes that's sounds good. I agree with what you guys are saying. That's great.' " (P6)*

Remote workers need to learn to communicate many of the actions that are easily observable in a collocated office work context. The previous quote also highlights that communicating one's availability on a regular basis is particularly important. The remote worker's goal is to avoid the appearance of being unreachable.

Being remote requires remote workers to pay close attention to communication channels such as chat and email in order to manage visibility. However, the extra communication for visibility purposes can also cause disruptions to the normal workflow and overall work rhythm. Emailing caused too many disruptions for *P10*, a senior researcher at a large IT company who is currently working from home:

> *"I got distracted checking for email too much. So, I've now changed my email client so it only gets updates once an hour." (P10)*

Mark *et al.* compared the work fragmentation caused by interruptions between collocated workers and distributed workers in the hub to hub configuration, and found that collocated people encounter more interruptions than their distributed colleagues [14]. In our study, we found that remote team members who work alone and away from the critical mass face even greater stress in having to manage their visibility while not getting overwhelmed by the constant interruptions. A manager who can understand and respect a remote worker's work style can greatly help mitigate such a distraction. *P13*, a project manager at a financial services company who worked as a developer before he stepped into the managerial role, shed light on this issue:

> *If I was a developer or a programmer, then maybe I would turn that [the instant messenger] off, because I would need a solid period of time when I couldn't be interrupted. [...] You can't always be available because of the type of work that you're - where you have to be concentrating. [...] I try not to instant message people on the team, unless absolutely necessary. We definitely use it. But I think everybody knows and respects people's heads-down time as well. (P13)*

In addition to making themselves visible, they established a supportive relationship with their project managers. For instance, in a project described by *P9*, a senior researcher who works for a large IT company from home, the manager would make sure to let remote collaborators present their own work during meetings as well as specifically point out their contributions and availability. *P15*, a partner at a small start-up, actively sends out email accolades to recognize the employee contributions:

> *"We try to sometimes over-recognize what people do, just to make sure that they are feeling okay and they're keeping involved." (P15)*

P16, a senior researcher at large software company who works from a hub office away from all his team members, pointed out to us that having a close contact person to co-manage some of the visibility aspects was of great value. However, it also represented additional work for the collocated workers to provide support for the remote workers:

> *"So, I feel very supported socially by my colleagues up there kind of looking out for me. Now, is it inconvenient for them? I think yes. Do they complain about it? I think yes, but not to me." (P16)*

The concept of "paying one's dues" by picking up more workload as a remote worker is prevalent, as *P9*, a senior researcher at a large IT company, described:

> *"If there is some last minute thing and people need to scramble around and talk to people or make equipment work, they're the ones who are doing it. And so, you need to figure out as a remote worker, 'How do I pay my dues to the group?' [...] You don't want to be a free rider just because you're a thousand miles away."(P9)*

For remote workers, visibility needs to be maintained and supported by explicit social processes. Remote workers do not share the benefit of brief social interactions that often occur naturally in collocated office settings. *P8*, vice president of product marketing at a software company, shared the following strategy:

> *"I strongly believe that every email should have a please and a thank you in it [...] if you get negative team feelings, they grow*

because there's not a chance to respond to each other. You don't get the ability to physically interact to confront it." (P8)

Issues related to visibility also surfaced in their performance evaluations. This is an important time for all team members, but can be especially critical for remote workers. When asked about evaluations, our participants stated concerns about fair representation of their contributions. Since our participants did not always have the opportunity to point out their contributions directly to the management chain, all of our participants (except for those who founded their own companies) developed a careful way of representing themselves. Often, the participants would try to positively influence their own evaluations by fostering elaborate communication with their evaluators. For instance, managers who are the principal evaluators need to be kept up to date even more frequently when the worker is remote. Over-emphasizing the communication of results and achievements turned out to be another strategy:

> *"[...] You have to play the game a little bit, sending out specific emails and saying, 'Oh yes, this was a great win here. Look what we did. Good job team. Thanks for working on this.' We kind of congratulate each other a little bit and call out specific contributions."(P6)*

Our participants often discussed their achievements publicly and used that as a strategy to make their contributions more visible for evaluation purposes. In one case, *P6* described a company-wide reward system that allowed team members to send out automated congratulatory messages while copying the recipient's manager on the message. Having a system that actively supports and encourages the celebration of positive project outcomes can help elevate individual contributions and mitigate disadvantages of being remote.

Evaluation and incentive structures provided by the company itself have been adopted in different ways by our participants. Many organizations do not evaluate productivity by the work hours spent on the project, but rather by results. Project results are reviewed by managers and also indirectly by customers. When remote workers work closely with specific customers, this can be an opportunity for direct evaluation. Since peer evaluation doesn't work for somebody working mostly alone, customer evaluation represents an alternative form of feedback that makes the remote worker's achievements visible to the team.

Another way for companies to identify contributions of remote workers is to provide assignments of clearly-defined work items. When possible, dividing up a project into clearly separated work elements can help mitigate evaluation issues for remote workers. For instance, in a project described by *P13*, a project manager who works for a financial services company from home, it became apparent that one of the team members did not carry out his assigned work items. The issue was discovered relatively early in the project due to the clear separation of responsibilities. At the end of the project, team members,

remote or not, can be evaluated based on their specific contributions.

While email is universally mentioned as a communication medium, it is also used as a repository of past discussions. Recommendations and ideas generated by an individual remote team member were often overlooked, sometimes leading to costly errors or ultimately to project failures. Therefore, our participants reported that they often take extra time to create summary meeting notes, and decisions made in emails were archived for the purpose of clarification. In the case of *P11*, well-maintained communication trails were used as evidence to avoid taking blame for negative developments in the project:

> *"In case something happens you have an email to save you. You have: 'I said this and this is the decision that came up in this meeting and this is what happened.' So you have the emails to conclude everything." (P11)*

Based on our results, individual coping strategies that suit the unique work environments and work styles of the remote workers are essential for them to remain visible. Evaluation has previously not been considered as a motivating factor for managing visibility in global teams. Our results show the importance of this connection and how establishing a remote presence through communication trails can solve some of the related problems.

Establishing Personal Social Support Infrastructure

The lack of social interaction can pose serious issues for the remote workers. If remote workers are not able to successfully adapt to a remote work style, they often suffered degraded work performances, as well as lowered motivation and personal satisfaction levels. *P3,* a founder of a small start-up that does not have a physical office space, shared with us an experience with his previous employee:

> *"We had one person that used to work for us and he was not getting tasks done because he was just, I think, lacking enough social interaction from being at home [...] The thing about it is he's actually a very - knowing the stuff he's done, he's very competent and talented. So, it really was just coming down to he couldn't be in an environment - because I think he was an extrovert, he couldn't be in such a work environment where he wasn't getting enough of that. And so, he ended up taking a job which was more a level of interaction, working in an office and the whole type of thing." (P3)*

P11 also shared similar experiences:

> *"I actually have a coworker started working remotely for a half a year and quit because he cannot justify the remote working structure. He enjoyed seeing people every day, going to an office every day, and that's why he found another job which he can go to the office every day." (P11)*

The need of social interaction with people emerged as a common thread in our interviews. Ten out of 17 participants mentioned having to cope with the feeling of wanting more people interactions. This is a result of the fact that an individual remote worker spends the majority of the day working alone or working with strangers. One effective strategy is to utilize nearby friend and family networks in order to remain connected to people.

"The flip side of working remote is - not feeling connected to anything. I was born in [location name], I grew up here, I went to school here. I have lots of friends and colleagues physically here. I have to make the effort, but I can get that kind of action, which I think for somebody who's in the middle of nowhere that would be a lot harder." (P10)

The ability to keep their well-being in tact by interacting socially with other human beings and sharing their experiences is often acquired through many years of practice working in the remote setting. Not many companies include training on how to work remotely. As *P1*, a user experience engineer working at a small software company emphasizes:

"You have to have the understanding of what working remotely entails, you know, what 'working remotely' really means." (P1)

Most distributed team training programs emphasize teleconferencing software tool usage and distributed team process models [27], and neglect coaching on remote work style and visibility management. *P7*, a product marketing director at a software company remarked:

"Our culture is you're not going to get a whole lot of handholding. You just figure it out." (P7)

Personal Connections

Fourteen out of 17 participants rely on their personal connections to identify personal mentors as a successful transition strategy. These mentors are people who have prior experience working in remote locations and have acquired the know-how to deal with the wide ranging issues that occur in being an individual remote worker. *P10* told us about being nervous during the first few months at a new job that involved her working alone from home and travelling to the headquarters office once every few weeks. She sought advice from a personal mentor who provided her not only with general support, but also essential advice. She was told that when she was at headquarters she should focus on building personal connections and when she was back home she should concentrate on work that did not need personal interaction. The remote worker and her mentor continue to engage each other for advice, which made her overall transition to becoming a remote worker much easier.

P6 also sought out coworkers, albeit strangers, to help coach him on the necessary transitions into distributed work:

"One of the things that I did before I started working remotely was I just pinged a lot of the other folks that do work remotely. [...] I pinged them and I just said, 'Hey, I know you've been working remotely for a couple of years now. I'm going to start next month. Any tips, pointers, advice how to make it work, etcetera?' 'Anything you can offer?' I got back a lot of really great feedback." (P6)

Participants also mentioned that they depended on personal contacts who are part of the core teams to keep them up-to-date on news and politics. *P14* commented on a situation in which things worked against his favor because he did not ask the personal contacts about the political situation on the status of a decision prior to an important meeting:

"It happened because I didn't understand the relationships between some people so I got screwed somehow. And next time you understand that if you want to get that guy's approval you first talk to that one and that one because they have a big influence in this one." (P14)

P9, a senior researcher at a large IT company, also emphasized the importance of collocated team members on distributed work:

"If you're actually being hired into a job where you're going to be a telecommuter, make sure that you have a chance to interview with your colleagues and not just your management chain. Because your colleagues will - they can, you know, make it easy or they can make it very, very hard." (P9)

Past work on distributed teams found that establishing a contact person who is responsible for communication among hub sites is critical to successful collaboration across distance [4, 8, 19]. Our finding suggests that it may be useful to have an official liaison who would provide constant meeting notes and feedback. It is essential to have a trusted insider who is able to provide more sensitive information or to represent the remote employee on his/her behalf.

Research has found that by making the work of the remote person as independent as possible, which decreases the amount of communication needed to synchronize, distributed teams are able achieve high performance output [19, 21]. Today, many distributed teams have begun to adopt this modular project management style. However, the independent nature of the tasks also makes individuals indispensable because they the only people responsible for the tasks. An individual remote worker who assumes that role is often required to be constantly available because the results of their work are heavily relied upon. One participant said this created a need to have a viable backup. In case of a technology breakdown, which occurs fairly frequently, or other personal emergencies, it becomes essential to trust in the co-workers to represent the remote member. While individual remote workers can rely on a coworker to cover for them, they can also rely on established personal connections as alternative options of backup support in case of needs:

"Even though [we] don't actually work together right now, we keep up with each other talking about twice a week. Usually if something breaks on one of us, the other person will know about it." (P10)

Countless distributed team studies have been conducted in the past, but few have focused on the need for social support as detailed in this paper. To our knowledge, no tools have been built to support such needs. The need for a social infrastructure stood out as one of the primary themes worthy of future investigation. Although our participants all noted that the transition to becoming an individual remote worker is a very difficult journey, they have also noted that when they succeed, the experience is an invaluable one:

"In the beginning it may be hard for me, but it takes time to adapt. And once you pass a certain time period it is hard to go back. I don't know if I'm at that point yet, but it's close to getting there that I'm not sure I can go back to the corporate

setting where you have to be there at certain times, certain hours." (P11)

BEST PRACTICES

We provide best practices emerged from the reported coping strategies for teams with individual remote members in the following two main categories: best practices that confirm findings discussed in current CSCW literature (see Table 1) and best practices that are novel additions to the literature. These best practices can serve as guidelines for both team managers and remote team members.

Best Practices: Confirmation of Existing Literature

- **Plan for extra communication overhead**
  What a remote worker can do: To plan a daily agenda, individual remote workers need to consider additional time spent on (over-)communication. It can be beneficial to limit the amount of interruptions by dealing with email only at set intervals and to deal with administrative work at one time of the day. Conference calls should be scheduled with additional buffer time to accommodate for *ad-hoc* agenda changes occurring at the hub location.

  What a manager can do: The whole team should accommodate for flexible meeting times and share accurate and timely information of the teams' activities. Ad-hoc schedule changes should be kept to a minimum.

- **Greater team awareness of time zone issues**
  What a remote worker can do: Very early or late meeting times caused by time zone differences can be unavoidable. It can be beneficial to explicitly create and follow task transition processes at the end of the workday to reduce communication problems with co-workers and customers. A well-defined status update protocol can further reduce time spent on catching up with the status of the work of other team members.

  What a manager can do: Managers can ease the negative impacts of time zone issues by scheduling global team meetings only if the presence of the remote worker is absolutely required. Minor issues should be coordinated using asynchronous tools. Having a well-defined structured work hand-off process helps team members to collaborate across time zones.

- **Prepare for meetings**
  What a remote worker can do: It is more difficult to convey messages effectively when attending meetings from a remote location. It is also difficult to address conflicts in efficient ways. To cope with these issues, for remote workers, especially careful preparation of discussion topics and individual conversations with individual participants before the actual meeting are often necessary to limit possible unplanned and difficult-to-control developments.

  What a manager can do: Assign a contact person for remote workers to create more awareness of remote members during actual meetings. If possible, meeting agendas and related documents should be distributed before the meeting to allow remote workers to prepare for unexpected events.

- **Expose tacit activities to raise awareness**
  What a remote worker can do: It can be beneficial to develop a work style based on much more explicit communication. Communication that would often be conducted in a tacit manner in collocated work environments needs to be explicit in distributed team contexts. In order to maintain a general status of higher visibility with other team members, availability needs to be signaled continuously and explicitly using instant messaging, email and other technologies. It is particularly important for remote workers to portray the impression that they are available and easy to reach. Visibility also needs to be addressed on a social level. Courtesy in digital communication for instance creates a more social form of communication.

  What a manager can do: Team managers can strive for higher team cohesion and minimize conflicts by promoting an open communication culture in the team. Implementing specific ICT that broadcasts activities and group interaction, such as instant messaging, document management systems and weekly newsletters about activities can also increase team awareness. Remote workers need to be explicitly kept on the group awareness horizon by having them present progress or specifically introducing their remote presence in meeting contexts. Managers should also provide enough room for social interaction of employees to develop a social awareness that can easily get lost in remote relationships with individual remote team members.

- **Plan for a healthy work and life balance**
  What a remote worker can do: It requires personal organizational skills from the remote worker and a good sense for timing and agendas to retain a healthy personal life when working at home or on the road. It takes time to develop a daily work rhythm that allows for a clear separation of personal and professional life. Individual remote workers need to consider the impact on family life and friend circles. Working alone requires a high degree of self-motivation and commitment to the job. Building a social network of colleagues can be just as important as communicating with colleagues from work to find help and support in times of crisis and without the presence of co-workers.

  What a manager can do: Managers should consider the difficult work-life balance that many remote workers are facing and provide sufficient space for personal activities.

Best Practices: New Insights

- **Create visibility for evaluation**
  What a remote worker can do: If possible, communicating very specific work assignments can make contributions more apparent and reduce the problem of visibility to a large extent. Customers can play an important role in the evaluation process by providing feedback about their experiences with individual remote

workers in customer feedback channels. Keeping the project manager up-to-date with even more specific status updates than would be necessary in collocated teams also improves visibility of individual contributions. Remote workers should not be reluctant to talk about success publicly in the team. Keeping records of actions taken during the project is important to justify invisible actions to the core team and manager.

What a manager can do: Managers need to look into different measures to evaluate remote workers. The result of specifically assigned work tasks should be combined with input from customers and other co-workers. Providing remote workers with means to document their work process in details is essential to allow for transparency and visibility. Having a searchable and documented history affords proof of contributions to a project for evaluation purposes.

- **Establish a personal trustee**
  What a remote worker can do: Remote workers can greatly benefit from a personal contact at the core team who can be trusted with representing the individual remote team member's interests. The personal contact can act as a delegate to better represent the team member's voice and facilitate activities for the individual remote member that can only be done in person on-site.

  What a manager can do: Simply *assigning* a trustee is insufficient. Ideally, a trustee relationship develops over a longer term and is based on previous work experiences between colleagues. Managers can support the development of trustee relationships by giving employees room to share work and personal experiences. Company-wide social activities and enterprise social media can help employees to connect and share experiences.

- **Establish mentorship relationships**
  What a remote worker can do: Besides establishing a trustee in a distributed team, an experienced remote worker can take on the mentorship role during active project work or before the project assignment to coach employees to become successful remote members.

  What a manager can do: The organization can maintain a network of mentors and individual remote members who will act as a social support group in case of needs. A buddy system can also be implemented when an employee is about to transition into distributed work

- **Account for the impact on the collocated members**
  What a remote worker can do: Remote workers need to realize that there is overhead necessary for the core team to continuously integrate remote team members. Maintaining visibility and cohesion of all team members requires additional work to which everyone, including the management, must commit substantial resources. Being appreciative of this fact can make a remote worker's effort to stay visible in the team easier and creates a mutually trusting and understanding relationship.

What a manager can do: It can make a big difference if the company culture actively promotes distributed work as a viable working style. Companies that operate an IT infrastructure that provides the fundamental technical framework for remote work, such as VPN and flexible firewall rule sets, can create beneficial groundwork for the successful development of distributed teams. Additionally, the cost of maintaining an active relationship with remote workers needs to provide collocated workers with benefits. Creating a healthy balance is the task of the team manager.

- **Provide relevant training for both remote workers and the collocated workers who will support them**
  What a remote worker can do: Team members should discuss the implications of remote work for the team as a whole as well as for the individual remote team members.

  What a manager can do: The provisions of training resources, in particular for social impacts, are necessary to help the remote workers transition into becoming an effective team member. Without the proper human infrastructure, technology alone will not be able to overcome the persisting issues inherent in distance collaboration. However, collocated team members also need to be aware of team's configuration and they need to learn to incorporate remote members better into daily work processes.

CONCLUSION AND FUTURE WORK

There is a wealth of literature on distance collaborations. However, most prior work focuses on enabling remote workers with innovative communication platforms, understanding the effects of computer-mediated communication, and providing organizational and managerial strategies to bridge the distance gap. Very little research has focused on the coping strategies of individual remote workers. Our work builds on existing work by interviewing seventeen people involved in remote work across a variety of business sectors, company sizes, and job functions.

The concept of coping strategies allowed us to analyze remote worker's daily work practices from a personal perspective. While we validated past results on distanced collaboration such as time zone issues and visibility management, we also uncovered previously understudied dimensions. Arguably one of the most striking findings is expressed in the area of evaluation which turned out to be a great concern for remote workers who coped with skillful creations of a virtual presence.

There needs to be support for allowing remote workers to connect with people who could become potential mentors, friends, and activity partners. Within the corporate intranet level, remote workers need to be able to identify employees with past experience with distributed work. In the public domain, there needs to be a platform designed specifically for remote workers to connect with other remote workers in the same situation, perhaps located in the same geographical region, so they can interact, socialize, share

experiences and problem-solving strategies in order to sustain a healthy remote work lifestyle.

Globally distributed work almost always involves cross-cultural collaboration which can have a strong impact on remote workers in particular. Cultural concerns were raised during the interviews, but a detailed discussion was beyond the scope of this study. In future work, we plan to focus specifically on cultural factors that individual remote workers need to cope with every day.

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