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Exploring Tensions and Unifying Discourses in Globally Networked R&D Work

Completed Research

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Abstract

Organizing software research and development (R&D) in different globally distributed work (GDW) settings is common today. GDW often involves collaboration challenges and tensions related to cultural differences, asymmetric organizational positions, and other boundaries. Previous research has provided exceptional insight into tensions between onshore and offshore actors, and cross-cultural issues in GDW. However, less is known about what kind of tensions and collaborative discourses appear in globally networked organizations with accrued experience of GDW. This qualitative case study with software R&D professionals in India explores tensions and unifying discourses in a networked GDW setting. The findings indicate three sources of tensions, which appear work context-related rather than arising from onshore-offshore oppositions, and several types of unifying discourses reflecting collaborative approaches and mutual learning in a global environment. The paper contributes to theory and practice in understanding manifestation and evolution of tensions, and how they may be greeted in different GDW settings.

Keywords

Globally distributed work, tensions, discourses, R&D, networked, collaboration.

Introduction

Today, knowledge intensive operations, such as business process services, software and information systems (IS) projects, and research, development and innovation activities, are often conducted as globally distributed work (GDW) (Brooks et al. 2020; Cramton and Hinds 2014; Levina and Vaast 2008; Ravishankar 2015). For years, boundaries and other conditions enabling and hindering effective global collaboration have been discussed in research (Gibbs 2009; Kotlarsky and Oshri 2005; Levina and Vaast 2008). It is known that GDW offers a fruitful ground for organizational tensions related to conditions, such as onshore-offshore positions (Brooks et al. 2020), cultural differences (Cramton and Hinds 2014; Ravishankar 2015), the quality of social ties and knowledge sharing (Kotlarsky and Oshri 2005), and other complex contextual boundaries (Levina and Vaast 2008) between collaborators. Despite the challenges, the global way of working is common, largely influenced by the globalizing nature of our world (Kotlarsky and Oshri 2005), where digital technologies have diluted organizational, geographical, and functional boundaries (Bharadwaj et al. 2013).

Among distinguished GDW research, we identify two related yet distinct approaches to examining tensions and boundaries influencing effective collaboration. The first explores the differing and asymmetric positions of onshore and offshore actors (Brooks et al. 2020; Gibbs 2009; Levina and Vaast 2008). The second focuses on cross-cultural differences, and how they are faced and managed (Cramton and Hinds 2014; Ravishankar 2015). More research has been called for to understand tensions in different types of GDW arrangements (Brooks et al. 2020). Recent research also points to the need of more work on understanding culture as a “discursive resource” in diverse information technology (IT) offshoring organizations. Additionally, exploration of other possible explanations than cultural differences in relation to challenges in global collaboration appears necessary. (Ravishankar 2015) Much work has been done to understand effective collaboration, coordination, communication, and productivity and performance (e.g. Bosch-Sijtsema et al. 2009; Kotlarsky and Oshri 2005; Levina and Vaast 2008) in GDW. At the same time,

organizational learning, and dynamic learning capability within and across organizational boundaries are noted among key factors of competitive advantage (Dyer and Nobeoka 2000; Levinthal and March 1993). However, to our knowledge, the influence of the described challenges in GDW on organizational learning and capability development appears scarcely attended to in IS research.

Against this background, and as GDW practices have matured over the years, we address these intriguing gaps and aim to extend the discussion from the onshore-offshore premise where offshore teams mainly focus on routine back-office activities (Brooks et al. 2020). Our study explores a case of globally distributed R&D work, which involves complex IT products, a dynamically networked organizational structure, and global teams responsible for the software R&D efforts with a high level of competency. The interlinked research questions are: 1) *What kind of tensions appear in globally networked R&D work, beyond typical onshore-offshore oppositions and cultural differences?* 2) *What kind of unifying and tension attenuating discourses are utilized among senior professionals engaged in global R&D work?* The paper presents a qualitative case study (Yin 2018) conducted with a global IT company and their software R&D professionals located in India, one of the vibrant locations of global innovation today (Mittal 2012). The research method comprises data collection by seven qualitative semi-structured interviews, and inductive and abductive data analyses (Kennedy 2018; Urquhart 2013). The paper contributes to answering the research questions with the perspective of senior R&D professionals located in India. The study is the first independent part of a research project encompassing a similar exploration in three locations of the case company.

As findings, we, first, present three sources of work-context related tensions in globally networked R&D work: differing experience levels among collaborating teams, incentives to share and retain knowledge, and multifold goals and priorities in R&D work. Second, we present several types of unifying and tension attenuating (Brooks et al. 2020) discourses, ways of talking (Putnam et al. 2016) about collaboration. The paper contributes to the area of GDW in IS research, and more specifically to theoretical insight and practical understanding (Mathiassen, 2017) on how tensions may manifest, and be greeted in day-to-day, networked global R&D work. We build on previous distinguished research on how tensions appear to evolve in GDW settings (Brooks et al. 2020) and, finally, extend the discussion to organizational learning capability development (Dyer and Nobeoka 2000; Levinthal and March 1993) in global organizations. Next, the theoretical underpinnings are discussed, including definitions for GDW, organizational tensions and discourses, and previous related GDW research from two perspectives. Then, the case description and method are presented followed by the findings with practical examples. Finally, the paper is completed by discussion, implications, limitations, suggestions for further research, and conclusions.

Theoretical Underpinnings

This section first defines GDW, and organizational tensions and discourses. After that, tensions in GDW are examined from the onshore-offshore positions (Brooks et al. 2020; Levina and Vaast 2008) and cultural differences perspectives (Cramton and Hinds 2014; Ravishankar 2015) based on four high-quality, in-depth studies. These studies will be further reflected on when presenting and discussing the findings.

Defining Globally Distributed Work

GDW is here understood as a setting, where teams dispersed geographically across different countries work to achieve a common goal (Bosch-Sijtsema et al. 2009). The goal may be a project deliverable to be integrated into a larger entity, such as a software program composed of input by multiple teams. The aim of GDW has traditionally related to availing of global opportunities, including skilled workforce, flexibility, competitive advantage, and cost reduction (Prikladnicki and Audy 2012). Common business models in GDW can be broadly divided into offshore outsourcing and internal offshoring. The first model entails partnering with an external service provider sited in another country, whereas the second model involves wholly owned subsidiaries, similarly located abroad. (Prikladnicki and Audy 2012)

In this paper, the setting resembles the latter model, and we refer to the different software development centers (Prikladnicki and Audy 2012) as locations. A meaningful elaboration to frame the case is that work is conducted globally in a networked manner where team collaborations, compositions, and dispersion may vary from one project to another. These compositions may evolve and change over time. This brings a dynamic attribute to our GDW case (cf. Putnam et al. 2016).

Organizational Tensions and Discourses

As new digital technologies emerge, new types of partnerships, changing business models, organizational structures, and capability requirements are formed (Bharadwaj et al. 2013). This creates flux inflicting dynamic, recurring, and reforming *tensions* in organizations as a part of their everyday life (Putnam et al. 2016). Organizational tensions are here understood as *oppositions*, “the clashing, push-pull dynamics of organizational life” (Fairhurst and Putnam 2019). Tensions comprise “feeling states” associated with difficult emotions, such as stress, anxiety, frustration, and uncertainty. The concept grounds other forms of organizational oppositions, such as contradictions and paradoxes. (Putnam et al. 2016) Oppositions have the potential to “create inertia” but also “spawn creative energy” (Fairhurst and Putnam 2019), for example for improving practices and processes. Therefore, following previous research (Brooks et al. 2020; Gibbs 2009), we view tensions not as hardship to be eliminated, but as something that exists, should be addressed, and could be exploited for productive action and organizational development.

Conflicts are frequently referred to in connection to organizational oppositions (Putnam et al. 2016). In this paper, we understand conflicts as organizational occurrences, where two or more parties have clashing or disagreeing views of things, such as communication or operational goals (cf. Brooks et al. 2020; Putnam et al. 2016; Ravishankar 2015). *Discourses* are understood as ways of talking (Putnam et al. 2016), and people positioning themselves and other parties in relation to a potential tension. They also relate to management strategies of tensions, which can be explored by the language used and may include “different ways of reacting to, dealing with, or responding to organizational oppositions”. (Fairhurst and Putnam 2019) When these discourses convey “interactive, and collaborative behaviors” (Brooks et al. 2020), they are identified as unifying (cf. Gibbs 2009), and tension attenuating (cf. Brooks et al. 2020), and supportive of rewarding collaboration in GDW (Ravishankar 2015). Finally, organizational tensions can be studied from different angles, such as strategic decision making, cross-sector collaboration, leadership practices, and everyday discourses (Smith et al. 2017). In this case, we identified GDW as the most fitting frame and a specific area of concern (Mathiassen 2017). Thus, we will explore the research questions in relation to previous research on tensions in GDW, as is described next.

Onshore-Offshore Positions and Tensions in GDW

Team processes, such as communication, coordination and trust are identified among enablers of effective distributed work (Kotlarsky and Oshri 2005). At the same time, tensions in GDW are noted as understudied phenomena, although they constitute a significant source of conflicts and issues in communication and coordination (Brooks et al. 2020). It appears that particularly the relationships between onshore and offshore actors are focal in research of GDW tensions. Typically, in such cases, a local, onshore, organization sources work from a subsidiary or a third-party subcontractor located abroad, offshore (Brooks et al. 2020; Levina and Vaast 2008; Prikladnicki and Audy 2012).

A recent study synthesizes that *knowledge asymmetries*, *power asymmetries* and *identity threats* constitute the key sources of tensions among onshore and offshore teams. Knowledge asymmetries occur when the knowledge and experience levels are perceived imbalanced between participants. Examples of such are business and domain knowledge possessed by onshore teams but unavailable to offshore teams, or a lack of understanding of offshore activities by the onshore teams. Power asymmetries refer to a gap in accessing resources and decision-making power between onshore and offshore parties. Identity threats have been identified on both sides. The offshore teams may feel they are regarded as less important, while the onshore teams may feel threatened professionally, if their tasks are migrated to offshore locations. Thus, both sides feel their organizational identities are under threat. (Brooks et al. 2020) Similarly, it is argued that separation caused by “multiple and overlapping boundaries” as well as differences in the country and organizational contexts among onshore and offshore participants may create contextual status differences inhibiting collaboration effectiveness. The difference in accumulation of capitals, including economic, intellectual, social, and symbolic, was discovered to inflict these boundaries in global IS development projects. (Levina and Vaast 2008)

As tensions are said to be embedded in the nature of the GDW, their elimination may not be feasible. However, tensions have been discovered to develop in a phasal manner from suppression and amplification to accommodation and attenuation, as defensive organizational tendencies evolve towards interactive and collaborative behaviors with the support of management’s formal and informal actions. (Brooks et al. 2020)

Further, leveling perceived status differences, creating mutual capability to share and listen to each other's ideas, contributing to joint projects, and facilitating shared practices have been found supportive of effective global collaboration (Levina and Vaast 2008). Importantly, effective collaboration has been noted to be accomplished over time (Brooks et al. 2020; Levina and Vaast 2008).

Cultural Differences and Tensions in GDW

Cultural differences embedded in various "local norms, institutions and conditions" have been identified to create persistent adaptation challenges in globally collaborating teams (Cramton and Hinds 2014). In a similar vein as in research on onshore-offshore tensions (Brooks et al. 2020; Levina and Vaast 2008), these culturally embedded contradictions arise dynamically from work-related issues and our surrounding worlds. The differences are found to lead to a continuous, complex adaptation process for resolving incompatible systems and contradictions in many areas of work, including approaches to organizational control, communication styles, and knowledge utilization and problem solving. Cultural adaptation in such cases happens iteratively in recurring phases through talking and learning, when competing pressures originating from local factors and practices collide in global work. (Cramton and Hinds 2014)

Further, conflicting perceptions of situations, "frame disputes", may take place, when global collaborators make sense of an activity in clashing ways. For example, what one views as inability of independent task handling, the other may view as turning down valid assistance requests. Similarly, what may show to one as lack of transparency, could be experienced as poor communication by the other. These kinds of gaps may amplify tensions and have a detrimental influence on relationships. Therefore, managing, reconciliating and realigning these task-, outcomes-, organizational boundary- and commitment-related disputes is important. (Ravishankar 2015)

Perhaps paradoxically, employing cultural, even stereotypical, beliefs of the other was found to help make sense of the tensions in a way that enabled reframing the dispute and mentally reconcile it. At the same time, this approach could cause perpetuation of the stereotypes hampering learning and the development of team relationships. Instead, seeking for resolutions to conflicts other than explanations by cultural differences was found important in supporting continuous learning and more effective global team interaction. (Ravishankar 2015) Finally, diluting of the perceived status differences between onshore and offshore participants over time (cf. Brooks et al. 2020) is anticipated to render cultural discourses less necessary. Instead, approaches, such as open and free communication, may be adopted. It is anticipated that adoption of strong, "universally recognizable" organizational cultures could also help reduce the intensity of disputes. (Ravishankar 2015)

Case Description and Method

A qualitative, interpretive case study (Klein and Myers 1999; Yin 2018) was initiated to examine the complex factors impacting GDW. The aim was first to understand current challenges, dynamics, and supportive factors of globally networked R&D in the industry of complex IT products. The case company operating in a business-to-business environment is an established, large operator in its field with several locations globally. It is accustomed to working in a globally distributed networked model composed of teams participating in software R&D efforts with a high level of technical competency and advanced processes for developing and maintaining a range of products in different life cycle stages. This study includes participants from one section of the organization, and it is the first independent part of a larger research project including three locations globally from the same organization.

The data collection was conducted in November 2019 by qualitative, semi-structured interviews with seven senior professionals located in India at different organizational levels and work roles in R&D and related functions. The interview participants were coordinated by the organization's contact persons with the main criteria that the participants had experience in global software R&D work from different perspectives. The number of interviewees was based on the scope of the larger research project, where the aim is to interview a similar number of professionals from the different locations. Prior to the interviews, two planning sessions were held with managerial level contact persons to identify topical areas of inquiry to complement the interview themes defined by the researchers. Additionally, the interviewing researcher got acquainted with high-level company documentation to understand the company structure and current focus areas. The researcher also participated as an observer in two staff training sessions to gain practical understanding of

the day-to-day operation. This approach is in accordance with engaged scholarship, where the aim is to find solutions to real-world problems while creating new theoretical insight (Mathiassen 2017).

The interviews were recorded in researcher notes and, additionally, as audio if a participant gave permission. Five out of seven interviews were audio recorded. The length of the sessions ranged from approximately 60 to 95 minutes. The length of the audio recordings ranged from approximately 50 to 86 minutes with an average duration of 66 minutes. The recordings excluded introduction to the research, addressing questions from the participants, and concluding the session. In addition to answering interview questions, the participants were encouraged to openly discuss their views around the interview themes. The overall aim was to identify important factors of effective collaboration and capability development, and related challenges in global software R&D work.

The first findings were derived by listening to and taking notes from the recordings to identify initial codes and categories depicting items and phenomena relevant to effective collaboration and capability development. This phase was conducted as inductively as possible, and therefore no tension lenses were utilized at that point. In the next phase, the audio recordings were transcribed, and the data were analyzed in a qualitative, inductive manner by systematic coding and categorization. The goal was to test and validate the initial findings and to identify potentially new items and connections between the phenomena. The codes were then categorized two-dimensionally to strengths, challenges, strategies, states, and desired factors by the categories. (Corbin and Strauss 1990; Urquhart 2013) The categories were formulated as a combination of the academic research problem and the case company research goals. The analysis was conducted by the primary researcher during the spring 2020 in consultation with academics familiar with the work. Atlas.ti qualitative data analysis software was utilized to support the process. These findings were validated by presenting and discussing them with the organization's contact persons, including a senior professional from the Indian and a European location, during the analysis. A report containing the identified challenging and supportive aspects in different categories was provided to the company for review, further validation, and practical utilization.

After that, we returned to the data from a theoretical perspective, as is described in this paper, and started to abductively (Kennedy 2018) identify what kind of tensions appear within the categorized data, and how collaboration was talked about by the participants. Particularly in this phase, the principle of moving between detailed parts of the data and the entity it forms, was enforced (Klein and Myers 1999). At this stage, literature on GDW tensions was included in the reflection, as will be seen further in the paper. The tensions were identified among the challenging aspects and the unifying discourses among the supportive aspects. Prior to submission, the paper was reviewed by two senior professionals from a European location of the company for further reflection and validation of the findings. The findings were perceived as relevant and identifiable, while some elaborative notes were made. The elaborative notes were recorded as further research, as they presented no conflict with the existing findings. The findings based on the interviews and the described process are examined next.

Findings

We first present three categories as identified sources of tensions (cf. Brooks et al. 2020) in globally networked R&D work suggesting that they may influence activities, such as collaboration, knowledge sharing, issue resolution and engaging in learning and renewal. Rather than primarily originating from the onshore-offshore positions of teams, the identified tensions appear to result from every-day work context-related factors (cf. Cramton and Hinds 2014; Levina and Vaast 2008). The last part of the findings focuses on discourses present when addressing collaboration in a global organization. Those we identified as unifying and tension attenuating rather than as polarizing or dividing (cf. Brooks et al. 2020; Ravishankar 2015). Throughout the findings, we reflect them against the cited literature.

Differing Experience Levels Among Collaborating Teams

Based on the interview material, the first source of tensions we identify as *differing experience levels among collaborating teams*. When work is divided across several locations, collaboration often happens between more experienced and newer teams. This creates "a gradient" in the teams' competency and capability to take responsibility. This difference may manifest as potential tensions between new and experienced teams in interlinked ways, as is illustrated next. Often, new teams start with small tasks and gradually take on

more demanding duties to ensure that the required competency has been built. However, challenges may occur, if the new teams are very soon expected to be on par with the more experienced ones creating a *gap between expectations for and capability of new teams*. This kind of a situation may create inhibitions in cross-team collaboration. First, the inhibition may reside in the more experienced teams, if they have concerns about how the new teams will fare. Second, new teams may experience reservations due to concerns of how the more seasoned teams will view their questions. These combined, we identify as *reservations in collaboration between experienced and new teams*. Finally, the different timeslots teams enter work and the differing experience levels of the teams may create a *power difference between experienced and new teams*. Table 1 summarizes these findings with examples.

| Source of tension | Between | Manifests if... |
|---|---------------------------|--|
| Differing experience levels among collaborating teams | New and experienced teams | ...a gap between expectations for and capability of new teams |
| | | ...reservations in collaboration between experienced and new teams |
| | | ...power differences between experienced and new teams |
| Examples from the interviews | | |
| “[M]aybe [a project] expects some things to come very early, where of course the new team would not be in a position to do it.” | | |
| “[I] think, we still see that sort of reservations. -- Maybe the development guys -- feel, if I put such a question to them, do they feel ‘oh they don’t know this’.” | | |
| “So, whoever enters first, they get to call the shots, you can say.” | | |

Table 1. Summary of Differing Experience Levels Among Collaborating Teams

In reflection to literature, it appears that this difference in team maturities could involve all, knowledge and power asymmetries and identity threats (cf. Brooks et al. 2020). However, our interview material indicates that rather than tensions caused by onshore-offshore positions (cf. Brooks et al. 2020; Levina and Vaast 2008), central appears to be the potentially challenging dynamics between teams with differing experience levels, particularly in fresh collaborative relationships.

Incentives to Share and Retain Knowledge

Like in previous research (e.g. Kotlarsky and Oshri 2005), our interview material indicates that managing knowledge is no straightforward endeavor in GDW. Insecurities and inhibitions may be present in knowledge sharing, which may hinder increasing efficiency, solving technical issues, and developing competence of new team members. Perhaps in seemingly the most easy-to-pinpoint situations, knowledge sharing can be difficult when work is transferred from a location to another location. This often involves changes in work, which may hinder readiness to freely share knowledge. This we identify as *a gap in knowledge transfer incentives between locations*. The tensions may also appear more subtle and, therefore, more difficult to explicate. In developing competence and increasing the competence of junior professionals, support and practical experience sharing from experts are important contributors. However, sometimes it may not be “*easy for anybody to just let go*” of their knowledge. One reason for this could tie with uncertainties in knowledge sharing which may stem from various context-dependent and sensitive reasons (cf. Cramton and Hinds 2014; Levina and Vaast 2008) and potentially lead to a thought-model where free knowledge sharing becomes halted. This we identify as *reservations in knowledge sharing in daily collaboration*. Table 2 summarizes these findings.

| Source of tension | Between | Manifests if... |
|---|---|---|
| Incentives to share and retain knowledge | Knowledge transfer giving and receiving teams | ...a gap in knowledge transfer incentives between locations |
| | Collaborators with differing knowledge levels | ...reservations in knowledge sharing in daily collaboration |
| Examples from the interviews | | |
| “[I]t depends on the motivation of that team, which is giving out the work --.” | | |
| “[A]ll those insecurities create an environment in which knowledge is not shared --.” | | |

Table 2. Summary of Incentives to Share and Retain Knowledge

Again, these reservations in knowledge sharing resonate with the knowledge, power, and identity dynamics discussed in literature (cf. Brooks et al. 2020), not dismissing the potential influence of the region, proximity, or cultural differences (cf. Ravishankar 2015). However, similarly, as in the preceding section, the interview material indicates that rather than primarily being an onshore-offshore challenge, it appears more like a situational, contextual question of whether it is perceived safe and desirable to share one's knowledge with others, or not.

Multifold Goals and Priorities in R&D Work

This section views tensions from a multifold organizational, team, and individual goals perspective as identified in the interview material. As is common in large organizations, key performance indicators (KPIs) and metrics are actively used for monitoring and steering performance. First, it appears that if teams adopt KPIs as intrinsic and their own, they constitute a motivational factor contributing to common alignment and ownership. However, if metrics are perceived to come from the outside, they may create a strain factor limiting collaboration. This tension we identify to manifest if *metrics are perceived to overly originate from the outside*. Second, metrics may create multifold priorities at an inter-team level, where teams' focus may steer towards meeting the metric rather than on the most efficient way of, for example, cross-team issue resolution. This, in turn, may hinder collaboration with tensions manifesting, if *team actions become driven by organizational metrics over collaboration effectiveness*. Finally, individuals may encounter competing time usage incentives in daily work. For example, learning, improving, and innovative thinking are encouraged and appreciated. However, these goals may contest with daily tasks and targets. This could create a tension to concurrently meet organizational goals and individual expectations. This we identify to manifest as *competing time usage pressures between renewal and task delivery*. In sum, we identified multifold goals and priorities in R&D work that may influence team strain, inter-team collaboration and individual time usage together with meeting organizational goals. Table 3 summarizes these findings.

| Source of tension | Between | Manifests if... |
|--|--|---|
| Multifold goals and priorities in R&D work | KPIs constituting a motivational and a strain factor | ...metrics perceived to overly originate from the outside |
| | Organizational metrics and action perceived most effective locally | ...team actions driven by organizational metrics over collaboration effectiveness |
| | Software development work and renewal | ...competing time usage pressures between renewal and task delivery |
| Examples from the interviews | | |
| <p><i>"[T]hat is where -- the issues keep transferring -- sometimes. Because of this sometimes, this collaboration slightly has a bit of hindrance."</i></p> <p><i>"They might also find really some challenges to get that [time], because at one end we say push innovation, bring new things, do continuous improvement, do your day-to-day work, [and] learn something new."</i></p> | | |

Table 3. Summary of Multifold Goals and Priorities in R&D Work

It appears that this section includes tensions stemming from relatively tangible factors, as goals, metrics, and organizational needs originate from formal structures and policies (cf. Brooks et al. 2020). Therefore, we expect similar kinds of tensions to appear also in other knowledge work organizations (cf. Levina and Vaast 2008).

Unifying and Tension Attenuating Discourses

This section describes, based on the interview material, the collaborative way of talking, here called unifying and tension attenuating discourses, utilized when addressing collaboration-related aspects in a global organization. First, it is acknowledged that inhibitions in new collaborations are natural and to be expected as a *"human tendency"*. To overcome them, mutual effort from both sides is needed: The more experienced team should show confidence towards the new team and include the new colleagues in the collaborative effort. At the same time, it is perceived the responsibility of the new team to take up the challenge and deliver according to expectations. Sometimes, knowledge transfer situations may be sensitive, and they are

acknowledged to require solutions, where locations are not made compete against one another. Rather, confidence and rapport (cf. Kotlarsky and Oshri 2005) should be promoted. In the discourse, understanding for the situation of different teams is present. The assumption that “*knowledge is power*” is questioned, and instead the potential of free knowledge sharing is encouraged.

Further, it is appreciated that global collaboration enables learning from other teams’ work, perspectives, and different communication styles. Similarly, the approach towards challenges is learning-oriented. Mutual links and helping between locations are valued and needed for sharing work, not only in technical but also in other work-related matters. Understanding of the other locations and their capabilities is important. The interview material also supports the notion that team maturity and experience in working together facilitate smooth collaboration and free-flowing information among teams (cf. Brooks et al. 2020). It seems to relate to knowing how and with whom to interact in a global setting. Finally, when examining perceptions on organizational culture, we found indications of the culture being well-received among teams. This shows, for example, in valuing respect for one another, the perceived absence of politics, accountability in one’s work as well as inclusion and diversity in the organization. Table 4 summarizes these findings.

| Types of unifying and tension attenuating discourses |
|--|
| Acknowledgement and understanding of inhibitions naturally existing in collaborative work |
| Acknowledgement of mutual effort required to facilitate collaboration |
| Promoting confidence, rapport, and free knowledge sharing |
| Learning orientation towards challenges |
| Experience in working together facilitating smooth collaboration |
| Valuing a collaborative approach of sharing, helping, guiding, and understanding one another |
| Well-received organizational culture with inclusion, diversity, and respect for one another |
| Examples from the interviews |
| <i>“[Y]ou need to have a communication link both technical and workwise with other sites in which the other parts of the same [work] can be shared, divided, talked and understood. -- the understanding of these different sites, their capabilities and how do we get help, and what are the things where we can help, and we get information --.”</i> |
| <i>“[I]f it is something, which I am not aware, and I need help, I approach that person. So, either [s/he] shares [their] inputs, or [s/he] guides me to the right contact to get the needed details, so it’s free-flowing information.”</i> |
| <i>“[I]t’s really good, and they really value [the culture], and then we also respect each other. So that’s very important when we are working as a team.”</i> |
| <i>“I have seen respect is very high, and people respect other teams, and so other teams also do respect us.”</i> |

Table 4. Summary of Unifying and Tension Attenuating Discourses

In sum, we identified several types of unifying and tension attenuating discourses, which emphasize learning and understanding rather than highlighting the differences or oppositions in globally networked R&D work. We argue that the discourses allow and acknowledge the existence of differences and opposing poles (cf. Putnam et al. 2016), while enabling mutual learning and acceptance (cf. Ravishankar 2015).

Discussion and Conclusions

In this paper, we explored 1) *what kind of tensions appear in globally networked R&D work, beyond typical onshore-offshore oppositions and cultural differences*, and 2) *what kind of unifying and tension attenuating discourses are utilized among senior professionals engaged in global R&D work*. First, we identified three sources of tensions: differing experience levels among collaborating teams, incentives to share and retain knowledge, and multifold goals and priorities in R&D work. Second, we uncovered several types of unifying discourses, such as acknowledging and understanding for others, the approach of valuing learning and collaboration, and a well-received organizational culture.

In terms of theoretical contributions, while the findings resonate with previous research, they also indicate how tensions may appear differently in a dynamically networked and established GDW setting. Rather than

being caused by onshore-offshore oppositions, we propose that the identified tensions are work-context related. As such, they seem to represent recurring issues playing a role above the potentially deeper-rooted tensions, such as local identities and contexts (cf. Brooks et al. 2020; Levina and Vaast 2008) and cross-cultural differences (cf. Cramton and Hinds 2014; Ravishankar 2015). The presented discourses convey interactive and collaborative behaviors, sense-making, and empathy, which have been identified to alleviate potential tensions in the more mature phases of GDW (Brooks et al. 2020). Thus, the latter findings empirically support and complement those from previous research.

From a more practical perspective, the dualistic onshore-offshore relationships seem to have diluted in this case, potentially due to years of experience of global work and by the influence of a “universally recognizable” organizational culture (Ravishankar 2015). While aspects, such as cultural differences will hardly disappear, perhaps people learn to manage them as collaboration matures, and with the support of formal and informal managerial means (Brooks et al. 2020). These means could include designing metrics that help teams operate as one and promoting discourses of open communication (cf. Ravishankar 2015). Complementing the phasal model of GDW tensions (Brooks et al. 2020), we propose that also in a networked environment where work allocations can change based on resources, competency, technology requirements, and other factors, these tensions may be recurring (cf. Brooks et al. 2020). We, further, suggest that this could happen until an organization has enough accumulated capability to proactively acknowledge, address, and capitalize on the potential tensions (cf. Gibbs 2009), as changes take place.

Finally, locations such as India today, are important contributors to innovation globally (Mittal 2012). Therefore, while viewing GDW through an onshore-offshore lens is relevant, it may provide a somewhat partial picture. To complement the view, we would like to propose moving towards reframing the question of GDW tensions to actively involve the development of organizational learning (Levinthal and March 1993) capabilities in mutual relationships among teams distributed across the world and operating as one organization. Each location has their own characteristics, challenges, and capabilities, but they are working for a common goal. In the end, identifying “with a larger collective” appears as a key to effective knowledge generation, utilization, and transfer by members of a network (Dyer and Nobeoka 2000). Therefore, as further research, it could be fruitful to explore, how tensions in GDW appear in broader organizational and work-related contexts, such as organizational learning (Levinthal and March 1993), or innovation and change (Smith et al. 2017).

As the main limitations, we wish to highlight two aspects. First, the paper explores the research problem from the perspective of senior professionals of a single location of the company in India. In the scope of the study, it was possible to address the limitation of a single location by discussing the findings for validation also with representatives from another company location in Europe. Second, the analysis was primarily conducted by the interviewing researcher. This limitation was addressed by the iterative analysis in collaboration with the company representatives and academics, as described in the method section. Our subsequent steps include data collection in additional company locations, cross-case analyses between data sets (Yin 2018) in collaboration with practitioners and researchers, and, thereby, providing a richer picture of the research problem for further theoretical and practical contributions.

In conclusion, this paper presented three sources of work context-related tensions and several unifying discourses with the perspective of senior professionals engaged in globally networked R&D work in India. By the networked organizational setting, the study complements the onshore-offshore positions view of GDW. The findings contribute to research and practice in understanding and managing GDW tensions beyond onshore-offshore oppositions and cross-cultural differences in networked and continually changing operating environments. While limitations exist, we believe these insights are valuable for learning and development of GDW practices. Finally, we wish the findings encourage further exploration of organizational oppositions in GDW from perspectives, such as organizational learning capability.

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