Backstage Matters:

Collective Energy and Information Sharing on Global Teams

Wenjie Ma
Shanghai University of International Business and Economics
1900 Wenxiang Road
Songjiang, Shanghai, 201600
China
Tel: (021)67703396
E-mail: mawenjie@suibe.edu.cn

Leslie A. Perlow*
Harvard Business School
Soldiers Field
Boston, MA 02163
United States
Tel: (617) 495-6173
Email: lperlow@hbs.edu

Eunice Eun
Yale School of Management
165 Whitney Ave
New Haven, CT 06511
United States
Tel: (203) 432-5635
Email: eunice.eun@yale.edu

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Corresponding to: lperlow@hbs.edu

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ABSTRACT

It is well documented that information sharing – which is central to team effectiveness – is complicated by cultural and geographical factors. However, little is known about the process of information sharing between subgroups within global teams. Building on Goffman's (1959) notions of frontstage – for all the world to see – and backstage – for only you (or your subgroup) to see, we explore how backstage (intragroup) dynamics affect frontstage (intergroup/global team) dynamics. In a concurrent ethnographic study of two global teams, each with subgroups in both the US and China, we discover that it is not only what was shared with the global team that matters, but also what is not shared on the frontstage but shared only on the backstage. Backstage dynamics may undermine – but also in some cases improve – global team information sharing, based on the collective energy that emerges among co-located subgroup members. We document the self-reinforcing relationship that exists between collective energy shared among sub-team members in the backstage and the information shared amongst the entire global team on the frontstage. Our findings have both theoretical and practical implications for the study of global teams, intergroup dynamics more generally, and the future of work.

Keywords: Energy, Information Sharing, Global Teams, Ethnography, Frontstage and Backstage Interactions.

The world is increasingly hybrid. It is now more common than ever to find yourself with a group of people physically co-located in a meeting room, while others, some from halfway across the world, join the meeting via Zoom. When you hang up the Zoom call, those of you together in the room are likely still there, sharing reflections on, or reactions to, the meeting and/or meeting attendees. This tendency is especially common when the people in the room share an identification that is different from those not in the room (e.g., cultural, work team, etc.). The subgroup – now co-located without others present – may express a reaction, and more often than not, this reaction, especially if critical, is kept amongst the co-located subgroup and not shared later with other members of the larger group. But have you ever stopped to consider how those conversations might affect the work dynamics of the

larger group? Drawing from Goffman's (1959) notion of *frontstage*, where a person is present before a particular set of observers, and *backstage*, a place where the performer could come "out of character" and relax, we refer to these conversations within a subgroup, unknown to others in the larger group, as backstage interactions and explore how they affect global team dynamics.

Global teams are teams comprised of members who carry out interdependent tasks while dispersed across countries, cultures, and time zones (Maznevski & Chudoba, 2000; Reiche, Lee, & Allen, 2019). In the post-pandemic world, global teams are more prevalent than ever (Caligiuri, De Cieri, Minbaeva, Verbeke, & Zimmermann, 2020; Schlaegel, Gunkel, & Taras, 2023). Due to the geographic distance, global teams usually consist of subgroups that are physically co-located and far away from other members of their larger global team and rely on digital technology, such as zoom meetings, emails, or instant messaging tools, to communicate about and coordinate their work. Given this, backstage interactions within subgroups of global teams are far likelier to happen after meetings/interactions end, as subgroups are co-located and far from their teammates.

According to Goffman (1959), it is on the backstage that the performer can let go of his frontstage façade. When performers go backstage, where the audience cannot see or hear them, they often disparage the audience in a way that is contradictory to the treatment given to the audience on the frontstage. In global teams, such backstage subgroup interactions – the conversations sharing reflections on the global meetings – are a way to share thoughts and feelings amongst themselves that they did not or could not on the frontstage. However, little is known about these backstage interactions or their effects on future frontstage interactions

as they are difficult for the researcher to observe and unknown to those not present.

We had a unique opportunity to conduct a concurrent ethnographic study of two global software development teams within the same division of a multinational company. Both teams had sub-teams in the US and China, and we had members of our research team stationed in both locations. This arrangement enabled us to conduct concurrent observations and collect ethnographic data about the daily lives of the team members in both locations in real-time, including how they interacted with their co-located team members and their global team members. One of the most powerful aspects of our concurrent observation was that the team members we observed only knew what was presented in their global meetings, but our researchers had access to what happened not only on the frontstage at the global meetings but also on the backstage of their co-located subgroups, through the notes that our research team shared each night. This gave us insight into what was shared and *not* shared with the global team. We were also privy to how each side heard and experienced what those at the other location said and did. For instance, we observed a team member frequently saying "yes" while shaking his head "no" while the other subgroup was talking and under the impression that they were all agreeing to work on the task in the meeting. The moment they hung up the phone, the same person shaking his head yes would start complaining to his local sub-team about the work being asked of him.

Conducting a concurrent ethnographic study enabled us to uncover how both the frontstage interactions – known to everyone on the global team – and the backstage interactions – those known only to the members within the co-located sub-team – affected overall global team dynamics. In this process, two important factors surfaced: frontstage

information sharing and backstage collective energy. First, we discovered that for global teams, frontstage information sharing matters. It was not only what was shared with the global team that mattered, but also what was *not* shared – both in terms of information and their feelings. Second, we came to appreciate that frontstage information sharing was highly intertwined with a crucial factor that had been largely underexplored in prior studies of global teams—namely, the collective energy that emerged from backstage interactions and affected global team dynamics.

Collective energy refers to a shared experience and demonstration of affect among unit members in their joint pursuit of organizationally salient objectives (modified from Cole, Bruch, & Vogel, 2012). In our case, we found that both teams in our study experienced the same code ownership change[1] which set off similar levels of collective fear for the Chinese sub-teams. Yet, despite the similarities between the teams, what happened to them and how they initially felt, the two Chinese sub-teams in our study each shared information differently with their global counterparts, which further affected their collective energy, and, in turn, the information shared. Nine weeks later, they ended with different levels of collective energy: one subsidiary sub-team felt collective anger against, while the other sub-team felt collective appreciation toward, their HQ teammates. We describe how frontstage information sharing and backstage collective energy affected each other and evolved. We also open the black box of subgroups' backstage interactions, revealing how information sharing amplified individual energy –positively or negatively – and how individual energy grew into collective energy, affecting future information sharing.

[1] "Code ownership" is a term used by software developers to designate control over the source code and responsibility over what goes into a product or module (Metiu, 2006).

Our paper contributes to the study of global teams by enriching the understanding of what affects information sharing, a central purpose of global teams. Due to geographic distance (Cramton, 2001), time zones (Montoya-Weiss, Massey, & Song, 2001), cultural differences (Rai, Maruping, & Venkatesh, 2009), status distinctions (Metiu, 2006), and language diversities (Hinds, Neeley, & Cramton, 2014), global teams are often saddled with problems around information sharing among subgroups. Researchers have explored factors on global teams that can either amplify or minimize such problems (e.g., Eisenberg, Post, & DiTomaso, 2019; Lu, Swaab, & Galinsky, 2022; O'Leary, Wilson, & Metiu, 2014). However, we know little about how energy affects information sharing on global teams. It has been found however that positive energy is the "fuel that makes great organizations run" (Dutton, 2003: 7), and negative energy, such as exhaustion, impacts work life and organizational functioning (Wright & Cropanzano, 1998). Despite its importance and its prevalence in global teams, there are surprisingly few studies that have previously explored how energy affects global team dynamics. This study enriches our understanding of global team dynamics, and the relationship between information sharing and collective energy. Furthermore, our methodology enabled us to observe *both* the frontstage and backstage of the global teams we were studying and thus provided rich insights about how interactions on the frontstage and the backstage each affect information sharing and collective energy exchange. We therefore contribute to research on intergroup dynamics more generally, showing how backstage interactions among members of one subgroup, unknown to or silenced from the other, affect and are affected by frontstage interactions of the larger team. Our findings also have practical implications for improving information sharing on global teams.

INSIGHTS FROM THE LITERATURE

Global Teams and Information Sharing

It is the new normal for multinational enterprises (MNEs) to conduct business using global teams consisting of members dispersed across countries, cultures, and time zones (Maznevski & Chudoba, 2000; Reiche et al., 2019). Global teams have become particularly important since the COVID-19 pandemic (Caligiuri et al., 2020; Schlaegel et al., 2023). In 2021, it was found that 69% of employees worked with team members in a different country every week, while 30% of them worked with global team members every day (G-P, 2021).

Global teams in particular depend on being able to effectively share information, as team members are distributed across different sites which makes it difficult to share information (Eisenberg et al., 2019; Hinds & Bailey, 2003; Polzer, Crisp, Jarvenpaa, & Kim, 2006). As a result, members from different sites may experience information asymmetry and a lack of mutual knowledge (Cramton, 2001; Lauring, Drogendijk, & Kubovcikova, 2022; Olson & Olson, 2000). Mutual knowledge serves as the foundation for team members to ensure they are on common ground, which is of vital importance for the coordination of actions (Clark, 1996; Cramton, 2001). When global teams fail to share adequate information, it is difficult for them to know their remote team members, their work, and their team's vision (Metiu, 2006). Failure to get and maintain such information can cause misunderstandings in global teams (Olson & Olson, 2000; Raghuram, Hill, Gibbs, & Maruping, 2019; Sole & Edmondson, 2002), making it easier for team members to make personal attributions versus situational ones (Cramton, 2001; Hinds et al., 2014), ultimately resulting in problems with coordination and conflicts related to tasks, processes, and relationships (Hinds & Bailey, 2003). What's worse, in global teams, geographic distance is usually accompanied by cultural

differences (Lu et al., 2022) and language differences (Hinds et al., 2014), all of which have the potential to activate faultlines among subgroups (O'Leary & Mortensen, 2010), which can cause more conflicts and less trust (Polzer et al., 2006). Increased conflicts and decreased trust can result in in-group/outgroup distinctions (O'Leary & Cummings, 2007) and further intensify competition (Brewer & Kramer, 1986; Schopler & Insko, 1992), reifying status dynamics of different subgroups (Metiu, 2006; Hinds et al., 2014).

Based on the critical role of information sharing on global teams, researchers have further explored factors that can either amplify or minimize problems regarding information sharing faced by global teams, such as shared identity (Hinds & Mortensen, 2005; O'Leary et al., 2014), coworker familiarity (Espinosa, Slaughter, Kraut, & Herbsleb, 2007; Hinds & Cramton, 2014), subgroup configuration (O'Leary & Mortensen, 2010; Polzer et al., 2006) and the role of the team leader (Eisenberg et al., 2019; Lu et al., 2022). For example, Rai et al. (2009) argued that for offshore project teams, shared norms and values can reduce the need for monitoring and therefore facilitate the transfer of information and integration of specialized knowledge and capabilities. Hinds and Cramton (2014) found that distant coworkers can form closer relationships and facilitate information sharing, by visiting the other's site. When visiting each other's sites, teammates from remote sites and headquarters have more opportunities to observe their partners' work, building coworker familiarity, leading to more frequent communications, increased personal disclosure and responsiveness, and more discussion of difficult topics.

One aspect that has been underexplored in the study of global teams is information that has been *withheld* from each other. Information withholding refers to "the intentional failure

to share potentially useful information with others" (Haas & Park, 2010: 873). Research has documented that information withholding runs counter to organizational goals regarding knowledge sharing and cooperation, creating difficulties in communicating effectively, which can lead to coordination inefficiencies and low-quality decision-making (Faraj & Sproull, 2000), negatively affecting an organization's performance (Evans, Hendron, & Oldroyd, 2015). For global teams, the phenomenon of information withholding has become all the more severe as individuals and organizations tend to create an "idealized self-presentation" for their audience when they rely on digital technology to share or disclose information (Reischauer & Ringel, 2023). However, due to difficulties in capturing withheld information, to date, little is known about this phenomenon on global teams.

Several studies of global team dynamics have further implied that group energy may affect subgroups' abilities to work together. For instance, Hinds et al. (2014) found that language asymmetries lead to frustration. Cramton (2001) found that a lack of mutual knowledge leads distributed team members to blame each other. Metiu (2006) found that a lack of answers leads to disappointment. Lee, Mazmanian, and Perlow (2020) described that with more sharing, disclosing, and speaking up in global teams, remote team members felt more connected. While these studies of global team dynamics suggest that collective energy may emerge, they provide little insight into *how* energy affects global teams working together, or how such energy affects information sharing among global team members.

Energy at Work

In the organizational behavior literature, energy is usually conceptualized as an umbrella concept that refers to "the subjective experience of activation that enhances an individual's

capacity to do work" (Zhang, Spreitzer, & Qiu, 2023: 1). Energy is critical for individuals to conduct their work effectively (Baker, 2019; Bennett, Campion, Keeler, & Keener, 2021; Quinn, Spreitzer, & Lam, 2012). Scholars have explored various forms of energy at work, including positive forms such as vigor (Carmeli, Ben-Hador, Waldman, & Rupp, 2009; Zhang et al., 2023), and negative forms such as exhaustion (Cross, Rebele, & Grant, 2016; Leonardi, 2021), and fatigue (Bennett et al., 2021; Bolino, Hsiung, Harvey, & LePine, 2015).

Others have extended the idea of energy at work into a multilevel model; for instance, Baker (2019: 374) identified three levels in unpacking the concept of emotional energy and what it means: "micro (individual-level emotional energy), meso (dyadic or relational energy), and macro (e.g., group emotion, productive energy, energy networks)." Moreover, scholars have argued that what occurs on one level can influence what happens at another (Ray et al., 2023). Indeed, there is growing evidence about how energy at the individual and dyadic level influences each other. For example, how one personally regards others was significantly more associated with task interaction than the assessments they made about their task-related competence (Casciaro & Lobo, 2008). Moreover, relational energy has been found to influence employees' job engagement and further influence their job performance (Casciaro, Lobo, Wilhelm, & Wittland, 2022; Owens, Baker, Sumpter, & Cameron, 2016). Quinn and Dutton (2005) proposed a model of energy-as-conversation describing how individuals create and reduce energy in the process of speech acts, and how this resultant energy affects subsequent speech acts.

Researchers have also begun to call for more exploration of energy at the macro level (Bruch & Ghoshal, 2003; Cole et al., 2012; Kipfelsberger, Bruch, & Herhausen, 2019; Volk,

Pearsall, Christian, & Becker, 2017). As Cole et al. (2012:447-8) pointed out, "an individual-level focus on energy… ignores the fact that most contemporary work environments require individuals to align with a work group, team, and/or the organization." After all, workplaces are where individuals face situations that require collective responses and shared interpretations (Cole et al., 2012). Thus, the concept of *collective* energy may need to be established (e.g., Kahrobaei & Mortazavi, 2016); collective energy refers to a shared experience and demonstration of affect among unit members in their joint pursuit of organizationally salient objectives (modified from Cole et al., 2012). Collective energy is important in an organization because of its link to group cohesiveness, which predicts work performance (Chang & Bordia, 2001; Mullen & Copper, 1994). Despite its importance, we found few studies exploring how collective energy affects work-group dynamics.

Backstage Interactions

A core insight in our work was the importance of what happened in the moments just after the global meeting ended, when the sub-team members disconnected from the other side. We turned to Goffman (1959)'s dramaturgical model of social life to unpack what we were observing: where behavior on the "frontstage" referred to what is shared "intentionally or unwittingly" in front of an audience of observers (Goffman, 1959: 22), and behaviors in the "backstage" were where the "impression fostered by the (frontstage) performance is knowingly contradicted" (Goffman, 1959: 112). Goffman suggested that when a person performs in the presence of other people, some aspects of said performance were highlighted on the frontstage – and others, which might disgrace the performer, were repressed and aired out on the backstage.

Since this concept of self-presentation on the frontstage and backstage was first documented, it has been used in a range of applications, such as in service marketing to showcase the idea that the service experience as a whole can be described as a kind of theatre (Grove & Fisk, 1992); in the hospital and medical fields wherein physicians "perform" on the frontstage, telling patients their diagnosis, and plan on the backstage—trying to figure out how to tell the patient their diagnosis (Barton, 2004); in online environments such as social networking and social media platforms, wherein individuals put on a performance on the frontstage to an online audience (Ross, 2007); and in teaching and the classroom, where the classroom acts as the stage (Van Tartwijk, Brekelmans, Wubbels, Fisher, & Fraser, 1998).

Taken together, these different streams of literature help us understand the importance of information sharing for global teams, the emergence and propagation of collective energy, and how individuals can behave differently on the frontstage and on the backstage, which are all central to the effectiveness of global teams. But we are still left with our research question: How do backstage (intragroup) dynamics affect frontstage (intergroup, global team) information sharing? In other words: What is happening on the backstage of global teams and how does that affect the global team's ability to get its work done?

In what follows, we first describe our methods and then elaborate in detail about how two global teams experienced the same code ownership change—which set off a similar experience of negative energy—but ended in vastly different places in terms of their team's level of collective energy and information sharing. We describe the self-reinforcing relationship between frontstage information sharing and backstage collective energy on these two global teams. Our findings have both theoretical and practical implications for the study

of global teams, intergroup dynamics more generally, and the future of work.

DATA AND METHODS

Research Setting

We conducted a seven-month concurrent ethnographic study at a large high-technology company, GeoCo (pseudonym), headquartered in California, USA, with R&D centers in North America, South America, Europe, and Asia. We studied two global software development teams that were distributed across the same locations: sub-teams in the US (HQ) and in the China R&D Center (C-Center). This allowed us to compare cases with parallel multicultural and organizational contexts (Perlow, Gittell, & Katz, 2004).

We worked with a Vice President in HQ and the head of the C-Center to identify two comparable global teams: Team Radius and Team Prism. Both global teams worked in the same department which had approximately 300 people worldwide, and their department's senior director, Jacob (to protect informants, all the names in this paper are pseudonymous) located in HQ reported to a Vice President right below the Chief Technology Officer (CTO), as shown in Figure 1. The work of these two global teams (Radius and Prism) shared the same end goal: to provide a development, testing, and production environment that other developers in GeoCo could use to create, verify, deploy, and host applications and services. Thus, both teams' customers were similar in need and located in HQ. Both global teams also used two-week "sprints" wherein they were expected to deliver and showcase their work at sprint demo meetings. For both teams, tasks that were not finished within the designated sprint would get pushed into the following sprint, with the same consequences. Both teams were comparable along key dimensions that have been found to create variance on subgroup

dynamics in global teams: team size (O'Leary & Mortensen, 2010) and demography (Polzer et al., 2006), communication technology (Cramton, 2001), language (Hinds et al., 2014), status (Metiu, 2006) and status loss (Neeley, 2013), as well as task design (Kumar, van Fenema & von Glinow, 2009). Table 1 summarizes the similarities of Teams Radius and Prism along key dimensions that have been shown to affect global team dynamics.

Insert Figure 1 and Table 1 about here

Data Collection

Concurrent observations.

For seven months, we had two researchers, stationed full-time at each location, collecting ethnographic data about the daily lives of Teams Radius and Prism, especially how they interacted with their co-located team members as well as their global teammates. A third team member spent time at both locations, which enabled us to ensure consistency across sites. Observations of each team averaged eight to twelve hours per day, lasting for a period of seven months (126 days in HQ, 127 days in C-Center).

Extensive field notes were typed each day and exchanged each night. In this way, as one research team member finished notes from the day, the other was just getting started observing, and was able to read the other's notes to gain a richer understanding of what had transpired while the other side had been sleeping. We also exchanged messages through emails and a Chinese instant messaging application, WeChat, to notify each other about notable events that happened each day at our own location in real-time. This provided us with a great deal of data about the other side, including information that the team members themselves often did not possess, enabling us to pay attention in areas we might not have

otherwise. Daily notes ranged from 2,000 to 12,000 words, averaging 5,000 words each day, per person. Overall, we gathered field notes of more than 12 million words and over 4,000 pages, single-spaced.

Meeting observations.

Given we were focused on information sharing, global meetings were a natural place to study, as many relevant behaviors pertaining to communication, coordination, and collaboration can be observed in meetings (Köhler, Cramton, & Hinds, 2012). Research has also increasingly focused on meetings as an important organizational phenomenon and has shown that what happens in meetings greatly impacts employee attitudes and behaviors outside the meeting context (e.g., Rogelberg, Allen, Shanock, Scott, & Shuffler, 2010). We conducted in-depth observations of Team Radius' and Prism's global meetings.

Teams Radius and Prism had four kinds of recurring meetings: daily local team meetings to update engineers' daily status; local and global sprint planning meetings at the beginning of each sprint to introduce their plans for the upcoming two weeks; weekly global sync-up meetings for their sprint planning updates; and local and global sprint demos at the end of every two weeks to share what they had completed in the sprint. Conveniently for our observations, the two-week sprints were staggered; week 1 of Team Radius' sprint was week 2 of Team Prism's sprint, and vice versa. In this way, we were able to attend all recurring global sprint planning, sync-up, and demo meetings. Overall, we attended 45 global meetings for Team Radius, 35 global meetings for Team Prism, and one department-level global meeting with both teams. In each case, we had researchers at the meetings, co-located with each sub-team.

Ethnographic interviews.

At the beginning of the project, we conducted 30 exploratory semi-structured formal interviews, with the purpose of building rapport and gaining a basic understanding of the two teams we were going to observe (e.g., work structure, communication, and coordination with remote sub-teams or other teams). During the project, the research team also conducted regular interviews to understand the progress of teamwork. In total, we conducted an additional 29 formal interviews: 15 in the United States and 14 in China.

Once the project officially began, we conducted mostly informal interviews to further understand the information sharing that occurred between the global teams during this process as well as the informants' interpretations of and energy around the specific events that took place. During each global meeting, if the researchers observed that there were some topics of interest that arose in the meeting, they would be shared with the remote researcher in real-time and they would both ask the respective team members at the end of the meeting the same question(s), in order to get the two sub-teams interpretations of the same problem, to understand their convergence and differences as well as their feelings of energy, and to gain a better understanding of the source of misunderstanding(s). For example, in a global meeting, when one researcher observed frustration emerge, she would ask this person about their frustration, and, at the same time, share with the researcher in the other location so they could seek to understand the experience of those dealing with the frustrated engineer.

Informal and department-wide activities.

An important strategy to build trust with our informants was to attend informal activities in the office, including breakfasts, lunches, and coffee breaks. During these informal activities, informants tended to talk in further detail about their personal attitudes toward their

work, projects, and remote teammates. We also attended department-level activities, such as team-building outings and all-hands meetings. In addition, we spent time with both sides of the global teams outside of the office as well (e.g., meals, walks) to build rapport.

Data Analysis

As mentioned above, we worked with a Vice President in HQ and the head of the C-Center to identify the teams for our study. Team Radius was chosen as an exemplar, and the C-Center sub-team manager, Wei-Jian, was highlighted as a top performer—a self-described "loyal company man." Yet, as we began the study, Team Radius had just shifted from sole code ownership in the C-Center to a shared model with HQ. Nine weeks after we began our observations, frustrated with what he perceived as ever-worsening relations with HQ, Wei-Jian accepted a job offer at a local company and quit GeoCo.

Four months into our observation, Team Prism underwent the same shift in ownership transfer: from sole code ownership in C-Center to shared code ownership with HQ, similar to Team Radius. While we have multiple months of data for both teams, we focused our analysis on the nine weeks that followed their shift in code ownership, as that is the amount of time we observed Team Radius before their C-Center sub-team leader announced his departure. We did so to maximize commonalities across the two teams, but it is important to note we found no notable changes in the patterns we observed in subsequent weeks. Two major stages of analysis drove us from raw data to theoretical implications (Gioia, Corley, & Hamilton, 2013; Langley & Abdallah, 2011), though the overall process was iterative.

Stage I: develop thick descriptions.

We first wrote thick descriptions for the two global teams, including their team structure, and how they interacted (and shared information) with the larger global team as well as their

local sub-team members. Describing not only what was shared in the global meetings, but also what was said after they disconnected, provided a rich window into the hidden energy of the subgroup as it was in these moments that sub-team members often expressed their true feelings. Because hidden energy was often not expressed to the other sub-team, the other side would have no idea that there were differences with which they needed to deal. These findings led us to focus specifically on two key elements: (1) information sharing: information shared and withheld in the global meetings, as well as information revealed within the local sub-team; (2) energy expressed both in the global meeting and on the moments that they hang up their phone, when only amongst sub-team peers.

Stage II: identify key interaction patterns.

We first coded the frontstage interactions that both teams had in their global meetings. After having coded two meetings of global Team Radius and three meetings of global Team Prism, we generated 11 first-order categories and no other new category emerged after that. We continued coding all the global meetings for the subsequent nine weeks for both Teams Radius and Prism, which led to three themes describing global meeting interactions. We named them: (1) withholding information, which refers to one side withheld information – purposefully or not – that the other side may have needed for their work, including withholding differences about work, silenced non-verbal behavior on one side, side conversation on one side and not response to questions being asked; (2) obligatory information sharing, which refers to the regular information exchange process that occurred in the global meetings, including assigning work, asking about work, and providing updates and explanations about work; (3) expansive information sharing, which refers to one side

sharing detailed and expansive information that the other side may need or even information that would sometimes be far more in-depth than the job requires, including sharing expansive knowledge about work, sharing personal information, intending to provide help for the other side, and having small talk showing care about each other.

We then analyzed the collective energy that emerged in the two global teams. Since this collective energy notably emerged during Teams Radius and Prism's backstage conversations, we coded what took place once teams had disconnected, describing how team members responded to the global meetings. From the HQ side, the global meetings tended to take place during their early evenings, and the engineers usually hung up the phone and headed straight home. We observed that engineers in HQ usually did not talk about the meeting when they walked out of the meeting room. Therefore, the backstage activities we observed happened predominantly on the C-Center side. After going back and forth between our data and the literature (Glaser & Strauss, 2009), we generated 5 first-order categories and no other new category emerged after that: collective fear, collective frustration, collective anger, collective hope, and collective appreciation. The first three were clustered as "negative collective energy," which refers to the collective energy that would hinder global teams' ability to work together; the last two were clustered to "positive collective energy," which refers to the collective energy that would help teams work together.

In analyzing how collective energy evolved over time, we found that the initial remarks on both our teams were all categorically negative; a team member would make a disparaging remark about a task, process, or person—a difference that had until that point not been surfaced, certainly not on the frontstage in front of the other subgroup—and then that

comment either escalated into a collective negative direction or defused into a more positive direction, depending on the interactions that followed the first negative remark. We labeled these: (1) "escalating behaviors," including revealing unshared information locally, changing the conversation toward an emotional direction, and escalating the emotional response; and (2) "de-escalating behaviors," including revealing contextual information and de-escalating the emotional response.

In order to ensure inter-coder reliability, both researchers coded the first two weeks of data from their and each other's sites and discussed their coding results together. For the small number of places they did not agree, the third team member would join the discussion and help resolve differences. Once the coding structure had been agreed upon, both researchers coded all data, with an internal consistency over 80%, and all differences were discussed to agree on the final coding. Figure 2 illustrates the data structure.

Insert Figure 2 about here

FINDINGS

Code Ownership Change and the Accompanying Energy

The importance of information sharing for global teams

In the initial interviews with the team members of both global teams, everyone consistently pointed out the importance of effectively sharing information with one another in order to do their work in global teams. At GeoCo, all of their customers were located at headquarters (HQ), which had both geographic and temporal distances from their subsidiary locations. Remote team members often lacked adequate information since they were far away from the customers. According to an engineer in Team Radius HQ sub-team, "If you're

working here, you have the latest information, firsthand information. To succeed, we must always be around our customers." A Team Radius C-Center sub-team engineer also shared the same opinion, "We are a customer-oriented company, but our company doesn't have a market in China. All the customers are in HQ and other countries. We are far away from the customers, and it's more difficult to discuss tasks from a distance."

Team Prism members also acknowledged the importance of information sharing, both in HQ and C-Center. According to the Team Prism C-Center team leader, "There is a lot of communication, a lot of side talk, a lot of context that happens during lunch, in casual conversations, at the water cooler… and that is all lost because we are not on the same side of the ocean as our customers." Similarly, the Team Prism HQ sub-team leader also shared with us, "If you have something [C-Center] can drive completely on their own, with no direction from [HQ], then that would be better… The translation of customer needs to product development doesn't work well with a subsidiary team." Both sides of both teams emphasized the vital importance of information sharing for global teams at GeoCo.

Initial response to code ownership change: collective fear

For both Teams Radius and Prism, the decision to change the code ownership came from the senior manager of the department (and above), based on customer demands, and to improve information sharing between HQ and C-Center:

"The reason why we started the team here [in HQ] is because so many issues were happening during [California] time… people would come in at 8, 8:30 a.m., no one here knew the code, we would send the firewall to [C-Center], but the intensity gets lost, and there would be no response until 5 p.m. at the earliest. Those customer experiences were made worse, and this cycle would sometimes take a few DAYS. If you look at it mathematically, it doesn't happen very frequently. But when it happens, it's a big deal and very visible and needs to get done right this minute." *(Senior Director, Jacob)*

Both HQ sub-team leaders were tasked to share this code ownership change with their

C-Center counterparts and explain that the changes were aimed at helping C-Center get more information about what was happening in HQ. For both C-Center sub-teams, we observed that members were silent when their sub-team leader shared this news with them. However, when we asked them about the change, both teams shared their fear of losing ownership with us – though they had not shared their individual fears with the larger sub-team – as they interpreted the shift in code ownership as HQ's desire to gain control. Wei-Jian shared, "We have the capability to own more, but they [HQ] seem to not want us to have ownership." Similarly, Prism C-Center member shared, "Our team's work is central to the department. It will make [C-Center] all the more removed having less ownership. What happened in [Team Radius] will happen here."

Later collective energy in two global teams

By the end of nine weeks of observation, we observed different levels of collective energy in the two C-Center sub-teams. For Team Radius C-Center, their initial collective fear turned to shared anger toward HQ. When we interviewed C-Center team members about their cooperation with HQ, one engineer angrily shared with us, "[Radhesh] (HQ sub-team leader) never listens to us. They just make decisions and tell us what to do without telling us why!" In later interviews with Team Radius, both HQ and C-Center shared the belief that a global team could not work:

"I do not want to work in a remote center anymore… I don't believe it can work unless you're actually working at the company's headquarters, not dealing with any other remote teams—just your own."
(Team Radius C-Center manager, Wei-Jian, who resigned and shared why he left)

"When you're working with a remote team, they will always be misaligned on goals, priorities, and resources." *(Team Radius HQ team member)*

In contrast, for Team Prism C-Center, the initial fear shared by the team members turned

to a shared appreciation for their global team. In the later interviews, both sub-team members shared the belief that having a global team was a profound advantage:

"The rhythm we developed, though it was hard at the beginning, has really worked, and we have had big successes with big initiatives, like building a data center in record time together. We got it up in a week, whereas in the past, it would have taken three weeks." *(Team Prism HQ engineer)*

I used to worry [about ownership], but now I appreciate sharing tasks and projects with our HQ sub-team." *(Team Prism C-Center engineer)*

The Evolution of Information Sharing and Collective Energy

In the following sections, we describe how we repeatedly observed the frontstage of the global teams' meetings, followed by backstage reactions, and how these backstage dynamics further affected future frontstage interactions. For both global teams, we divided our analysis into four stages: initial stage, early stage, middle stage, and later stage.

Team Radius

Initial frontstage: withholding information about resource allocation

With regards to resource allocation and the code ownership change, HQ's plan was to have 2 engineers from HQ side and 2 engineers from C-Center side on both of Team Radius' top priority tasks. Due to the fear about the possibility of losing ownership, Wei-Jian wanted to maintain a sense of ownership for his team. Wei-Jian sent an email to Radhesh, suggesting that they staff the most important task with 4 engineers from the US, and the second highest priority task with 4 engineers from China. According to Wei-Jian, he was willing to "sacrifice" the top priority task to HQ to have ownership:

"I'm giving the number 1 priority task to them and asking for a task over which we still have ownership. I want to have more ownership – my team has the ability to do that. If they still go with the 2x2 model, I won't let my best engineers become involved. If they agree with my plan, I will put my best engineers on the project."

Though Wei-Jian shared with us the reason for this request is to "have more ownership," he did not mention that information in the email; instead, he argued the reason for the request

was to “minimize possible overhead” which led to Radhesh know nothing about the C-Center’s desire for ownership (Appendix 1a). The next day, Radhesh wrote back to Wei-Jian, rejecting Wei-Jian’s suggestion (Appendix 1b). Wei-Jian simply replied “OK” to this email. They then had a one-on-one to discuss resource allocation, and the final decision was not changed. On the frontstage, Wei-Jian summarized the final plan to Radhesh and explained the resource allocation; there was no sign that Wei-Jian was not satisfied with that decision (Appendix 1c).

Initial backstage: reinforcing collective fear

To his C-Center team, Wei-Jian expressed frustration about this decision. In a local meeting, Wei-Jian sighed and then shared with team members, “[Radhesh] rejected my proposal and insisted on the co-ownership model,” and interpreted the reason for code ownership change as HQ wanting to take the C-Center’s glory away:

“What we (C-Center) are working on has become more important; since our CEO has named it as a key priority, it is an opportunity for ‘glory’... It will make whoever does it look good. [Radhesh] does not want to give that glory to me and my team.”

What he shared with them led his team members to feel not just nervous that HQ might take away their ownership, but also reinforced the initial fear that the change was indeed to take their ownership away, as shared by one lead engineer, “Last year we did very well on this project. [HQ] saw it, and they took it away.”

Early frontstage: withholding work preferences

Frontstage global meetings were a place where HQ and C-Center shared information with each other in order to finish their tasks. After global Team Radius started to work together, we documented that their frontstage interactions were mostly obligatory information sharing, which included interactions like assigning work, asking about work statuses, as well

as corresponding updates about work, without going into much detail. Beyond that, there were a few moments when either HQ or C-Center shared more expansive information with each other. However, what caught our attention in this early stage was the *withholding* of information from C-Center. Firm in the belief that the HQ team was out to steal C-Center's glory, after global Team Radius started to work together and had global meetings, we documented quite frequently that the C-Center sub-team provided limited context or even withheld their real thoughts. When an HQ teammate was talking about a task on the conference call, the C-Center engineers would check their phones or their computers, or shake their heads, sigh, or frown. Though these behaviors were happening during the global meetings, they were actually not visible to HQ. The HQ sub-team only knew that the C-Center sub-team would routinely react to what was said, saying "yes," "mm-hmm," and "OK." For example, in a global meeting in week 1, our HQ and C-Center researchers documented field notes as if they were not in the same meeting. Our HQ researcher described what she saw in the HQ meeting:

Radhesh gave Wei-Jian a summary of the collection of standards for GeoCo services. Their conversation is straightforward: Radhesh begins speaking. Wei-Jian responds with "mm-hmm." Wei-Jian asks questions about [feature name] and the timing of work, and Radhesh answers, giving detailed background. Wei-Jian acknowledges with "mm-hmm." (Week 1 California notes)

During the same period of time, our C-Center researcher's notes were as follows (our coding results are shown in brackets on the side):

Radhesh: So [Wei-Jian], for GeoCo services… (explaining the status)	[Provide update and explanation about work]
Wei-Jian *(staring at his cell phone):* Hmm, hmm, hmm.	[Silenced non-verbal behavior on one side]
Ming-Yu checked his phone silently.	
Wei-Jian: My concern is – if we think [feature name] is an issue, we should stop.	
Radhesh: May I interrupt you? This has nothing to do with [feature name] … It doesn't matter what kind of template, it's a	[Provide update and explanation about work]

generic issue… the code comes from one source… (explaining details)	
Side notes: While Radhesh was talking, Wei-Jian smiled, said mm-hmm, but shook his head. He disagreed with Radhesh. But he didn't say anything, just continued asking questions.	[Silenced non-verbal behavior on one side]
Wei-Jian: OK. Radhesh, I know we should start. Do you think we should start on this sprint or next sprint?	[Withhold differences toward work]

Early backstage: from individual frustration to collective frustration

Without knowing Wei-Jian withheld information (shaking his head no), the HQ sub-team came out of the meeting room assuming they reached a consensus. Radhesh told our HQ researcher, "These meetings are all technical details that we need to hammer out together in order to get our work done," and joked, "It's good for us, but you will likely feel very bored." We then observed that HQ engineers went back to their cubes, packed their backpacks, and said goodbye to each other, without further discussion about the global meeting.

On the other side of the ocean, we observed that Wei-Jian initiated a conversation questioning the global meeting, changing the conversation from discussing the work to an emotional direction, and those who attended this global meeting began complaining, creating, and amplifying collective frustration:

Wei-Jian: I don't get it. Does the code come from different sources or a shared one?	[Reveal unshared information locally]
Ming-Yu: From the same source; they wouldn't be able to share otherwise.	[Provide update and explanation about work]
Wei-Jian: OK. That wasn't clear to me from that conversation in the meeting. *(Frowns)*	[Change the conversation toward an emotional direction]
Ming-Yu *(raising his voice)***:** I have no idea about what they want to do, actually! They just talked to each other… they talked to each other and then gave me a decision!	[Escalate the emotional response]
Wei-Jian: You know, you're right. *(Raises voice)* The point is: Radhesh thinks he knows everything! If you want my advice: if you don't understand, just stay in silent!	[Escalate the emotional response]
Ming-Yu: Exactly! Just like last time! That's what I usually have to do!	[Collective frustration]

The above case captured the early information sharing and collective energy evolution pattern: that the C-Center sub-team withheld their differences about how to do the work and then revealed this information and frustration only on the backstage within their sub-team. Often, with the team leader leading the conversation to an emotional direction, negative individual energy quickly turned to negative collective energy as the conversation went on and became further reinforced within the sub-team.

Middle frontstage: withholding work preferences and process knowledge

As the collective frustrations grew, in the middle stage, we documented that in Team Radius's global meetings, there were fewer moments that C-Center would provide expansive information sharing, and instead, C-Center tended to withhold even more information. In the early interactions between HQ and C-Center, the information C-Center withheld was mostly about their work preference. For engineers, "there are a thousand ways to write codes, which can all make the software work." (Team Radius, C-Center engineer). Although C-Center withheld their different work preference, they would often still do the work as HQ required or suggested. However, in the middle period of global meetings, we observed that the C-Center started to withhold not only their work preferences but also their work decisions more generally, such as saying yes in the global meeting while deciding not to work on the tasks. The following illustrates a typical example of how information was shared and withheld:

Ten minutes into the global meeting:	
Vinesh: So, I have sent an email to you about the code bug…	[Assign work]
Shao-Qi: Yeah, I got your email about it (explains technical details)	[Provide update and explanation about work]
Vinesh: That *is* something Doug is trying to work through, so if you could just help—	[Ask about work]
Shao-Qi: Currently, I am working on [feature PT], and I am sure that Doug can do this.	[Provide update and explanation about work]

Vinesh: Sure, Sure, Doug can take over the task… my question is could you help him look at what exactly needs to be tweaked in the—	[Ask about work]
Shao-Qi: Yes. I know the issue. But try to figure out the main problem… we need to look out for the other issues that can come up because of this.	[Provide update and explanation about work]
Vinesh: OK… you can tell Doug these details… that will help him…	[Ask about work]
Shao-Qi: Yeah, yeah, I'll help.	[Withhold differences]

In the above example, Shao-Qi initially insisted that Doug could do the work himself, but after Vinesh had asked a second time, Shao-Qi agreed that he would help Doug with the task.

Middle backstage: from collective frustration to collective anger

However, after they disconnected from the global meeting, we observed Shao-Qi's negative reaction toward this task, and Wei-Jian's escalation in this process, as shown in the following conversation:

The teams hung up, and the C-Center team began to discuss amongst themselves:	
Wei-Jian: What task does Vinesh want you to work on?	[Ask about work]
Shao-Qi*: (Sigh)* For some reason he asked me why this [feature] has these points… (He goes through all the task details.)	[Provide update and explanation about work]
Wei-Jian: Why are we **even** talking about those feature points?!	[Change the conversation toward an emotional direction]
Shao-Qi: Theoretically, there should be no data. But now there is data, thus there is a problem. I said OK, I can have a look at the data for you, but you need to bring the data to me. You know, I told Doug where he can get those data. It will only take him one hour to get them, but he didn't. Now he asks for help. I already told him how to do all this before! *(He keeps raising his voice, becoming angry.)*	[Reveal unshared information locally] [Escalate the emotional response]
Wei-Jian: Don't do anything for Doug. Don't help him. *(He frowns; his tone is firm.)*	[Collective anger]

We can see from the above conversation, on the backstage, Shao-Qi revealed that he had "already told Doug before how to do the work," though Shao-Qi did not raise this fact in the meeting. Wei-Jian led that conversation in an emotional direction with individual anger,

which resonated with Shao-Qi, raising a shared angry energy. Wei-Jian then escalated this negative energy by demanding, “Don’t do anything for Doug,” creating a collective anger. Ultimately, Shao-Qi did not contact Doug; however, Vinesh remained under the impression from the frontstage that Shao-Qi was helping Doug and that the work was in process.

The above case captured what had happened in the middle stage in terms of the frontstage information sharing and backstage collective energy evolution pattern: knowing that C-Center withheld their decision to *not* work on the assigned task, we observed that on the backstage, C-Center engineers would usually complain about HQ, changing the conversation to an emotional direction, reinforcing their collective frustration and anger toward HQ. Here, Wei-Jian played a key role in escalating negative energy, leading to emotional contagion (Barsade, 2002).

Later frontstage: withholding work knowledge

With frustration and anger continually escalating within Team Radius C-Center, in the later frontstage global meetings, we observed that C-Center engineers became openly uncooperative with HQ engineers. In fact, in this stage, most of their frontstage information sharing was documented as withholding information. Not only did they withhold their feelings about why they should do the work (or not), but the C-Center also started to withhold any semblance of understanding about shared work tasks. By the end of our observations, in Team Radius’s global meetings, we noted that though the Chinese engineers were physically present in the meeting room, they were often playing games and watching the news on their cell phones. Sometimes, they would talk in Chinese, so their HQ counterparts could not understand. When asked about the progress of their tasks, the C-Center sub-team members

usually provided limited information (e.g., “OK” or “I don’t know”), or no response:

Vinesh *(louder)*: So, those 8-10 custom cases Doug mentioned; how are they?	[Ask about work]
Wei-Jian: I don’t know. I don’t even know what those cases are for.	[Withhold differences toward work]
Vinesh: No, no, the dependencies are what differ within the custom cases. That’s what Doug mentioned at our meeting a few weeks ago, right? *He sounds frustrated.*	[Provide updates and explanation about work]
Ming-Yu: We cannot answer these questions because we haven’t yet investigated the code.	[Withhold differences toward work]
Radhesh: Didn’t we have a meeting about this a couple of weeks ago?! *He sounds incredulous—as if he can’t believe what he’s hearing from Ming. They had a meeting together a few weeks ago wherein they discussed C-Center’s looking at the code.*	[Provide updates and explanation about work]
Ming-Yu: Doug knows the whole code… we don’t know. We have to look.	[Withhold differences toward work]
Radhesh: OK, Ming, I’m completely lost. *He sounds exasperated.* We had all those meetings. You said you’d look at the code, and afterward, Doug mentioned he needed your help… I thought this would all get taken care of…	[Provide updates and explanation about work]
Silence from the C-Center side.	[No response]

In the above, when HQ asked about the progress of a task they assumed the C-Center engineers had been working on – the one on which Shao-Qi had initially agreed to help Doug in an earlier global meeting – Wei-Jian revealed that they had *not* actually worked on the task and refused to answer directly to the questions posed by his HQ counterparts. It is worth mentioning that we chose the above illustrative example given this was a follow-up relevant to the examples we illustrated above, so it would be easier for the reader to understand how information sharing and collective energy evolved over time. During our field observation, we documented these kinds of conversations about other tasks frequently in Team Radius.

Similarly, Team Radius-HQ members had many side conversations amongst themselves for increasingly longer periods of time. After a meeting in which the HQ sub-team went back

and forth amongst themselves for over 15 minutes, our C-Center researcher asked the C-Center team what the HQ team members had been talking about. One of the C-Center engineers explained, “This morning, they did not have their sprint planning meeting, so they were going over tasks. It had nothing to do with us. I didn’t understand either.”

Later backstage: reinforcing collective anger

In the later stages of our observation, C-Center’s backstage was captured with the following characteristics: firstly, we observed the complaints toward HQ sub-team members were not only limited to work but became more about them as people; secondly, we observed that Wei-Jian was not the only one who took the conversation in an emotional direction; in fact, in many cases, it was other team members who initiated the negativity toward HQ sub-team members, resulting in reinforced negativity. The collective energy became angrier and tinged with disrespect as shown here:

Ming-Yu: I said in today’s meeting that you had come back, and then he said, ‘Then assign it to Ling-Ling!’ *C-Center researcher’s notes: Ming-Yu imitated Robert, using a high-pitched, silly voice, but I noted that Robert didn’t say that or sound like this in the actual meeting; Ming-Yu was trying to make fun of Robert. (All the persons in the room laughed at the imitation of Robert.)*	[Change the conversation toward an emotional direction]
Ling-Ling: Well, Robert wants me to write it! How should I do that?! I have no idea… Nothing Robert says makes sense—actually, the entire process is unclear!	[Escalate the emotional response]
Ming-Yu: Don’t worry about it. The clown (Robert) assigned the task to Maxwell (HQ engineer) while you were away, but Maxwell didn’t work on it at all. Obviously, the task is not urgent. Let’s make it a low-priority task.	[Reveal unshared information locally]
Ling-Ling: I replied to Robert before, and I asked him which scheme he preferred for the task. I sent him so many emails, but he never responded to me. In fact, he didn't make it clear what he wanted until now! And it’s still not clear! How can I do this?!	[Escalate the emotional response]
Ming-Yu: (Shakes head) Well, that’s Robert… He will never be	[Collective Anger]

clear! I don't think he can make anything clear! *(C-Center sub-team laughed)*

As illustrated in the above case, in the later stage backstage interactions, the collective anger became reinforced among C-Center sub-team members, where C-Center engineers told each other to not work on the tasks that their HQ counterparts asked them to do, while launching attacks against their HQ teammates. We can also see how the energy emotionally contaminated the whole group's conversation. At the end of our observations, Wei-Jian concluded: "Now that we have started working with HQ, our efficiency is worse than before." However, these feelings or thoughts were not shared with HQ, who remained unaware.

Team Prism

As we did with Team Radius, in the following sections, we describe the following sequence of events: the frontstage of the global teams' meetings, the backstage reactions, and then how these dynamics unfolded when the global team reconvened.

Initial frontstage: sharing information toward resource allocation

Like Wei-Jian, the Team Prism C-Center leader, An-Kang, also initially responded to the HQ sub-team leader's decision regarding resource allocation by pushing back. An-Kang asked for an additional Chinese team member on the HQ team who could act as the "bridge" between the two sub-teams, so that the two sides could be better connected. According to An-Kang, "The most important thing is to find a Chinese engineer or partner for the HQ sub-team. That would make our communication easier." As a C-Center engineer shared:

"[An-Kang] proposed to [Srihan] (HQ sub-team leader) that we want a Chinese engineer in HQ to make our communication better, [Srihan] said it was a good idea, and ask [An-Kang] to find a suitable Chinese engineer… He is thinking about a suitable person there. He found one but that guy did not want to change his job, so he is talking to another guy now."

It is possible that the HQ leader's reaction helped An-Kang feel more hope that the

formation of a global team could work. When we interviewed An-Kang about the code ownership change, he told us, “Sometimes they (HQ) don't understand what we are doing or why we do it in this way… with the partnership of a Chinese engineer at HQ, it will be easier for us to communicate.”

Initial backstage: alleviating collective fear

An-Kang’s more inclusive framing of how to best approach the code ownership change was also shared with his C-Center sub-team. In a local C-Center sub-team meeting, An-Kang shared the news that this new HQ sub-team would have a Chinese engineer and further pointed out that, “Actually, if you think about it, having a sub-team in HQ is good for us. In this way, we can ‘throw’ the support tasks to them… and then focus on more important, more interesting tasks.” We observed that the C-Center sub-team members looked at each other and smiled after hearing this. It is important to note that going forward, however, a Chinese resource was never added to the HQ sub-team. But what turned out to matter was the fact that the C-Center sub-team leader felt that his request was being seriously considered, which helped the team feel more engaged and committed to making it work together.

Early frontstage: sharing task and personal knowledge

Like Team Radius, after Global Team Prism started to work together, we documented that their frontstage interactions were mostly obligatory information sharing as well (e.g., assigning work, asking about work statuses, as well as the corresponding updates about work). However, what caught our attention in this early stage, and was in stark contrast with Team Radius, was their greater *expansive* knowledge sharing at this stage. Soon after Team Prism-HQ was expanded to work with C-Center, both the HQ and C-Center sub-team leaders decided to hold their first global team meeting all together, and proactively decided to set up

a series of knowledge transfer sessions for HQ since they were not familiar with C-Center's project and needed to be if they were to work collaboratively. During their first global meeting, An-Kang explained the need for knowledge transfer:

"In our first sprint together, let's focus on knowledge transfer; we need to do this to help HQ… on the other side, you'll have your buddy, so each HQ sub-team member will have a C-Center partner. Any questions you can discuss with your buddy… work with your partner on a plan for the next sprint."

Beyond the knowledge transfer meetings, suggested by An-Kang and agreed upon by Srihan, the two sub-teams started to hold sprint planning and demo meetings together on C-Center's Friday morning (HQ's Thursday afternoon). Team members went through the tasks each side was going to do in the sprint planning meetings, and then presented what they had done in the sprint demo meetings.

In addition to a more inclusive approach to information sharing, we also observed that in the meetings, when the HQ sub-team asked the C-Center sub-team about work tasks, An-Kang and his team members revealed task-related information in great detail, as described below:

Sherman: So, I think [project P] needs to be cleaned up… (explaining detailed requirement)	[Ask about work]
An-Kang: OK. We do clean up [project P] pool and I know [Jian-Kang] cleaned up last Friday… my question is that … it is still feasible, so maybe you need to talk with [team name]. But anyway, we should make sure that [project P] could work.	[Share expansive knowledge about work]
Sherman: Yeah, definitely. How does that work?	[Ask about work]
Jian-Kang: You mean… for different groups of people, they have different feature branches. They will merge…but sometimes QE finds some bugs, for another feature they need to release … and the QE team will do testing, and the features … but it is only for the case that there are some delays … which means that …for the feature development. (Jian-Kang explained how the testing works in detail)	[Share expansive knowledge about work]
Sherman: Got it, Got it.	

Unlike Team Radius, wherein C-Center team members said "yes," but shook their heads "no" in the global meetings, over the 9 weeks of observation we did not observe the C-Center sub-team displaying such behaviors in their global meetings. Instead, as the above example illustrated, in the early period of global team interaction, we observed that the C-Center sub-team exchanged work-related information in a detailed way with their HQ counterparts. Though in the global meetings, C-Center proactively shared information with HQ sub-team members, they did still harbor residual fear that their HQ teammates wanted to take their ownership away, although the fear was ultimately alleviated.

Early backstage: emerging collective hope

As they continued to work together, there were also times we observed team members express negative energy about their HQ sub-team. In response, the sub-team leader, An-Kang, would often share contextual information and express doubts about the differences that came up, addressing the negative energy in a more understanding manner, but also helping to construct a more positive outlook. For example, right after a knowledge transfer meeting, the C-Center sub-team began to talk amongst themselves:

Kun: After we transfer the knowledge to HQ, they will take our ownership away.	[Change the conversation toward an emotional direction]
Sun-Bu: The HQ team manager is the kind of person who takes anything valuable away. He's so self-serving! Now all our important projects are going to go to HQ!	[Escalate the emotional response]
An-Kang: We have some advantages working with them (HQ). They encounter the first-line customers, so they will frequently be interrupted by the first-line customers, and they will have no choice but to deal with the urgent issues. There are some urgent support issues that they need to take care of in HQ; thus, from this perspective, they should be able to take care of all the urgent tasks while we are sleeping. In contrast, we have more free time since we are far away from the customer, thus we	[Reveal contextual information locally] [De-escalate the emotional response]

don't need to support the urgent issues all the time… we have more time to think about the important issues—and actually work on them.	
(*Kun and Sun-Bu nodded their heads in agreement.)*	[De-escalate the emotional response]
Sun-Bu: I guess that makes sense. I understand.	
An-Kang: Currently, our HQ sub-team teammates are not familiar with our technology, and not familiar with our work, so it's hard for them to actually help us, especially during our nights or weekends. So, we need to help them acquire our teams' knowledge as soon as possible. In this way, once something happens in HQ during our night, they could help us instead of calling us from our dreams and asking us to deal with the problems.	[De-escalate the emotional response]
Wong-He: Yeah, we have been bothered by endless support for years. Now, finally, we can share the pain. *Other engineers all nodded and smiled*.	[Collective hope]

As shown in the above example, in the early weeks, we observed that the C-Center engineers sometimes also expressed their frustration about the knowledge transfer, revealing their fears. Instead of escalating the negativity, An-Kang shared his reasons as to why having an HQ sub-team could actually be beneficial to C-Center, "de-escalating" the frustration that had been raised. A collective hope emerged.

Middle frontstage: sharing task, personal and process knowledge

In the middle weeks of global Team Prism's frontstage meetings, our coding results suggested that obligatory information sharing turned to expansive knowledge sharing in this stage. When asked about tasks, both sides tended to provide more knowledge than what seemed necessary to the other side. During this period, aside from regular conversations about their work, key topics they raised in the frontstage meetings included the process of building regular information channels such as providing updates about team members' work; making the buddy system work; and retrospectives regarding working together. We observed that their information sharing turned from knowledge transfers to building regular

information-sharing channels. An increasingly regular topic in Team Prism's global meetings was to share progress:

An-Kang: Let me share what [C-Center] is doing with you so you can share with the rest of the HQ team members… we are working on taking the pools from private to public…	[Share expansive knowledge about work]
Srihan: OK…so from [HQ] side, Pravesh is working on the [feature name]; Sadiq is working on the unit test; we are working on mostly testing. That's what it looks like.	[Share expansive knowledge about work]

With regular sharing of team members' work statuses, both sides were familiar with the other side's work. However, during this stage, An-Kang and Srihan realized that the buddy system they set up at the early beginning did not work; only one pair of buddies was using the buddy system to communicate about work. Therefore, we observed that in this period's global meeting, a major topic was to encourage the engineers to utilize the buddy system:

Srihan: … what you talked about actually was a very good idea… I'll ask the team: why don't you talk to your buddy? Your buddy can assign tasks to you… I'll talk to the team to make sure they work with their buddy. I will talk to them in our team meeting…	[Share expansive knowledge about work]
An-Kang: Yeah, that's a good idea. I'll also talk to the C-Center engineers about that.	[Intend to provide help for the other side]

Beyond that, realizing that HQ and C-Center had been working together for some time, An-Kang suggested in the global meeting that each side could share their pain points about working together to make their global work more effective. The example below shows how they dealt with problems with their work and how the other side responded:

An-Kang: Are you fine with spending several minutes on the retrospective part? Both [HQ] and [C-Center] teams can share some pain points, and we can talk about how we can work more effectively together?	[Ask about work]
Srihan: Good idea to talk about the challenges…	
Pravesh: Yeah, so, An-Kang, I was not aware of the different code	[Ask about work]

changes that are getting pushed out [in the release] … I'd like to receive some details…	
An-Kang: I understand. I totally understand. Actually, for each release … we have release notes and announcements, but it looks like you did not receive the announcements. We will send the release information in the new DL so that you guys can receive it…	[Share expansive knowledge about work]

Thus, unlike Team Radius' global meetings in this stage—where the C-Center researcher typically documented many discussions that happened within the C-Center sub-team—in Team Prism, the sub-teams tended to surface concerns or opinions in real-time during the meetings, giving the global team a chance to explore their differences and often find better alternatives.

Middle backstage: reinforcing collective hope

Knowing more about each other's tasks and responsibilities, we observed that on the backstage of Team Prism C-Center sub-team, when they mentioned their HQ counterparts, they shared mostly updates about how they were cooperating with their overseas teammates. However, at this stage, there were also times that a C-Center engineer would take the conversation in a negative emotional direction. We observed that it was not only An-Kang, the team leader, who would de-escalate that negative emotional response; in fact, most times, other team members would try to give contextual information to de-escalate:

Wu: OK, I admit I haven't been using the buddy system. My buddy—Pravesh, is kind of mean. He has never spoken to me. *(Sigh)*	[Change the conversation toward an emotional direction]
Wong-He: Don't take it personally. He is not trying to be mean. It's not you, he is an introverted guy—he doesn't speak to the other guys near his [HQ] cube, let alone peers in [C-Center].	[Reveal contextual information locally]
An-Kang: Yes. Pravesh is a guy who usually doesn't ask any questions. You need to be more proactive with him if you want to speak to him; he's a nice guy, don't worry.	[Reveal contextual information locally]

Therefore, during the middle stage of Team Prism's interaction, on the frontstage, both

sides aimed to build regular information channels; on the backstage, though C-Center sub-team members would sometimes take conversations in an emotional direction, other team members would quickly de-escalate the negative energy. It is important to note that until the middle stage, in Team Prism C-Center sub-team, there were still times that a team member would take the conversation in a negative emotional direction, though the sub-team had experienced many de-escalating conversations before. This shows how difficult it is to change negative energy.

Later frontstage: revealing more information about a long-term work plan

By the end of our observations, our coding results suggested that most of their frontstage information sharing was expansive information sharing, and there was no information withheld in this stage. Team Prism had established a norm of updating each other with very detailed information; for example, during our last week of observation, when the C-Center started to consider their plans for the next half year (H2), they proactively provided their H2 plans to their HQ sub-team members, and they made the following arrangements:

An-Kang: OK, that's a good idea. I think so. Another thing is that Wong-He may have shared with you…the H2 plan. I'd like to set up another meeting to go through the H2 plan with you all, and also discuss what the HQ sub-team can do in H2.	[Share expansive knowledge about work]
Srihan: We are on board for keeping the lines of communication open… for H2…	[Share expansive knowledge about work]
An-Kang: Good. Wong-He can share the link for H2 after our meeting today.	[Intend to provide help for the other side]

Additionally, Team Prism showed increasingly more willingness to help the other side and get the information from customers on their own side. We documented that when the C-Center leader shared that he was missing information about a feature that was owned by

another HQ engineer on a different team, a Prism-HQ engineer immediately responded: "I know the guy here… I will ping him." The following example shows that when the HQ sub-team shared that they could not contact an engineer for information they needed, An-Kang turned to a C-Center engineer and asked whether he could help the HQ members:

Srihan: We have part of the user data… and yeah next sprint we have the other feature we plan to work on… but currently we are blocked because the person who was supposed to do the work, we found out, had left the company.	[Share expansive knowledge about work]
An-Kang: Maybe Kun can help; he was another person who worked on the feature. *He turned to C-Center engineer, Sun-Bu.* Sun-Bu, can you help with follow-up?	[Intend to provide help for the other side]
Sun-Bu: Sure. I can follow up with Kun and let you know, Srihan. I am sure he would be happy to help. No problem.	[Intend to provide help for the other side]

This willingness to help, and even get others involved, in order to come to the best possible outcome was typical of Team Prism's meeting interactions in the later weeks. They often offered to help one another both in real time during the meeting, as well as after the meeting once they had established what the other side would need.

We documented more interactions showing appreciation and continued recognition of each other's ideas and contributions. We frequently heard statements like "That's an important point," and "Thanks, we really appreciate your help."

Later backstage: growing collective appreciation for a global team

During the later weeks of observation, we did not observe negativity in the C-Center team members' backstage conversations; instead, we documented that when they mentioned their HQ team members, it would be to commend their efforts. The initial fear shared by the team members turned to a shared appreciation for their teammates. For example, at the end of

the nine weeks, in the C-Center sub-team's local informal information exchange communication tool, WeChat, we observed the following conversation:

Sun-Bu: Wow! This morning when I woke up I found that one customer encountered a bug, but Srihan (an HQ sub-team engineer) has helped me fix it!!! (Smile emoji)	[Reveal contextual information locally]
Kun: WOW! (Smile emoji)	
An-Kang: WOW! Did you thank him?	[Collective appreciation]
Sun-Bu: Of course I did! (Cool emoji)	[Collective appreciation]

By the end of our observations, team members on both sides of Team Prism went as far as to say, "We do what we have to do—we are one team together."

In the above, we described how frontstage information sharing and backstage collective energy co-evolved and affected global team dynamics. In Team Radius, during the initial stage, C-Center withheld why they wanted a different resource allocation plan. Without knowing C-Center's "backstage" thoughts, the HQ sub-team leader rejected C-Center's plan. The C-Center team leader shared his frustration with his sub-team members, which only reinforced the sub-team's collective fear. With their collective fear in mind, the C-Center sub-team frequently withheld their work preferences, especially when they encountered differences in opinion between them and their HQ counterparts. This withheld information was then revealed within only their own sub-team, allowing collective fear to evolve into collective frustration. The collective energy further affected C-Center's frontstage information-sharing behavior: they withheld even more information and often said yes in the meetings but refused to work on tasks after the meetings concluded. And on the backstage, C-Center sub-team members would reveal information that was withheld in the global meeting, ultimately escalating their collective frustration into a collective anger toward their HQ sub-team. However, because the information was purposely withheld in the frontstage

meetings, the Team Radius HQ sub-team knew nothing about the C-Center sub-team's frustrations around their global work. In the later global meetings, C-Center started to behave uncooperatively, and most of their frontstage interactions centered on withholding information, such as responding with an "I don't know" or even no response to questions being asked. On the backstage of the C-Center sub-team, team members revealed even more to one another about why they did not work on the task, and made personal attributions to HQ teammates, reinforcing the collective anger toward the HQ sub-team.

In contrast, in the initial stage of Team Prism's formation, the C-Center sub-team leader revealed to the HQ sub-team leader why they wanted a different resource allocation plan. Equipped with the knowledge of the C-Center sub-team's concerns, the HQ sub-team leader agreed with the plan, though ultimately, this plan did not play out. In their backstage, the C-Center sub-team leader shared this decision and his individual hope for the global team with his sub-team members, which mitigated the sub-team's collective fear. In their global meetings, C-Center engineers actively shared information or knowledge about their work, and regularly provided expansive knowledge to their HQ counterparts. On the backstage, there were still engineers who revealed their negative energy toward the global team, but this negativity was soon de-escalated as the sub-team leader shared more contextual information, further alleviating the sub-team's collective fear, and forming a sense of collective hope. In the following weeks, both HQ and C-Center tried to share more expansive information with each other, such as building regular information-sharing channels on the frontstage. On the backstage, when team members revealed their negative energy toward HQ sub-team members, it was not only the C-Center sub-team leader but also other C-Center sub-team members who

helped to provide more contextual information to de-escalate this negativity, which all the more reinforced their collective hope. Later in their global meeting, most frontstage interactions were documented as expansive information sharing for both C-Center and HQ. On the backstage, C-Center sub-team members became fully convinced that global teams could work, and they started to appreciate having a sub-team in HQ, creating a collective appreciation. In figure 3 we illustrate this process of information sharing and collective energy evolution through frontstage and backstage interactions. What's more, as shown in Figure 3, for Team Radius, their collective fear turned to collective frustration and then to collective anger, but for Team Prism, although the C-Center sub-team had experienced many de-escalating conversations before, there were still times that team member revealed negative feelings toward the HQ sub-team even in the middle stage. It was only in the later stage that individual appreciation and collective appreciation emerged. As noted above, this process highlights how difficult it can be to convert negative energy from negative to positive, but also how easy it can be for negative energy to feed on itself, growing in negativity.

Insert Figure 3 about here

DISCUSSION

In this paper, we describe how two global teams – with sub-teams in both the US and China – shared much in common when in each case their code ownership shifted from sole ownership to a shared model. Holding constant structural factors that have previously been found to cause variance in global teams' information sharing, we discovered how collective energy and information sharing amplified each other; when the sub-teams responses on the

backstage were critical, the amplification stayed on the backstage and evolved in a negative direction, but when the responses on the backstage were constructive, the amplification moved to the frontstage and was positive.

Discovery 1：Deeper Understanding of Information Sharing

Our findings provide evidence for the importance of detailed and ongoing information sharing in global teams (Eisenberg et al., 2019; Hinds & Bailey, 2003; Polzer et al., 2006), as well as the possible disadvantages of lacking mutual knowledge (Cramton, 2001). Our data suggest that proactively sharing personal and contextual information with global counterparts is helpful for global teams to effectively work together, while withholding information to their global counterparts could negatively affect their ability to work together as a team.

Our findings go beyond previous studies of information sharing on global teams in three important ways. First, our study was able to extend the domain of information shared with global counterparts (Cramton, 2001; Hinds et al., 2014) to information *withheld* from global counterparts in global teams, especially those that were withheld from global counterparts but revealed to their local sub-team members. After Cramton (2001)'s groundbreaking study about mutual knowledge in global teams, scholars have long explored the problem of global teams not being able to gain shared or mutual information about each other, and how this affected global team dynamics. Due to the difficulty of observation, how the information that was *not* shared further affected global team dynamics remained unclear. By conducting a concurrent ethnographic study of two global teams distributed between HQ and a subsidiary location, our study was able to provide insights into how withheld information plays into the lack of mutual knowledge and subsequent global team dynamics. Second, we have elaborated

on how collective energy and information sharing reinforce each other, and how they affect global teamwork. Though current research has explored factors that can affect information sharing on global teams (e.g., Espinosa et al., 2007; Hinds & Cramton 2014; Hinds & Mortensen 2005; O'Leary & Mortensen, 2010), to the best of our knowledge, our study is the first to call attention to the deep interconnections between information sharing and collective energy. We observed how negative collective energy diminished willingness to share information with the other group and how worsened information sharing fostered even greater negative collective energy. We also showed how positive collective energy increased willingness to share information and formed even stronger positive collective energy. In both directions, collective energy affected information sharing in a self-reinforcing relationship. Third, different from the current global team literature that explores information sharing in a static way (e.g., Hinds & Mortensen 2005), this study investigates the evolution of information sharing by tracking changes over time, revealing that the quality of information sharing may affect the sub-team's collective energy and further affect the quality of information sharing itself.

Our findings also shed light on the research about silence in organizations (e.g., Morrison & Milliken, 2000; Milliken & Morrison, 2010; Perlow, 2003; Perlow & Repenning, 2009). Prior research describes what happens when information, especially different opinions or attitudes, are silenced across subgroups (e.g., Perlow & Repenning, 2009). We further illuminate the dynamics that are playing out within subgroups while they are silencing differences across the subgroups. We find these backstage interactions serve to amplify the costs of silence for the global team.

Discovery 2: Collective Energy in Global Teams

Our findings extend the understanding of coordination through energy-as-conversation (Quinn & Dutton, 2005). In Quinn and Dutton's paper, they theorize about the bidirectional connection between energy and a dyad's attempt to coordinate through acts of speech. Our work builds on and extends this connection in the following ways: 1) we explored what happens empirically based on a 7-month concurrent observation of two global teams, going beyond established theoretical research, illustrating how it plays out in practice and over time; 2) we focused in particular on global teams and sub-teams, thereby expanding their concepts from dyads to the group level, and in turn finding that it is not just about speech acts but information sharing more generally that is influenced by the energy created; moreover, the energy is not just between subgroups but rather amplified within the subgroup on the backstage based on the information shared in the global team interaction.

Our findings also provide new insights about teams' collective energy evolution process and how that affects team dynamics. The concept of "collective energy" was first brought up by Cole et al. (2012); for over ten years now, scholars have also emphasized the importance of exploring energy at a macro level (Kipfelsberger et al., 2019; Volk et al., 2017), but the study of energy, especially collective energy, is riddled with difficulty, as group energy is not stable but was always changing over time. As Ray et al. (2023: 314) argued, collective energy is "based on state differences rather than stable (i.e., trait) differences that provide the foundation for human capital." Our findings contributed to the current literature in three ways: (a) by describing how collective energy affected sub-teams' information sharing with their global counterparts and in turn affected the sub-teams' collective energy going forward, we

were able to capture collective energy at the group level, in response to the scholars calling for attention to collective energy (Cole et al., 2012); (b) by describing how collective energy changed over time on Team Radius and Team Prism, we were able to provide new insights into how collective energy evolved in the team process; (c) by describing the conversations on the backstage of sub-teams, especially how the two sub-team leaders each shifted the energy in their sub-teams in different directions following their contrasting responses, we were able to capture how employees' individual energy was escalated or de-escalated in conversation to then form collective energy, therefore unpacking the process of collective energy emergence. By doing so, we are responding to Ray et al. (2023)'s call for providing more clarity about *how* individual human capital resources relate to collective energy, therefore contributing to the multilevel theory.

Discovery 3: The Repeated Interaction of Frontstage and Backstage

Our findings also contribute to frontstage and backstage studies in the following ways: First, we have added an understanding of the power of backstage interactions in shaping and amplifying the evolution of global team relations by extending the concept of backstage from the individual level to the group level. Once the backstage is conceptualized beyond the individual level (Goffman, 1959), it has the possibility to reveal how a shared collective experience—carried out in the form of backstage interactions—can further influence the way people later act on the frontstage. Second, though Goffman comprehensively described what the frontstage and backstage were, and how the frontstage could influence the backstage, he did not consider the possibility that the backstage could also in turn influence the frontstage. Yet, once the backstage is conceptualized at the workgroup level, it becomes apparent that

the shared collective experience can influence how people later act on the frontstage. As we described above, collective energy helps explain how this could be the case.

By comparing two global teams with the same code ownership change which set off similar initial energy changes for the subsidiary sub-teams but ended in different levels of collective energy, our data revealed how the backstage interactions intertwined with the frontstage interactions, activated "faultlines" that impaired team functioning. Although faultlines have been an important factor explored in the group and organizational literature (e.g., Mäs, Flache, Takács, & Jehn, 2013; Ren, Gray, & Harrison, 2015) as well as in the global team literature (e.g., Polzer et al., 2006; Cramton, 2001; Hinds et al., 2014), this paper adds new insights in understanding *how* collective energy intertwined with information sharing in activating faultlines.

Limitations and Future Research

Our study is not without limitations. First, we studied two global teams within a particular type of work, industry, cultural context, and time zone difference, with parallel group composition and the same shift in code ownership (from subsidiary to HQ). Since we held these structural and organizational factors constant, we cannot unpack their interdependencies and explore the relative impact of structural factors affecting global team dynamics. We also cannot unpack how much of these findings pertain only to global teams. With the new world of hybrid work, teams are frequently co-located with some members of the team and virtual with others. How do these dynamics we observed in co-located subgroups play out on all the different combinations of hybrid work arrangements that have arisen post the COVID-19 Pandemic? Future research would benefit from looking at how

backstage matters across different combinations of co-located subgroups. It even raises the question of whether these subgroups need to be co-located or could they have these backstage interactions virtually but only among their own sub-team? Additionally, though we observed two distinct pathways that led to different frontstage and backstage dynamics (positive vs. negative), can frontstage patterns be altered once set in motion? In a global team going down a negative trajectory, could it utilize de-escalating interactions on the backstage to reverse this dynamic? Lastly, we saw this process play out following a significant emotional trigger; however, the interplay between collective energy and information sharing likely happens to some degree in any context.

In the end, our findings suggest that collective energy plays a key role in setting and further influencing the trajectory of the global team's dynamics, particularly around the quality and quantity of information shared. Furthermore, the subsidiary leader can play two roles that further influence their global teams' trajectory: on the frontstage, they influence whether differences are raised or silenced—and, on the backstage, they influence whether energy is escalated or de-escalated. This reveals opportunities to improve global team dynamics by recognizing the importance of collective energy in the information sharing process, and moreover the role of the subgroup leader in amplifying it. As it turned out, small, subtle interactions on the backstage and proactive information sharing on the frontstage had significant long-run implications for global team relations.

As the future of work becomes increasingly global, but also, increasingly hybrid, our findings suggest how interactions that are shared among some – on the backstage – in reaction to what others have said and done on the frontstage need to be carefully managed.

These backstage interactions have the power to escalate and de-escalate collective energy, which in turn, has the power to enable or undermine a core aspect of the work process itself, namely the sharing of information. Enabling productive work dynamics within teams in the new ever more global and hybrid work environment requires effectively managing team interactions not just on the frontstage but also among sub-teams on the backstage.

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Table 1 Team Comparison

Dimension	Team Radius	Team Prism
Team size	16 teammates in HQ and 15 teammates in C-Center	18 teammates in HQ and 15 teammates in C-Center
Demography	HQ subgroup: 6% American, 75% Indian, 13% Chinese, 6% Romania C-Center subgroup: 100% Native Chinese	HQ subgroup: 11% American, 72% Indian, 11% Chinese, 6% Russian C-Center subgroup: 100% Native Chinese
Gender	HQ subgroup: 6% Female, 94 Male C-Center subgroup: 7% Female, 93 Male	HQ subgroup: 11% Female, 89% Male C-Center subgroup: 100% Male
Communication technology	Phone, emails, Jira dashboard, Lync instant messaging, and Skype chat	
Language fluency	C-Center and HQ spoke in English in global meetings, with parallel fluency; in local C-Center meetings, C-Center subgroup spoke in Chinese.	
Geographic and temporal distance	HQ and C-Center subgroups were separated by over 6,000 miles, with 15 hours' difference (including daylight savings time)	
Status	High status in HQ, low status in subsidiary C-Center	
Task design	Changed from pooled interdependence centered in C-Center to reciprocal interdependence	

Figure 1 Composition of Global Teams Radius and Prism

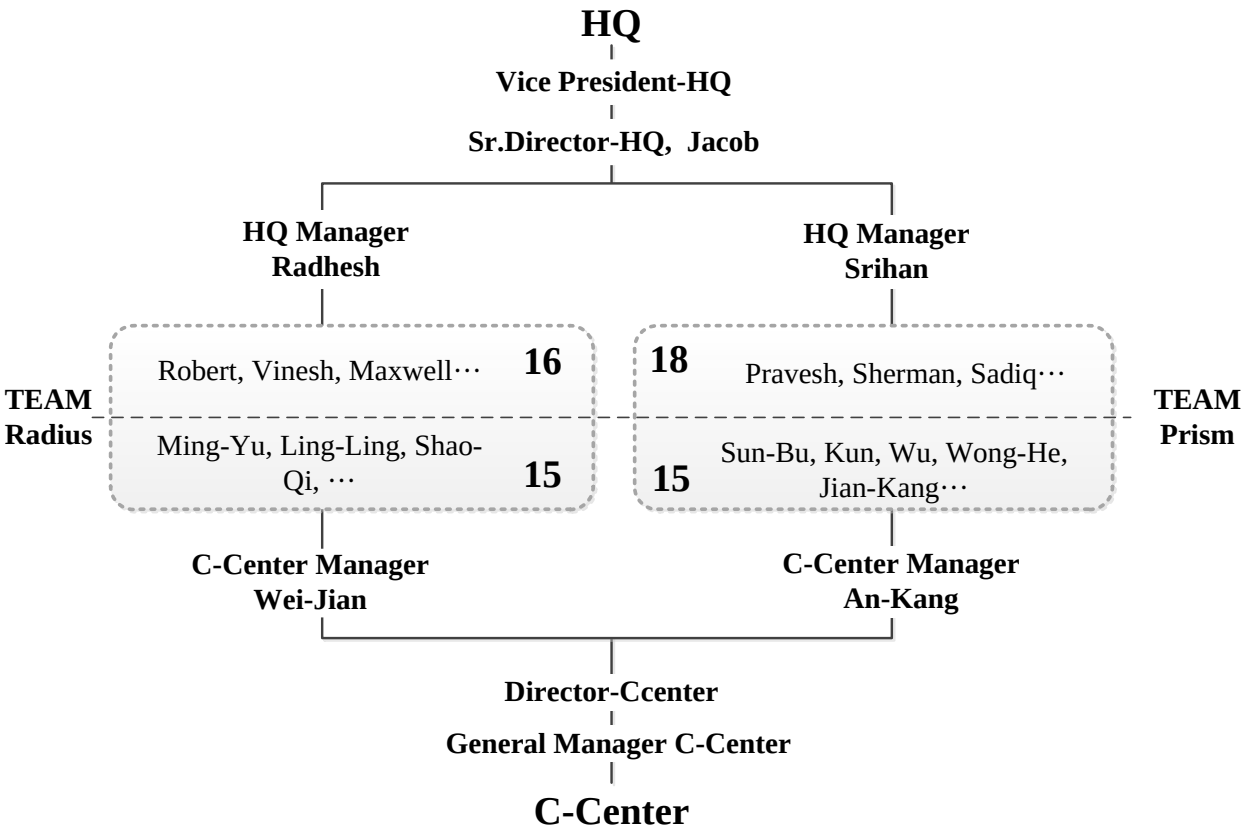


Figure 2 Data Structure

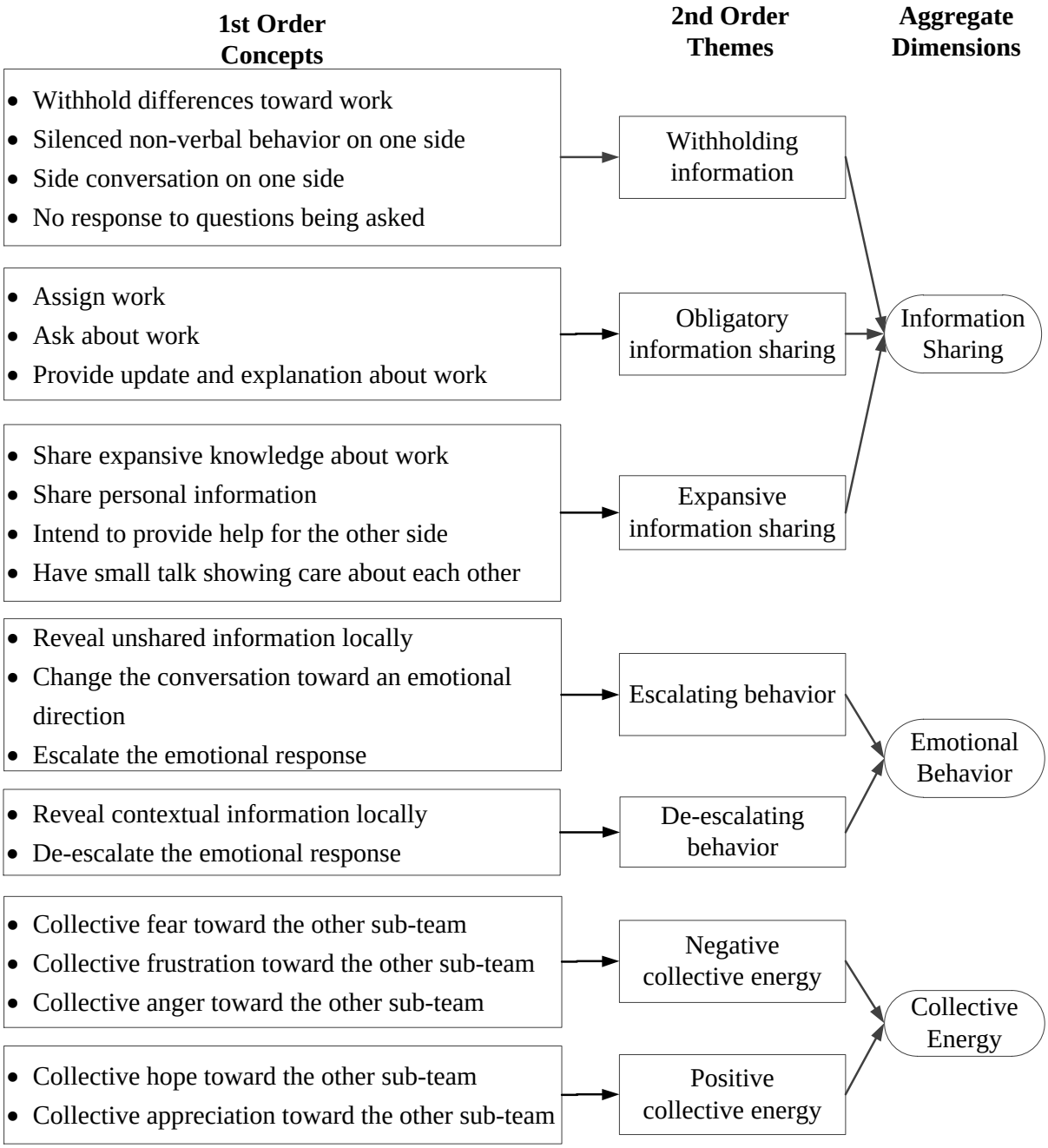
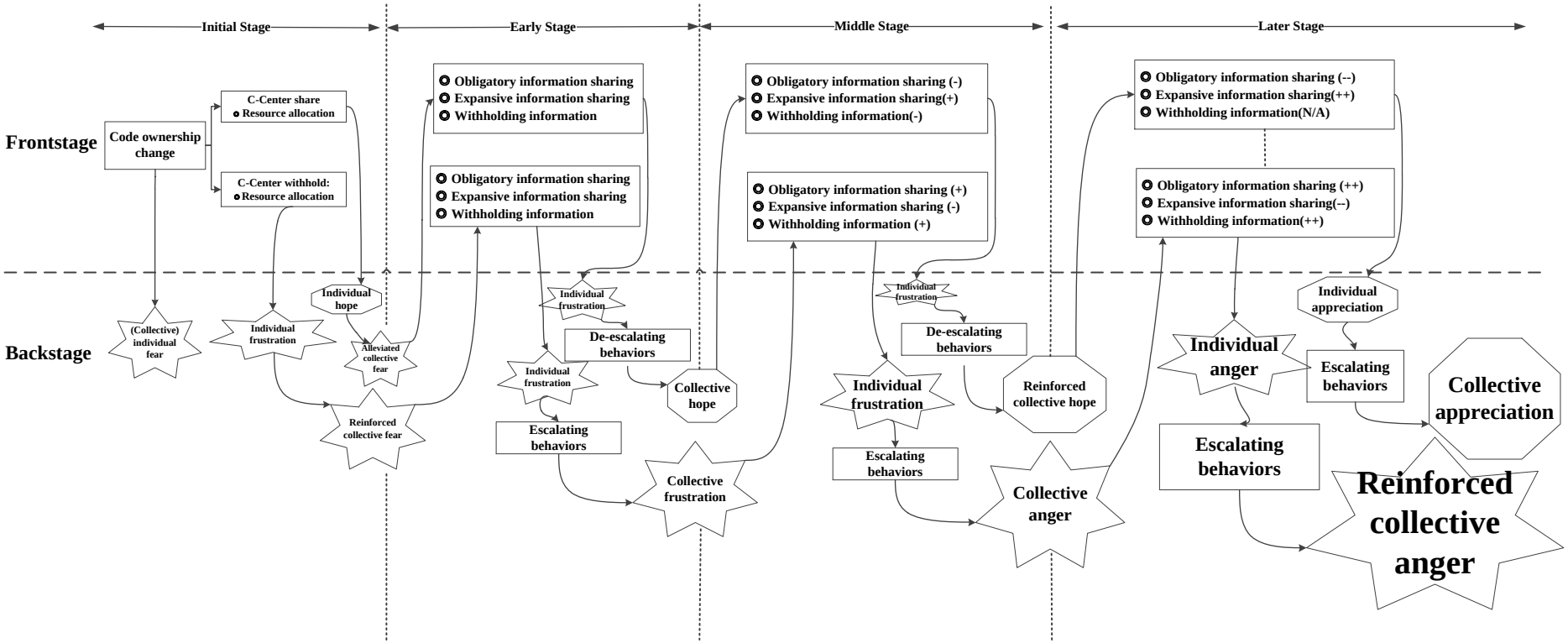


Figure 3 The Evolution Process of Frontstage Information Sharing and Backstage Collective Energy



Note: we use the heptagon shape in the figure to refer to *negative* individual and collective energy, and we use the octagon shape to refer to positive individual and collective energy. We also try to use different sizes of both heptagons and octagons to show the intensity/amplification of the respective energy.

Appendix 1. Email Exchange between Wei-Jian and Radhesh

Appendix 1a. Email from Wei-Jian to Radhesh

Hi [Radhesh],
… (talked about another work topic) …we have too many initiatives programs. The resources are tight if we just have these people. But, it will be much better if all folks under [Project 1] will report to you.

I'm just thinking, between [HQ] team and [C-Center] team, we may minimize possible overhead at the very beginning of each program. For [Project 1] and [Project 2], we will put 2 [HQ] resources and 2 [C-Center] resources for each of them. That means the 2 programs are both crossing geographies. I would propose to assign 4 [HQ] resources on [Project 1], and 4 [C-Center] resources for [Project 2]. If so, each of them will be done in one location, team members inside of each program don't need to depend on remote team so much. [Project 1] is high priority this year, and [Robert] has lots of good ideas on it. It should be good to let him lead the program in [HQ]; [Project 2] doesn't need frequent interaction with customer, so it is good for the remote team. [C-Center] team also has good knowledge/experience on [Project 2]. Even for [Robert] and myself, we can focus, instead of spending efforts on too many areas.

Please let me know your opinion for the proposal. We can talk it when you are free.

Thanks,
[Wei-Jian]

Appendix 1b. Response from Radhesh to Wei-Jian

[Wei-Jian],

Thanks for putting some thought into the resource situation and offering your proposal.

Regarding [Project 1] and [Project 2], I would like to still pursue the same split as previously:

· [Project 1] – 2 [HQ] + 2 [C-Center]
· [Project 2] – 2 [HQ] + 2 [C-Center] and more if required

Rationale: It may be better that I explain this during a 1:1 setting as I have feedback from a few team members on how different engagement models are working.

Assuming the above, I will also request you to identify resources for [project 3] and [project 4] in Q1/Q2 as appropriate.

Thanks,
[Radhesh]

Appendix 1c. Follow up email from Wei-Jian to Radhesh after 1:1

Hi [Radhesh],

According to the discussion today, I summarized the resource assignment as below. Please have a review.

Program name	Total resources	[HQ]		[C-Center]	
[Project 1]	4	2	[Henry], [Sam]	2	[Shao-Qi], [Jie]
[Project 2]	4	2	[Neville], [Zak]	2	[Shao-Qi], [Shi-Xiang]
…	…	…	…	…	…

Some comments:

1. For [Project 2], I put [Shao-Qi] and [Shi-Xiang] from [C-Center]. [Shi-Xiang] is level 25. He is very good at java code and he is tech fans. He worked for [project name] last year. I expect he can deliver a lot on the project.
2. For [Project 1], I put [Shao-Qi] and [Jie]. [Jie] was graduated from school last year. He had experience on Hadoop before [GeoCo]. He also worked on [Project 1] in 2013.
3. For both [Project 1] and [Project 2], I put totally 3 resources. I issued an offer last month and that guy will be onboard in April. I will let him to help on the 2 programs.

Thanks,

[Wei-Jian]

Wenjie Ma (mawenjie@suibe.edu.cn) is an Assistant Professor of International Business at Shanghai University of International Business and Economics. Wenjie's research interests include global team dynamics, international business and innovation.

Leslie Perlow (lperlow@hbs.edu) is the Konosuke Matsushita Professor of Leadership in the Organizational Behavior Unit at Harvard Business School. Leslie's research interests include the future of work, team dynamics, and time use.

Eunice Eun (eunice.eun@yale.edu) is a doctoral student at the Yale School of Management within the Organizations & Management (Organizational Behavior) program. Her research interests include meaning of work and team dynamics.